

Investment Performance Review
Period Ending March 31, 2019

Southfield Employees' Retirement System

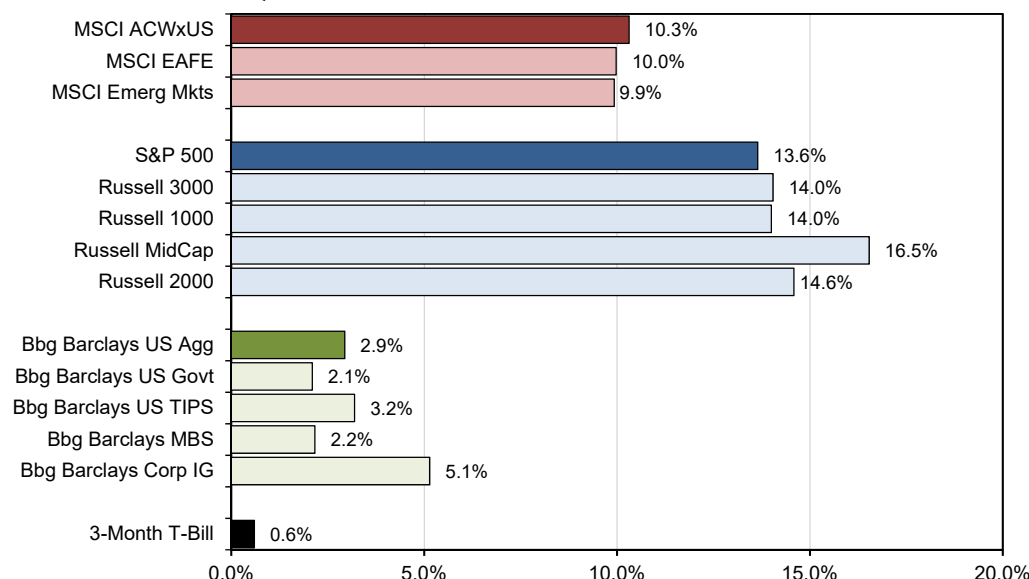


1st Quarter 2019 Market Environment

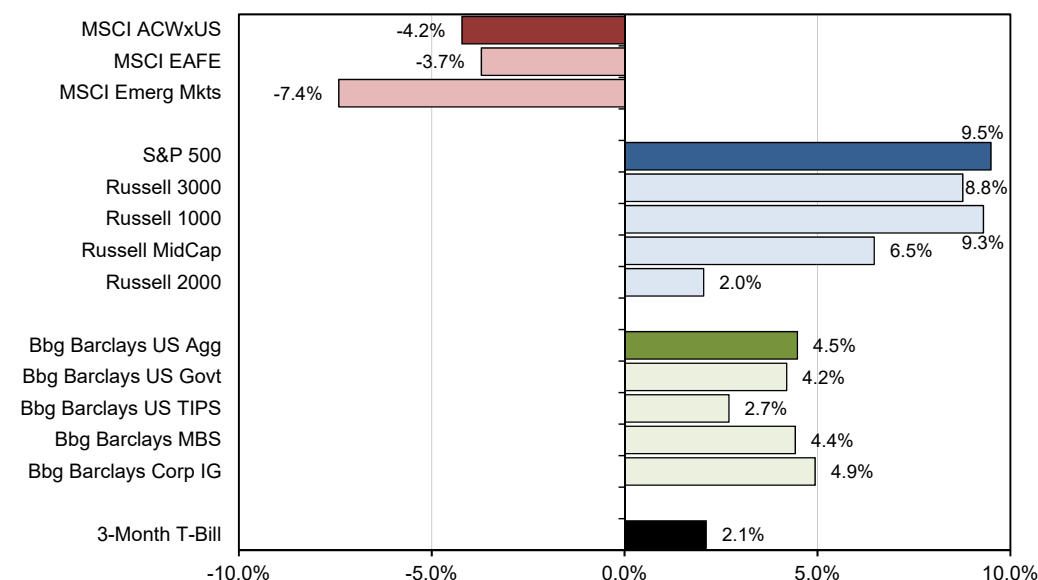


- After a difficult end to 2018, markets rebounded strongly during the 1st quarter of 2019 with higher risk assets posting the greatest returns. Broad international and domestic equity markets had double-digit gains during the period as investors overlooked signs of weakening global growth in favor of increased accommodation in global monetary policy and progress in global trade negotiations. While muted relative to equities, fixed income returns were also positive during the quarter. Within equities, domestic stocks outperformed international markets. US markets pushed higher as the US Federal Reserve (Fed) shifted their stance on monetary policy toward a more accommodative posture, the US and China moved closer to a resolution of their ongoing trade dispute and the partial government shutdown that began in December came to an end. The large cap S&P 500 Index returned 13.6% during the quarter while the small cap Russell 2000 Index gained 14.6% for the period. US equity returns over the 1-year period are positive with the S&P 500 appreciating 9.5% while the Russell 2000 posted a more modest gain of 2.0%.
- Similar to US markets, international equity investors were encouraged by a general easing in central bank monetary policy, including new stimulus measures in Europe and China, as well as the de-escalation of trade tensions with the US. Despite the continued softening in global macroeconomic data and the lack of certainty around Brexit, international equity index returns finished the quarter in positive territory with the MSCI ACWI ex US Index returning 10.3%. The developed market MSCI EAFE Index and the MSCI Emerging Markets Index had similar performance during the 1st quarter returning 10.0% and 9.9% respectively. Despite the strong quarter, returns over the 1-year period remain negative with developed markets falling -3.7%, outperforming emerging markets which fell -7.4%.
- Fixed income securities underperformed equities to start 2019 with the broad market Bloomberg Barclays Aggregate Index returning 2.9%. Interest rates fell for all maturities across the US Treasury Yield Curve as Fed guidance signaled a pause in monetary policy tightening through 2019. Interest rates in the middle of the curve saw the greatest declines causing the curve to invert with shorter-term maturities paying higher interest rates than those in the middle of the curve. This has historically preceded a recession by 6-24 months. Investment grade corporate issues were the best performing securities this quarter, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 5.1% for the period, as corporate credit had tailwinds due to its greater interest rate sensitivity, higher yields and tightening credit spreads. Corporate issues also outperformed the other major fixed income sectors over the 1-year period, returning 4.9% versus a 4.5% return for the Bloomberg Barclays Aggregate Index.

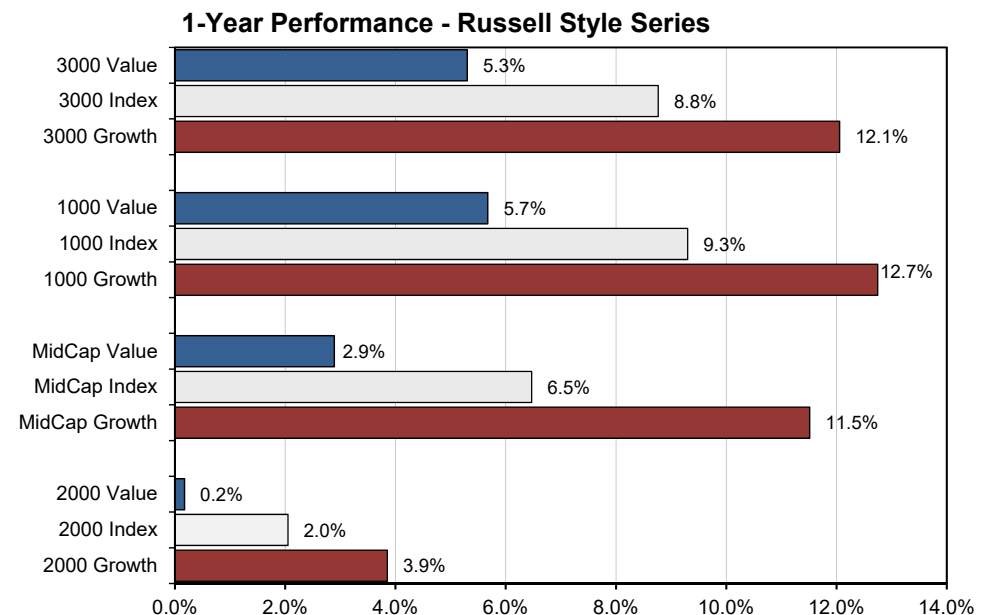
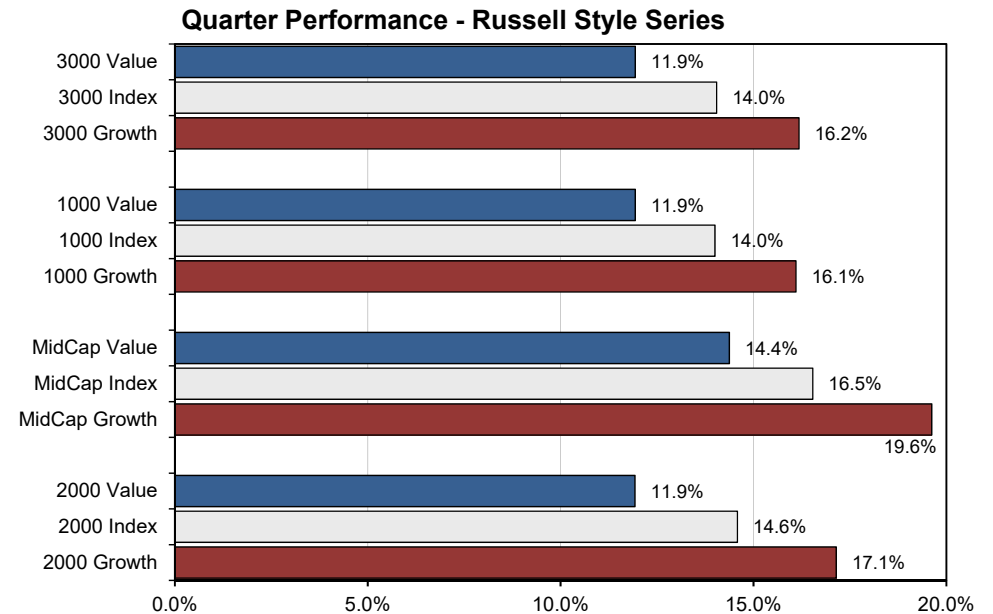
Quarter Performance



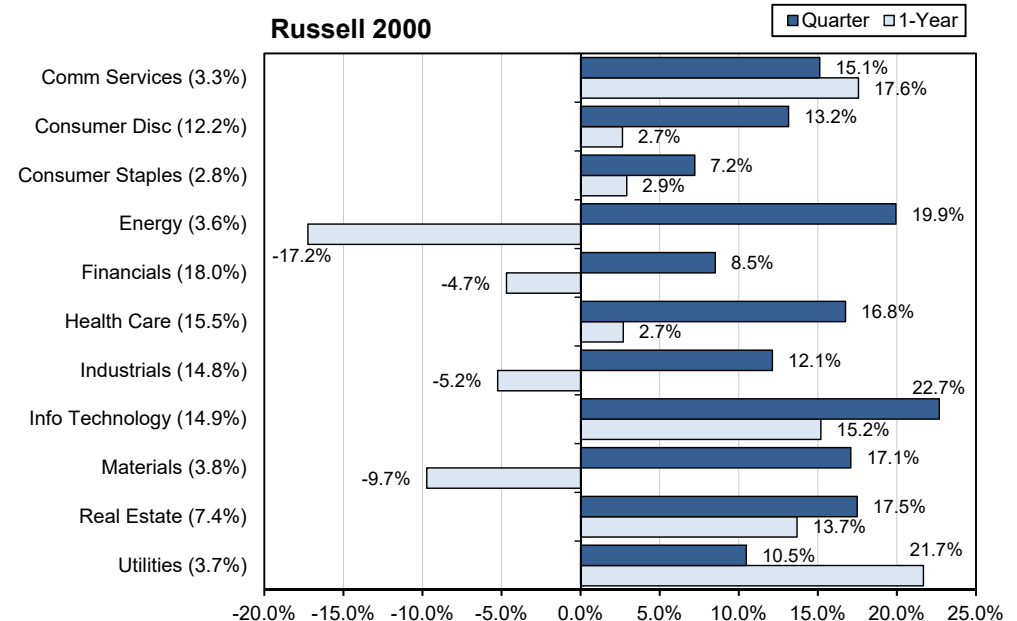
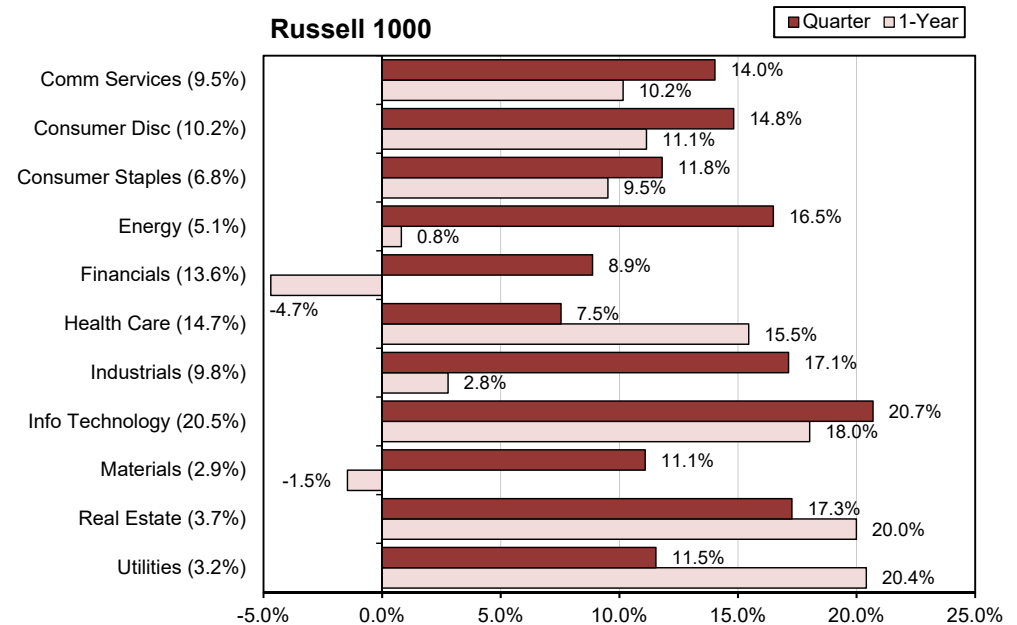
1-Year Performance



- US equity index returns were strongly positive across the style and capitalization spectrum to start the year with all indices posting double digit returns. Macroeconomic data released during the quarter was mixed with disappointing data released late in the quarter for GDP and employment being particularly notable. Even though earnings reported during the period were viewed favorably, many companies provided negative forward earnings guidance due to slowing global growth, trade concerns and the fading effects of US tax reform. However, investor concerns over the economy were overshadowed by positive developments in trade negotiations with China and an accommodative shift in Fed monetary policy. With regards to trade, President Trump delayed the implementation of new Chinese tariffs scheduled for March 1st citing substantial progress in ongoing discussions. Stocks also rallied on Fed guidance to put further monetary policy tightening on hold as they lowered projections for growth and inflation. Lastly, we saw the end of the partial government shutdown that began in December due to a partisan disagreement over funds for the construction of a border wall with Mexico. While the spending bill that passed did not budget for the wall, President Trump declared a national state of emergency later in the quarter in order to secure the needed funding.
- During the quarter, mid cap stocks were the best performers while small cap stocks outperformed large cap equities across growth, value and core indices. The Russell MidCap Index gained 16.5% during the period versus a 14.6% return for the small cap Russell 2000 Index and a 14.0% gain on the large cap Russell 1000 Index. Part of the reason for strength in small cap names is the projected hold on interest rate increases that occurred over 2018 as small and mid-cap companies typically maintain higher percentages of debt than their large cap peers. Small and mid-cap companies are usually more domestically focused which will serve as a tailwind in periods where the US economy is on stronger footing than international markets. It is also not unusual for smaller market cap stocks to outperform in risk-on market environments. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 9.3% for the year while the Russell 2000 gained only 2.0%.
- Growth indices outperformed value indices across the market cap spectrum during the 1st quarter. Growth stocks have outperformed value in all but one quarter over the last two years. The Russell MidCap Growth Index was the best performing style index for the period, returning 19.6% for the quarter. The large cap and small cap value indices had the lowest relative returns, both gaining 11.9%. The trend of growth outperformance is also visible over the 1-year period as growth indices have benefitted from larger exposures to technology which has been a large driver of index performance over the last year, as well as a meaningful underweight to financials which has been a relative detractor.



- Sector performance was broadly positive across large cap sectors for the 1st quarter. There were strong gains for all sectors within the Russell 1000 Index during for the period with five sectors outpacing the return of the index. While the rally was broad with nine of eleven sectors posting double digit returns, cyclical sectors such as technology, industrials and energy were some of the best performers through the quarter returning 20.7%, 17.1% and 16.5% respectively. Technology stocks rose on strong earnings and attractive valuations following their 4th quarter 2018 sell off. Energy companies benefitted from a large rebound in oil prices which increased by over 30% during the quarter following an OPEC led supply cut and US sanctions against Iran and Venezuela. Industrial stocks, among others, gained on hopes that trade tensions between the US and China would continue to abate. REITs also had a particularly strong quarter, returning 17.3% as the prospect of lower interest rates acted as a tailwind. Financials and health care stocks were the worst performers during the period returning 8.9% and 7.5% respectively. Health care stocks faced uncertainty around the potential for future regulation following congressional hearings on drug pricing while the prospect of lower earnings due to a muted interest rate environment weighed on financial stocks. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Utilities, REITs and information technology were the best performers returning 20.4%, 20.0% and 18.0% respectively. Financials and materials posted negative results at -4.7% and -1.5% while energy was only slightly positive at 0.8%.
- Quarterly results for small cap sectors were mixed relative to their large capitalization counterparts with six of eleven sectors outperforming their corresponding large cap equivalents. Like large caps, all eleven sectors produced gains during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter and nine returning over 10.0%. Similar to large caps, cyclical sectors performed well with technology, energy and materials returning 22.7%, 19.9% and 17.1% respectively. Real estate also did well returning 17.5%. The largest detractors over the period were consumer staples, financials and utilities which still produced gains of 7.2%, 8.5% and 10.5%. Over the trailing 1-year period, returns varied significantly with four sectors posting double digit gains and four losing value. Despite a very strong quarter, energy stocks were the worst performers over the 1-year period, falling a considerable -17.2%, while the defensive utilities sector produced the greatest gains, appreciating 21.7%.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2019

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.42%	20.9%	14.9%	Information Technology
Microsoft Corp	3.39%	16.6%	30.8%	Information Technology
Amazon.com Inc	2.78%	18.6%	23.0%	Consumer Discretionary
Facebook Inc A	1.50%	27.2%	4.3%	Communication Services
Berkshire Hathaway Inc B	1.48%	-1.6%	0.7%	Financials
Johnson & Johnson	1.42%	9.0%	12.1%	Health Care
Alphabet Inc C	1.36%	13.3%	13.7%	Communication Services
Alphabet Inc A	1.33%	12.6%	13.5%	Communication Services
Exxon Mobil Corp	1.30%	19.8%	12.9%	Energy
JPMorgan Chase & Co	1.27%	4.6%	-5.6%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Versum Materials Inc	0.02%	81.9%	34.7%	Information Technology
Coty Inc Class A	0.02%	77.3%	-34.3%	Consumer Staples
Nabors Industries Ltd	0.00%	72.5%	-48.7%	Energy
Sage Therapeutics Inc	0.03%	66.0%	-1.3%	Health Care
Wayfair Inc Class A	0.03%	64.8%	119.8%	Consumer Discretionary
Chipotle Mexican Grill Inc Class A	0.07%	64.5%	119.8%	Consumer Discretionary
Universal Display Corp	0.02%	63.5%	51.7%	Information Technology
Xerox Corp	0.02%	63.1%	15.7%	Information Technology
Floor & Decor Holdings Inc	0.01%	59.2%	-20.9%	Consumer Discretionary
bluebird bio Inc	0.03%	58.6%	-7.9%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Uniti Group Inc	0.01%	-27.8%	-23.8%	Real Estate
PG&E Corp	0.03%	-25.1%	-59.5%	Utilities
The Kraft Heinz Co	0.07%	-23.2%	-45.1%	Consumer Staples
Realogy Holdings Corp	0.01%	-21.8%	-57.3%	Real Estate
Nu Skin Enterprises Inc Class A	0.01%	-21.5%	-33.7%	Consumer Staples
Biogen Inc	0.18%	-21.4%	-13.7%	Health Care
Centennial Resource Development A	0.01%	-20.2%	-52.1%	Energy
CenturyLink Inc	0.04%	-19.3%	-19.0%	Communication Services
Qurate Retail Inc Class A	0.03%	-18.1%	-36.5%	Consumer Discretionary
Macy's Inc	0.03%	-18.0%	-15.2%	Consumer Discretionary

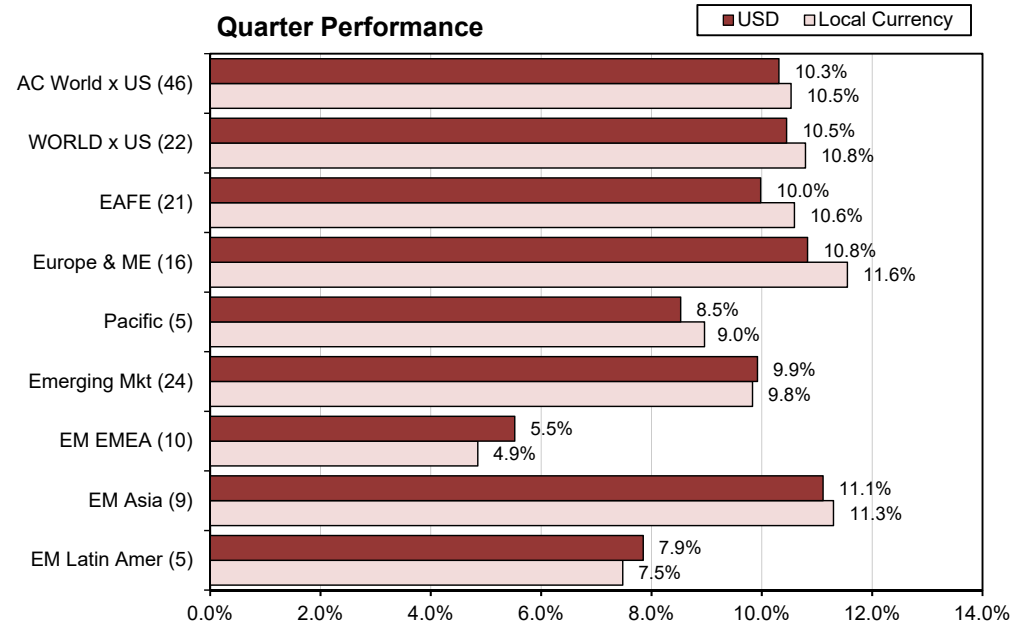
Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Etsy Inc	0.40%	41.3%	139.6%	Consumer Discretionary
Five Below Inc	0.33%	21.4%	69.4%	Consumer Discretionary
The Trade Desk Inc A	0.32%	70.6%	298.9%	Information Technology
Integrated Device Technology Inc	0.31%	1.2%	60.3%	Information Technology
HubSpot Inc	0.30%	32.2%	53.5%	Information Technology
Planet Fitness Inc A	0.30%	28.2%	81.9%	Consumer Discretionary
Cree Inc	0.29%	33.8%	41.9%	Information Technology
Ciena Corp	0.26%	10.1%	44.2%	Information Technology
Primerica Inc	0.26%	25.4%	27.7%	Financials
Array BioPharma Inc	0.25%	71.1%	49.4%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Immune Design Corp	0.01%	350.0%	77.3%	Health Care
Diebold Nixdorf Inc	0.04%	344.6%	-28.1%	Information Technology
Constellation Pharmaceuticals Inc	0.01%	237.9%	N/A	Health Care
Flotek Industries Inc	0.01%	197.2%	-46.9%	Materials
Spark Therapeutics Inc	0.18%	191.0%	71.0%	Health Care
Magenta Therapeutics Inc	0.01%	188.9%	N/A	Health Care
ION Geophysical Corp	0.01%	178.8%	-46.7%	Energy
Catalyst Pharmaceuticals Inc	0.02%	165.6%	113.4%	Health Care
VirnetX Holding Corp	0.02%	163.8%	60.3%	Information Technology
Rockwell Medical Inc	0.01%	151.8%	9.2%	Health Care

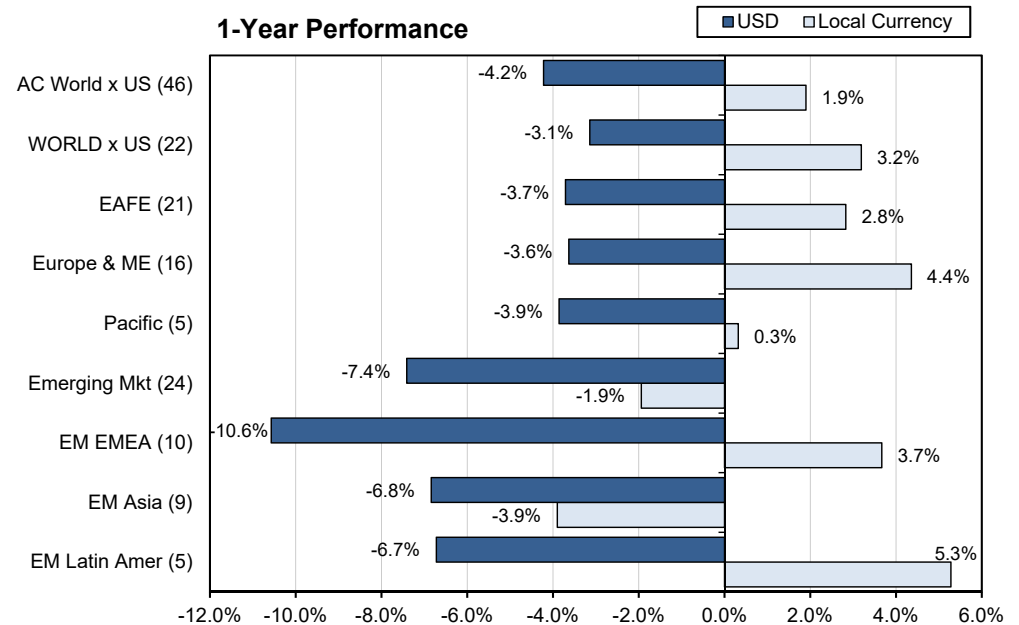
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Zomedica Pharmaceuticals Corp	0.00%	-77.0%	-84.2%	Health Care
Aptinyx Inc	0.00%	-75.5%	N/A	Health Care
Alta Mesa Resources Inc Class A	0.00%	-73.5%	-96.7%	Energy
Novavax Inc	0.01%	-70.1%	-73.8%	Health Care
Maxar Technologies Inc	0.01%	-66.3%	-91.0%	Industrials
Solid Biosciences Inc	0.01%	-65.7%	22.7%	Health Care
Achaogen Inc	0.00%	-62.9%	-96.5%	Health Care
EP Energy Corp A	0.00%	-62.9%	-80.6%	Energy
Proteostasis Therapeutics Inc	0.00%	-61.1%	-73.5%	Health Care
Approach Resources Inc	0.00%	-59.4%	-86.4%	Energy

- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 10.5% in local currency terms and 10.3% in USD terms during the 1st quarter. Similar to US markets, international equity investors were encouraged by central bank responses to slowing global growth as they shifted towards more accommodative policies and the improvement in dialogue around global trade. Returns in local currency typically outperformed USD returns in the developed markets, as the USD continued to strengthen against most major developed currencies. While the currency effect was detrimental in developed markets, it acted as a slight tailwind in emerging markets. The USD strength is particularly noticeable over the 1-year period where local currency returns on the MSCI ACWI ex US Index were 1.9%, but after accounting for foreign exchange, translated to a loss of -4.2% for a USD investor.
- Fourth quarter results for developed market international indices were positive in both local currency and USD terms with the MSCI EAFE Index returning 10.6% and 10.0% respectively. Ongoing weakness in global economic reporting pushed major central banks to move toward less restrictive postures around monetary policy. In Europe, the European Central Bank (ECB) announced plans for additional stimulus while putting any future interest rate increases on hold until 2020. The Bank of England (BoE) left policy unchanged as uncertainties around Brexit coincided with a slowing economy. Prime Minister Theresa May held two votes on her withdrawal plan, both of which failed, forcing her to request an extension to the March 29th withdrawal deadline. Data from Japan drew concerns that the country's economy is contracting as corporate earnings, exports, manufacturing, retail sales and inflation all hinted at an economic slowdown. The MSCI EAFE Index returned 2.8% and -3.7% for the last twelve months in local currency and USD terms respectively.
- Emerging markets slightly underperformed relative to developed markets for the 1st quarter, but still appreciated in both local currency and USD terms with the MSCI Emerging Markets Index returning 9.8% and 9.9% respectively. A major tailwind for equity markets was the improvement in trade relations between the US and China. As Chinese economic data appeared to be slowing, the Chinese government also announced continued stimulus in the form of tax cuts, infrastructure investment and lowered the reserve requirement for banks in order to encourage lending. We also saw commodity prices rise over the quarter which is generally beneficial to emerging market countries with rising oil prices helping Russian and Colombian equity returns. In Brazil, President Jair Bolsonaro officially took office. Bolsonaro announced his plan to reform the country's debt laden pension system and promised market friendly economic reforms. One year returns for the MSCI Emerging Market Index were -1.9% in local currency terms and -7.4% in USD terms.

Quarter Performance



1-Year Performance



The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	4.3%	-4.5%
Consumer Discretionary	11.0%	7.5%	-10.4%
Consumer Staples	11.8%	12.4%	3.3%
Energy	5.9%	10.4%	4.6%
Financials	18.9%	6.9%	-12.7%
Health Care	11.3%	11.2%	7.4%
Industrials	14.4%	10.6%	-5.4%
Information Technology	6.3%	15.3%	-3.8%
Materials	7.5%	13.2%	-3.0%
Real Estate	3.9%	14.0%	4.2%
Utilities	3.7%	9.0%	8.7%
Total	100.0%	10.0%	-3.7%

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.1%	6.9%	-1.8%
Consumer Discretionary	11.1%	11.2%	-10.3%
Consumer Staples	9.9%	11.2%	1.6%
Energy	7.4%	12.4%	5.2%
Financials	21.6%	7.7%	-9.4%
Health Care	8.4%	11.0%	4.4%
Industrials	11.7%	10.2%	-4.9%
Information Technology	8.4%	14.7%	-7.3%
Materials	7.6%	11.3%	-3.6%
Real Estate	3.5%	14.4%	2.8%
Utilities	3.3%	8.2%	6.1%
Total	100.0%	10.3%	-4.2%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	12.3%	9.5%	-3.3%
Consumer Discretionary	13.4%	20.8%	-13.2%
Consumer Staples	6.4%	5.3%	-8.4%
Energy	8.1%	12.2%	9.4%
Financials	24.2%	7.2%	-6.0%
Health Care	2.6%	3.6%	-23.4%
Industrials	5.4%	4.8%	-7.6%
Information Technology	14.6%	12.8%	-10.8%
Materials	7.4%	6.9%	-6.2%
Real Estate	3.2%	15.6%	-2.1%
Utilities	2.5%	4.2%	-2.7%
Total	100.0%	9.9%	-7.4%

Country	MSCI-EAFE Weight	MSCI-ACWIXUS Weight	Quarter Return	1- Year Return
Japan	24.0%	16.1%	6.7%	-7.8%
United Kingdom	17.1%	11.5%	11.9%	-0.1%
France	11.3%	7.6%	10.7%	-3.7%
Switzerland	8.9%	6.0%	13.1%	7.5%
Germany	8.6%	5.8%	6.9%	-13.7%
Australia	6.9%	4.7%	11.4%	4.5%
Hong Kong	4.1%	2.8%	15.6%	8.0%
Netherlands	3.6%	2.4%	13.6%	-2.3%
Spain	3.0%	2.0%	7.0%	-8.8%
Sweden	2.6%	1.8%	7.4%	-5.1%
Italy	2.4%	1.6%	14.6%	-10.6%
Denmark	1.8%	1.2%	12.8%	-3.2%
Singapore	1.3%	0.9%	6.2%	-6.4%
Finland	1.0%	0.7%	8.0%	-3.6%
Belgium	1.0%	0.7%	16.2%	-15.5%
Norway	0.7%	0.5%	7.0%	-4.4%
Ireland	0.5%	0.4%	11.4%	-11.6%
Israel	0.5%	0.4%	10.1%	9.9%
Austria	0.2%	0.2%	8.4%	-23.0%
New Zealand	0.2%	0.2%	16.7%	18.1%
Portugal	0.2%	0.1%	10.2%	-4.9%
Total EAFE Countries	100.0%	67.1%	10.0%	-3.7%
Canada		6.8%	15.4%	3.1%
Total Developed Countries		73.9%	10.5%	-3.1%
China		8.6%	17.7%	-6.2%
Korea		3.4%	4.9%	-16.7%
Taiwan		3.0%	9.0%	-6.1%
India		2.4%	7.2%	6.8%
Brazil		1.9%	8.1%	-4.2%
South Africa		1.5%	4.4%	-18.0%
Russia		1.0%	12.2%	2.2%
Mexico		0.7%	5.5%	-11.7%
Thailand		0.6%	7.4%	-6.9%
Indonesia		0.6%	4.3%	2.0%
Malaysia		0.6%	0.3%	-13.1%
Poland		0.3%	-0.6%	-5.7%
Philippines		0.3%	7.9%	1.8%
Chile		0.3%	4.1%	-17.5%
Qatar		0.2%	-3.5%	22.2%
United Arab Emirates		0.2%	8.7%	1.3%
Turkey		0.1%	-3.2%	-40.3%
Colombia		0.1%	24.8%	5.3%
Peru		0.1%	11.0%	2.2%
Hungary		0.1%	6.0%	0.5%
Greece		0.1%	12.8%	-23.6%
Czech Republic		0.0%	3.8%	-6.8%
Egypt		0.0%	15.8%	-10.2%
Pakistan		0.0%	8.3%	-36.6%
Total Emerging Countries		26.1%	9.9%	-7.4%
Total ACWIXUS Countries		100.0%	10.3%	-4.2%

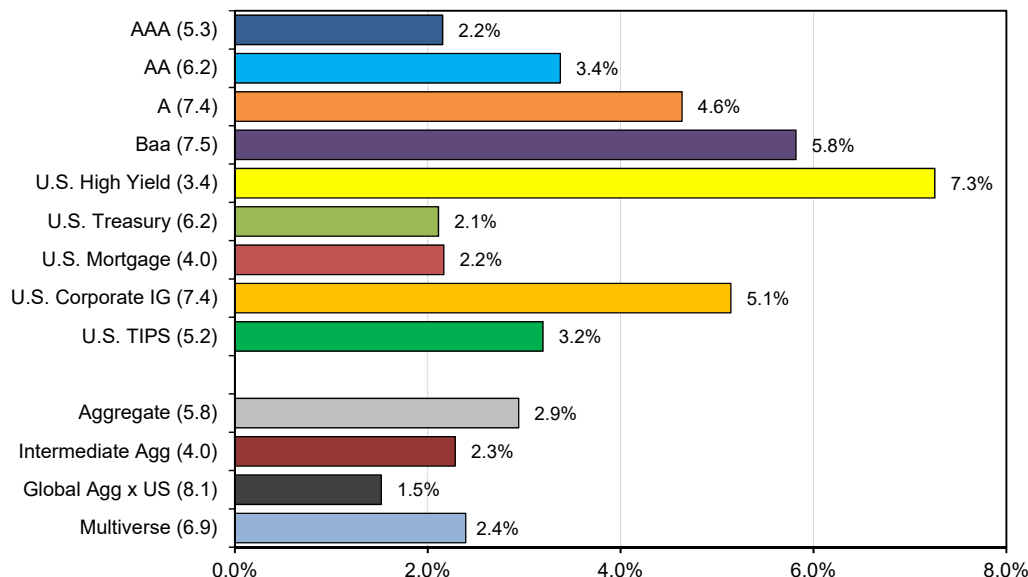
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

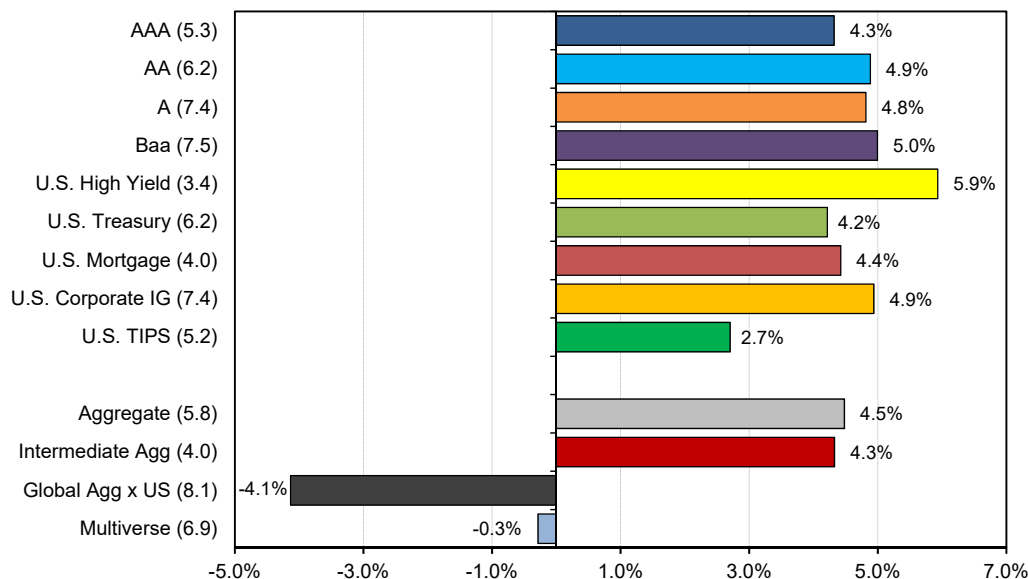


- Broad fixed income benchmarks were positive to start 2019. Following the late 2018 market volatility, the Federal Open Market Committee (FOMC) issued dovish guidance after their January meeting stating that they would be patient in determining future interest rate adjustments. The FOMC also commented on the ongoing balance sheet reduction program, stating that they would be open to changes to the program if market conditions warranted them. Later in March, Fed Chair Jerome Powell communicated that the FOMC is no longer projecting any further interest rate increases through 2019. He also stated that they would begin tapering the roll off from the balance sheet reduction program in May with a plan to halt the program entirely in September. The stoppage of the balance sheet reduction program represents an easing of monetary policy. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. This caused continued inversion in the yield curve with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.14% with the 30-day T-Bill yielding more than the 10-year bond by 0.02%. Historically, an inverted yield curve has been a leading indicator of a recession in the next 6-24 months. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 2.9% and 4.5% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 5.8% for the quarter, while AAA was the worst performing, returning 2.2%. Despite their relatively low durations, high yield securities posted very strong returns for the quarter, gaining 7.3%, as spreads tightened by 135 basis points on these issues. When viewed over the 1-year period, returns for the various quality segments generally show lower quality securities outperforming higher quality issues by a small margin.
- During the 1st quarter, investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors. Investment grade corporate credit returned 5.1%, as the drop in interest rates benefitted these securities to a greater degree and credit spreads tightened considerably since the end of 2018. This quarter's performance carried through to the 1-year period as corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 4.9% versus a 4.4% return for mortgages and 4.2% gain on Treasury securities.

Quarter Performance

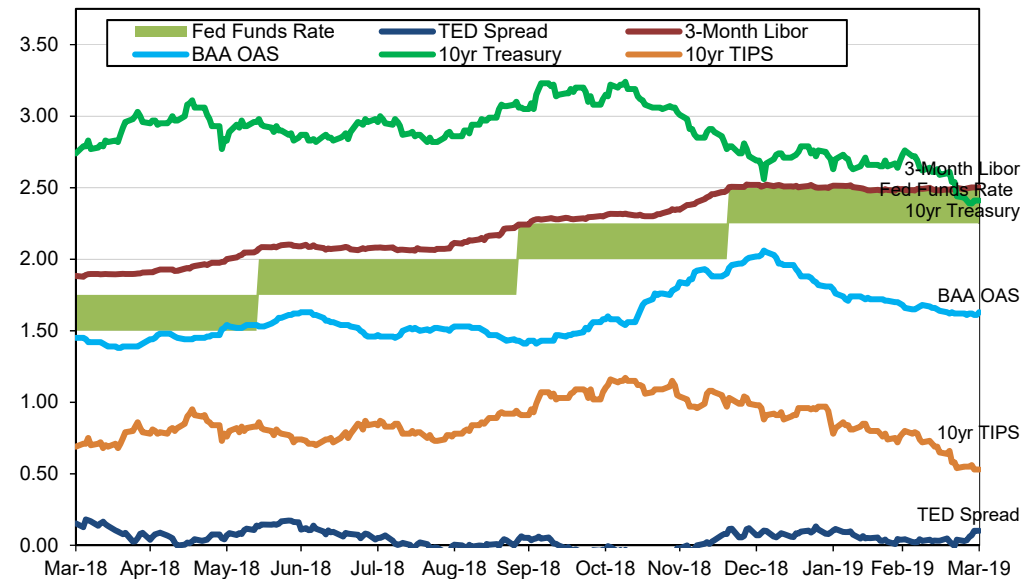


1-Year Performance

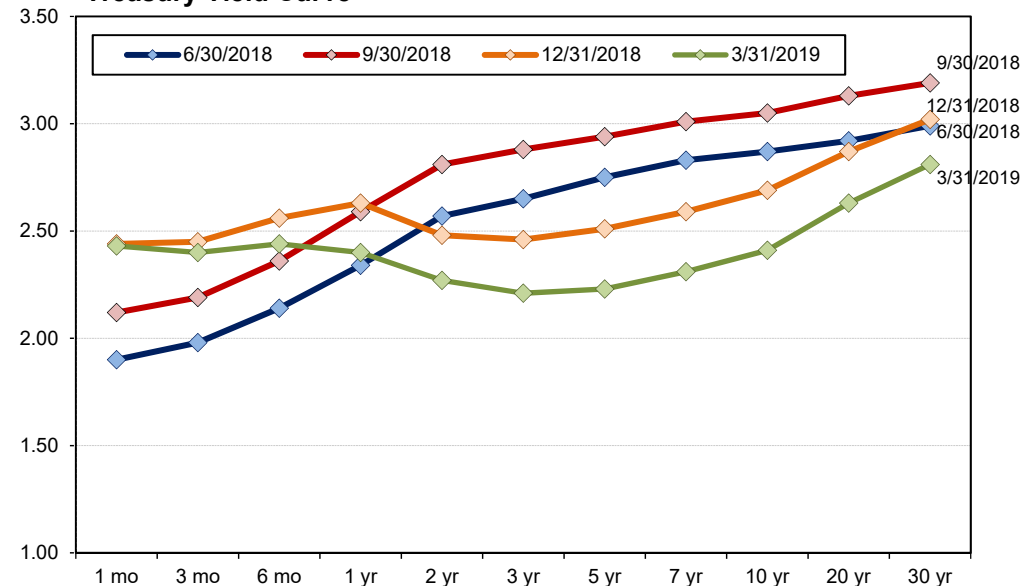


- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 1st quarter. These indices have lower, or in some cases (Germany, Japan), negative yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD has appreciated against most other developed currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 1.5% and -4.1% for the quarter and 1-year period respectively. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. Notably, the ECB announced a program to extend loans to European banks in an effort to increase lending and pledged to keep interest rates steady through the end of 2019. China also announced new stimulus to help spur its economy. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) fell from recent high's greater than 3.0%, to yields below 2.5% to end the first quarter. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads dropped steadily over the 1st quarter of 2019. This spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. These credit spreads have tightened by about 34 basis points over the last three months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate due to the tightening of US monetary policy during 2018. As mentioned, the Fed's current guidance is for zero rate increases in 2019.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift of interest rates as well as a general flattening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorter-term maturities fell less than interest rates in the middle- to long-end of the curve.

1-Year Trailing Market Rates



Treasury Yield Curve



Southfield Employees Retirement System
Total Fund Asset Allocation Compliance Summary

March 31, 2019

Total Portfolio Compliance Summary							
	March 31, 2019 Market Value \$	Current Allocation %	Target Allocation %	Range Allocation %	Act 314 Limit %	Compliance within Ranges	Compliance w/314 Limits
Total Portfolio (excluding Unfunded Commitments)	110,157,102.16	100.0%	100.0%				
Total Equity (14)	73,962,834.71	67.1%	63.5%	53.0% - 70.0%	70.0%	YES	YES
Domestic Equity (14)	55,009,461.71	49.9%	48.0%	43.0% - 53.0%	70.0%	YES	YES
International Equity (14)	18,953,373.00	17.2%	15.5%	10.0% - 20.0%	70.0%	YES	YES
Total US Fixed Income (17 & 17.1.a.iii)	16,314,441.03	14.8%	22.0%	15.0% - 30.0%	100.0%	NO	YES
US Investment Grade Fixed Income (17)	10,546,228.35	9.6%	15.0%	10.0% - 25.0%	100.0%	NO	YES
US Non-Investment Grade Fixed Income (17.1.a.iii)	5,768,212.68	5.2%	5.0%	0.0% - 10.0%	100.0%	YES	YES
Total Non US Fixed Income (20k)	3,339,771.87	3.0%	2.0%	0.0% - 10.0%	20.0%	YES	YES
Total Real Estate (18 & 19)	7,711,541.43	7.0%	6.0%	0.0% - 10.0%	20.0%	YES	YES
Alternative Investments (20d)	8,342,029.69	7.6%	8.5%	0.0% - 10.0%	20.0%	YES	YES
Short Term/Cash Reserves	486,483.43	0.4%	0.0%	0.0% - 5.0%	N/A	YES	YES



EXECUTIVE SUMMARY: 1Q 2019

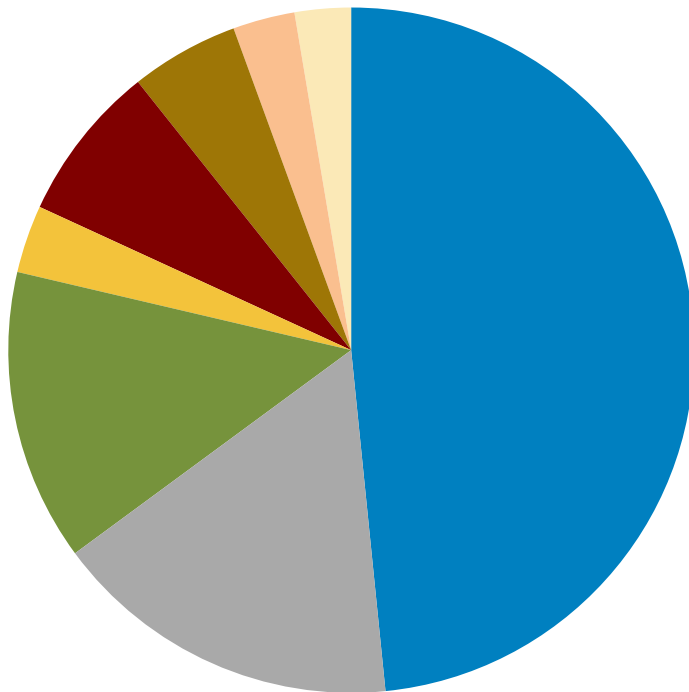
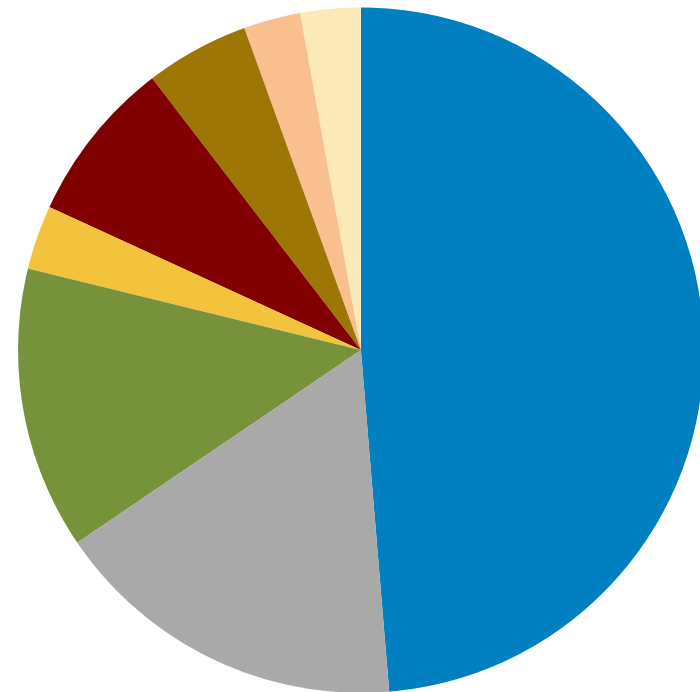
Market Summary:

With the Federal Reserve taking a more dovish tone the capital markets reversed course during the 1st quarter of 2019, recouping much of the losses suffered during the 4th quarter. Better than expected global economic news coupled with muted inflation expectations served to boost asset prices across a wide range of investment categories. Large cap stocks (S&P 500 Index) returned 13.7% in the first quarter, mid cap stocks (Russell Mid Cap) gained 16.5%, and small cap stocks (Russell 2000) appreciated 14.6%. Outside of the US, International stock markets also did very well, with the MSCI EAFE and MSCI Emerging Markets indexes both climbing 10.0% during the 1st quarter. The global markets were fueled by renewed optimism about the trade negotiations between the U.S. and China and solid global economic growth. Interest rates fell across the board as the Fed pressed pause on rate hikes during the quarter. The Bloomberg Barclays U.S. Aggregate Bond Index gained 2.9% in the 1st quarter, benefiting from the Fed's policy change on additional rate hikes. Corporate investment grade bonds returned +5.1% and high yield rose +7.3% as recessionary fears subsided.

Conclusions/Recommendations:

1. The Total Fund returned 9.60% during the quarter, performing in line with the Policy Index and ranking near the top of the Public Fund universe. The Fund benefited from strong returns from domestic and international equities.
2. The Total Fund posted a return of 3.30% over the past year, under performing the Policy Index and ranking in the bottom half of the peer group. Longer-term, the Fund has performed very well, generally exceeding the Policy Index and ranking in the top third of the peer group.
3. SouthernSun out performed the Russell 2000 Index and ranked near the top of their peer group; the manager benefited from strong stock selection. The manager continues to lag performance expectations and remains on watch.
4. Bloomfield Capital II struggled again this quarter. The manager has returned over 60% of the capital during the last 12 months; the remaining portfolio contains some challenging loans and due to the smaller capital base, these loans have a larger impact on performance.
5. Metropolitan and BTG/RMK have not yet reported their first quarter 2019 results (about 3% of the portfolio); these strategies will have minimal impact on the Total Fund. As of 3/31/19, the Plan has outstanding investment commitments with Bloomfield Capital V.
6. The Fund was slightly below the minimum allocation to domestic fixed income (9.6% vs. 10.0%); see AndCo's rebalancing recommendation on the Asset/Manager Summary handout. We did not detect any other violations of investment policies.



Asset Allocation By Segment as of
December 31, 2018 : \$102,473,900Asset Allocation By Segment as of
March 31, 2019 : \$110,157,102

Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	49,600,413	48.4	Domestic Equity	53,635,713	48.7
International Equity	16,904,115	16.5	International Equity	18,515,854	16.8
Domestic Fixed Income	14,110,866	13.8	Domestic Fixed Income	14,681,366	13.3
Global Fixed Income	3,273,975	3.2	Global Fixed Income	3,339,772	3.0
Real Estate	7,636,987	7.5	Real Estate	8,510,691	7.7
Hedge Fund	5,234,608	5.1	Hedge Fund	5,383,239	4.9
Other Illiquid Asset	2,993,426	2.9	Other Illiquid Asset	2,958,791	2.7
Cash Equivalent	2,719,510	2.7	Cash Equivalent	3,131,677	2.8

Financial Reconciliation
Total Fund
1 Quarter Ending March 31, 2019

Financial Reconciliation								
	Market Value 01/01/2019	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 03/31/2019
Total Domestic Equity	50,663,425	-3,000,000	-	-	-63,179	-3,162	7,412,379	55,009,462
Comerica S&P 500 Index Fund	22,159,010	-3,000,000	-	-	-	-	2,976,828	22,135,838
Champlain MC Equity	7,607,029	-	-	-	-16,165	-1,060	1,283,967	8,873,771
QMA US MC Equity	6,315,524	-	-	-	-7,867	-	912,039	7,219,696
SouthernSun SC	9,471,138	-	-	-	-27,038	-1,350	1,635,623	11,078,374
Walhausen & Co. SMID Value	5,110,724	-	-	-	-12,110	-753	603,922	5,701,783
Total International Equity	17,040,955	16,713	-	-	-16,713	-1,179	1,913,597	18,953,373
LSV International LCV	8,478,902	16,713	-	-	-16,713	-	702,137	9,181,039
WCM Focused Growth International	8,562,053	-	-	-	-	-1,179	1,211,459	9,772,334
Total Fixed Income	17,812,061	1,582,622	-	-	-6,776	-1,573	267,879	19,654,213
Pacific Fixed Income	9,362,243	940,000	-	-	-6,776	-1,573	252,334	10,546,228
Bloomfield Capital Income Fund II	962,908	-139,333	-	-	-	-	-92,615	730,961
Bloomfield Capital Income Fund III	4,212,935	-80,658	-	-	-	-	40,764	4,173,041
Bloomfield Capital Income Fund V	-	862,613	-	-	-	-	1,598	864,211
Templeton Global Bond R6 (FBNRX)	3,273,975	-	-	-	-	-	65,797	3,339,772
Total Real Estate	7,695,180	-81,480	-	-	-19,177	-	117,019	7,711,541
AEW Core Property Trust	6,856,568	-	-	-	-19,177	-	117,019	6,954,410
Metropolitan Real Estate V	838,612	-81,480	-	-	-	-	-	757,131
Total Timber Funds	2,993,426	-34,635	-	-	-	-	-	2,958,791
RMK Timberland US Fund	2,079,392	-	-	-	-	-	-	2,079,392
RMK Timberland Intl Fund	914,034	-34,635	-	-	-	-	-	879,399
Total Hedge Fund of Funds	5,234,608	-	-	-	-	-	148,630	5,383,239
Magnitude Institutional	2,710,420	-	-	-	-	-	77,603	2,788,023
Titan Masters Int'l Fund	2,524,188	-	-	-	-	-	71,027	2,595,215
Cash Account	1,034,245	1,516,780	1,085,380	-3,156,019	-	-42,292	48,388	486,483
Total Fund	102,473,900	-	1,085,380	-3,156,019	-105,845	-48,206	9,907,892	110,157,102

*Other expenses represent any professional fees outside of the management fee (custody, consultant, attorney, and admin).



Comparative Performance

Trailing Returns

As of March 31, 2019

Comparative Performance																	
	QTR		FYTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception		Inception Date
Total Fund	9.60	(17)	1.48	(92)	3.30	(75)	9.09	(21)	5.93	(54)	8.49	(10)	12.33	(1)	7.63	(6)	06/01/1997
Total Fund Policy	9.57	(17)	2.40	(74)	4.52	(39)	8.94	(23)	6.56	(24)	8.33	(13)	11.29	(7)	7.89	(2)	
Difference	0.03		-0.92		-1.22		0.15		-0.63		0.16		1.04		-0.26		
All Public Plans-Total Fund Median	8.50		3.04		4.13		8.37		6.01		7.40		9.83		6.86		
Total Domestic Equity	14.64	(40)	0.98	(59)	4.46	(56)	11.33	(51)	7.22	(61)	10.82	(54)	16.10	(33)	8.79	(76)	02/01/1992
Total Domestic Equity Policy	14.21	(45)	0.30	(62)	5.23	(51)	12.70	(39)	9.07	(38)	11.86	(37)	15.96	(36)	10.20	(39)	
Difference	0.43		0.68		-0.77		-1.37		-1.85		-1.04		0.14		-1.41		
IM U.S. Equity (SA+CF+MF) Median	13.68		2.10		5.39		11.40		8.05		11.02		15.17		9.75		
Total International Equity	11.23	(39)	-1.19	(34)	-1.89	(16)	9.86	(26)	5.34	(18)	7.98	(14)	11.14	(26)	2.48	(35)	12/01/2007
Total International Equity Policy	9.98	(62)	-2.51	(48)	-3.71	(25)	7.27	(55)	2.33	(63)	5.63	(44)	8.96	(62)	1.03	(64)	
Difference	1.25		1.32		1.82		2.59		3.01		2.35		2.18		1.45		
IM International Equity (SA+CF+MF) Median	10.53		-2.75		-6.81		7.57		2.95		5.26		9.51		1.70		
Total Fixed Income	1.53	(100)	3.59	(98)	4.02	(96)	5.08	(3)	4.79	(2)	4.23	(5)	5.34	(26)	5.39	(26)	03/01/2009
Total Fixed Income Policy	2.94	(83)	4.65	(79)	4.48	(80)	2.03	(89)	2.74	(90)	2.48	(95)	3.77	(94)	3.88	(94)	
Difference	-1.41		-1.06		-0.46		3.05		2.05		1.75		1.57		1.51		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.23		4.79		4.70		2.54		3.10		2.94		4.65		4.80		
Total Real Estate	1.54	(68)	4.65	(90)	6.81	(90)	7.53	(84)	9.63	(86)	7.03	(100)	N/A		5.47	(100)	01/01/2012
Total Real Estate Policy	1.80	(60)	4.93	(87)	6.83	(90)	7.07	(92)	9.13	(91)	9.62	(92)	8.51	(74)	9.65	(91)	
Difference	-0.26		-0.28		-0.02		0.46		0.50		-2.59		N/A		-4.18		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.93		5.96		8.23		8.56		10.54		11.38		9.45		11.43		
Total Hedge Fund of Funds	2.84		0.60		2.47		3.95		N/A		N/A		N/A		2.17		08/01/2015
HFRI FOF: Diversified Index	4.26		0.06		0.76		3.67		2.15		3.11		3.52		1.34		
Difference	-1.42		0.54		1.71		0.28		N/A		N/A		N/A		0.83		
Total Timber Funds	0.00		4.35		0.83		-0.21		-2.27		N/A		N/A		-0.39		08/01/2012
Total Timber Policy	0.11		1.89		2.38		3.27		4.63		5.97		3.74		6.10		
Difference	-0.11		2.46		-1.55		-3.48		-6.90		N/A		N/A		-6.49		

** All History prior to 3/31/2015, obtained from prior consultant.**

LP Real Estate and Timber Funds separate accounts are presented on the IRR page.



Comparative Performance

Trailing Returns

As of March 31, 2019

	QTR	FYTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Domestic Equity	14.64 (40)	0.98 (59)	4.46 (56)	11.33 (51)	7.22 (61)	10.82 (54)	16.10 (33)	8.79 (76)	02/01/1992
Total Domestic Equity Policy	14.21 (45)	0.30 (62)	5.23 (51)	12.70 (39)	9.07 (38)	11.86 (37)	15.96 (36)	10.20 (39)	
Difference	0.43	0.68	-0.77	-1.37	-1.85	-1.04	0.14	-1.41	
IM U.S. Equity (SA+CF+MF) Median	13.68	2.10	5.39	11.40	8.05	11.02	15.17	9.75	
 Comerica S&P 500 Index Fund	 13.60 (42)	 5.88 (31)	 9.50 (25)	 13.49 (34)	 10.91 (36)	 12.85 (44)	 15.94 (40)	 8.51 (58)	 04/01/2006
S&P 500 Index	13.65 (38)	5.86 (31)	9.50 (25)	13.51 (33)	10.91 (35)	12.85 (44)	15.92 (41)	8.47 (62)	
Difference	-0.05	0.02	0.00	-0.02	0.00	0.00	0.02	0.04	
IM U.S. Large Cap Core Equity (SA+CF) Median	13.23	4.42	7.74	12.88	10.38	12.76	15.65	8.57	
 Champlain MC Equity	 16.90 (21)	 12.21 (1)	 16.65 (2)	 N/A	 N/A	 N/A	 N/A	 18.34 (5)	 08/01/2017
Russell Midcap Index	16.54 (30)	3.55 (33)	6.47 (29)	11.82 (35)	8.81 (43)	11.99 (45)	16.88 (45)	8.54 (29)	
Difference	0.36	8.66	10.18	N/A	N/A	N/A	N/A	9.80	
IM U.S. Mid Cap Core Equity (SA+CF) Median	14.58	-0.80	2.74	11.24	8.37	11.59	16.70	6.53	
 QMA US MC Equity	 14.44 (68)	 -4.07 (90)	 -1.99 (95)	 N/A	 N/A	 N/A	 N/A	 3.47 (88)	 08/01/2017
Russell Midcap Index	16.54 (30)	3.55 (33)	6.47 (29)	11.82 (35)	8.81 (43)	11.99 (45)	16.88 (45)	8.54 (29)	
Difference	-2.10	-7.62	-8.46	N/A	N/A	N/A	N/A	-5.07	
IM U.S. Mid Cap Core Equity (SA+CF) Median	14.58	-0.80	2.74	11.24	8.37	11.59	16.70	6.53	
 SouthernSun SC	 17.27 (14)	 -9.33 (93)	 -6.23 (99)	 5.55 (100)	 -1.39 (100)	 5.67 (100)	 16.05 (63)	 8.36 (93)	 04/01/2008
Russell 2000 Index	14.58 (42)	-5.29 (57)	2.05 (49)	12.92 (43)	7.05 (72)	10.74 (77)	15.36 (81)	9.11 (81)	
Difference	2.69	-4.04	-8.28	-7.37	-8.44	-5.07	0.69	-0.75	
IM U.S. Small Cap Core Equity (SA+CF) Median	13.99	-4.85	1.77	12.65	7.92	11.75	16.49	10.12	
 Walhausen & Co. SMID Value	 11.83 (86)	 -5.27 (70)	 -0.89 (59)	 9.94 (43)	 N/A	 N/A	 N/A	 9.53 (54)	 10/01/2015
Russell 2500 Value Index	13.12 (66)	-3.75 (57)	1.84 (41)	9.85 (44)	6.02 (66)	10.22 (67)	15.03 (69)	10.27 (45)	
Difference	-1.29	-1.52	-2.73	0.09	N/A	N/A	N/A	-0.74	
IM U.S. SMID Cap Value Equity (SA+CF) Median	13.93	-3.21	0.41	9.61	6.82	10.90	16.04	9.74	

** All History prior to 3/31/2015, obtained from prior consultant.**

LP Real Estate and Timber Funds separate accounts are presented on the IRR page.



Comparative Performance
Trailing Returns
As of March 31, 2019

	QTR		FYTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception		Inception Date
Total International Equity	11.23	(39)	-1.19	(34)	-1.89	(16)	9.86	(26)	5.34	(18)	7.98	(14)	11.14	(26)	2.48	(35)	12/01/2007
Total International Equity Policy	9.98	(62)	-2.51	(48)	-3.71	(25)	7.27	(55)	2.33	(63)	5.63	(44)	8.96	(62)	1.03	(64)	
Difference	1.25		1.32		1.82		2.59		3.01		2.35		2.18		1.45		
IM International Equity (SA+CF+MF) Median	10.53		-2.75		-6.81		7.57		2.95		5.26		9.51		1.70		
LSV International LCV	8.28	(82)	-5.41	(75)	-9.05	(83)	7.13	(54)	2.48	(56)	6.52	(35)	10.10	(45)	4.22	(77)	01/01/2006
MSCI EAFE Index	10.13	(35)	-2.27	(46)	-3.22	(34)	7.80	(41)	2.81	(47)	6.13	(47)	9.47	(60)	4.16	(81)	
Difference	-1.85		-3.14		-5.83		-0.67		-0.33		0.39		0.63		0.06		
IM International Large Cap Value Equity (SA+CF) Median	9.41		-3.06		-4.68		7.35		2.60		6.07		9.80		4.91		
WCM Focused Growth International	14.15	(23)	3.13	(4)	5.92	(1)	12.99	(10)	8.78	(7)	9.77	(12)	N/A		10.51	(10)	11/01/2011
MSCI EAFE (Net) Index	9.98	(91)	-2.51	(40)	-3.71	(45)	7.27	(72)	2.33	(96)	5.63	(92)	8.96	(95)	5.93	(95)	
Difference	4.17		5.64		9.63		5.72		6.45		4.14		N/A		4.58		
IM International Growth Equity (SA+CF) Median	12.26		-3.75		-4.64		8.44		4.50		7.22		11.42		7.90		

** All History prior to 3/31/2015, obtained from prior consultant.**

LP Real Estate and Timber Funds separate accounts are presented on the IRR page.



Comparative Performance

Trailing Returns

As of March 31, 2019

	QTR	FYTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fixed Income	1.53 (100)	3.59 (98)	4.02 (96)	5.08 (3)	4.79 (2)	4.23 (5)	5.34 (26)	5.39 (26)	03/01/2009
Total Fixed Income Policy	2.94 (83)	4.65 (79)	4.48 (80)	2.03 (89)	2.74 (90)	2.48 (95)	3.77 (94)	3.88 (94)	
Difference	-1.41	-1.06	-0.46	3.05	2.05	1.75	1.57	1.51	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.23	4.79	4.70	2.54	3.10	2.94	4.65	4.80	
Pacific Fixed Income	2.90 (84)	4.59 (84)	4.36 (91)	2.80 (35)	3.01 (60)	2.82 (63)	4.10 (80)	5.32 (65)	06/01/1997
Blmbg. Barc. U.S. Aggregate Index	2.94 (83)	4.65 (79)	4.48 (80)	2.03 (89)	2.74 (90)	2.48 (95)	3.77 (94)	5.05 (93)	
Difference	-0.04	-0.06	-0.12	0.77	0.27	0.34	0.33	0.27	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.23	4.79	4.70	2.54	3.10	2.94	4.65	5.46	
Templeton Global Bond R6 (FBNRX)	2.01 (86)	4.85 (9)	2.19 (39)	N/A	N/A	N/A	N/A	0.72 (100)	04/01/2017
Blmbg. Barc. Global Multiverse	2.39 (76)	2.62 (60)	-0.29 (56)	1.85 (67)	1.20 (58)	1.41 (69)	3.33 (70)	3.32 (25)	
Difference	-0.38	2.23	2.48	N/A	N/A	N/A	N/A	-2.60	
IM Global Fixed Income (MF) Median	3.10	3.00	0.24	2.25	1.31	1.70	3.95	2.78	
Total Real Estate	1.54 (68)	4.65 (90)	6.81 (90)	7.53 (84)	9.63 (86)	7.03 (100)	N/A	5.47 (100)	01/01/2012
Total Real Estate Policy	1.80 (60)	4.93 (87)	6.83 (90)	7.07 (92)	9.13 (91)	9.62 (92)	8.51 (74)	9.65 (91)	
Difference	-0.26	-0.28	-0.02	0.46	0.50	-2.59	N/A	-4.18	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.93	5.96	8.23	8.56	10.54	11.38	9.45	11.43	
AEW Core Property Trust	1.71 (66)	5.34 (83)	7.77 (69)	7.94 (76)	9.68 (85)	N/A	N/A	10.10 (85)	10/01/2012
NCREIF Fund Index-ODCE (VW)	1.42 (70)	5.36 (82)	7.52 (76)	7.97 (76)	10.18 (71)	10.77 (72)	8.74 (69)	10.74 (70)	
Difference	0.29	-0.02	0.25	-0.03	-0.50	N/A	N/A	-0.64	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.93	5.96	8.23	8.56	10.54	11.38	9.45	11.39	
Total Hedge Fund of Funds	2.84	0.60	2.47	3.95	N/A	N/A	N/A	2.17	08/01/2015
HFRI FOF: Diversified Index	4.26	0.06	0.76	3.67	2.15	3.11	3.52	1.34	
Difference	-1.42	0.54	1.71	0.28	N/A	N/A	N/A	0.83	
Magnitude Institutional	2.86	1.47	1.86	3.61	N/A	N/A	N/A	3.02	08/01/2015
HFRI FOF: Diversified Index	4.26	0.06	0.76	3.67	2.15	3.11	3.52	1.34	
Difference	-1.40	1.41	1.10	-0.06	N/A	N/A	N/A	1.68	
Titan Masters Int'l Fund	2.81	-0.33	3.13	4.31	N/A	N/A	N/A	1.02	08/01/2015
HFRI FOF: Diversified Index	4.26	0.06	0.76	3.67	2.15	3.11	3.52	1.34	
Difference	-1.45	-0.39	2.37	0.64	N/A	N/A	N/A	-0.32	

** All History prior to 3/31/2015, obtained from prior consultant.**

LP Real Estate and Timber Funds separate accounts are presented on the IRR page.



Comparative Performance - IRR

As of March 31, 2019

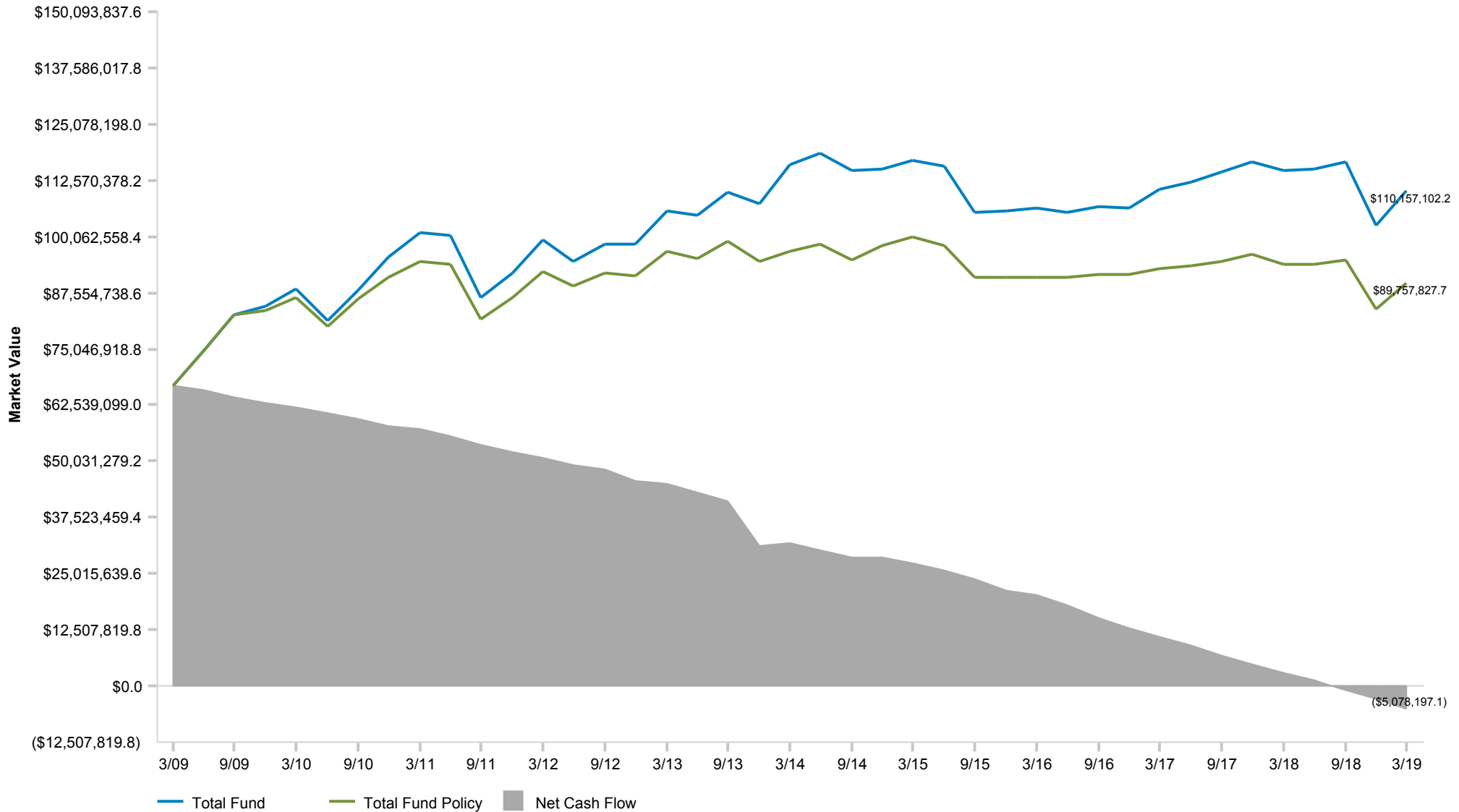
Comparative Performance - IRR

	QTR	FYTD	1 YR	3 YR	5 YR	7 YR	Since Inception Ending Mar-2019	Inception Date
Bloomfield Capital Income Fund II	-10.95	-10.01	-7.99	5.42	N/A	N/A	6.95	12/22/2014
Bloomfield Capital Income Fund III	0.98	4.71	6.96	N/A	N/A	N/A	9.35	12/31/2016
Bloomfield Capital Income Fund V	N/A	N/A	N/A	N/A	N/A	N/A	0.29	02/14/2019
Metropolitan Real Estate V	0.00	-0.78	-0.24	5.23	9.88	9.45	8.70	11/30/2011
RMK Timberland US Fund	0.00	7.32	9.46	4.41	2.21	N/A	3.98	10/31/2012
RMK Timberland Intl Fund	0.00	-1.88	-14.76	-8.17	-8.98	N/A	-7.91	11/21/2012



Schedule of Investable Assets
Total Fund
10 Years Ending March 31, 2019

Schedule of Investable Assets

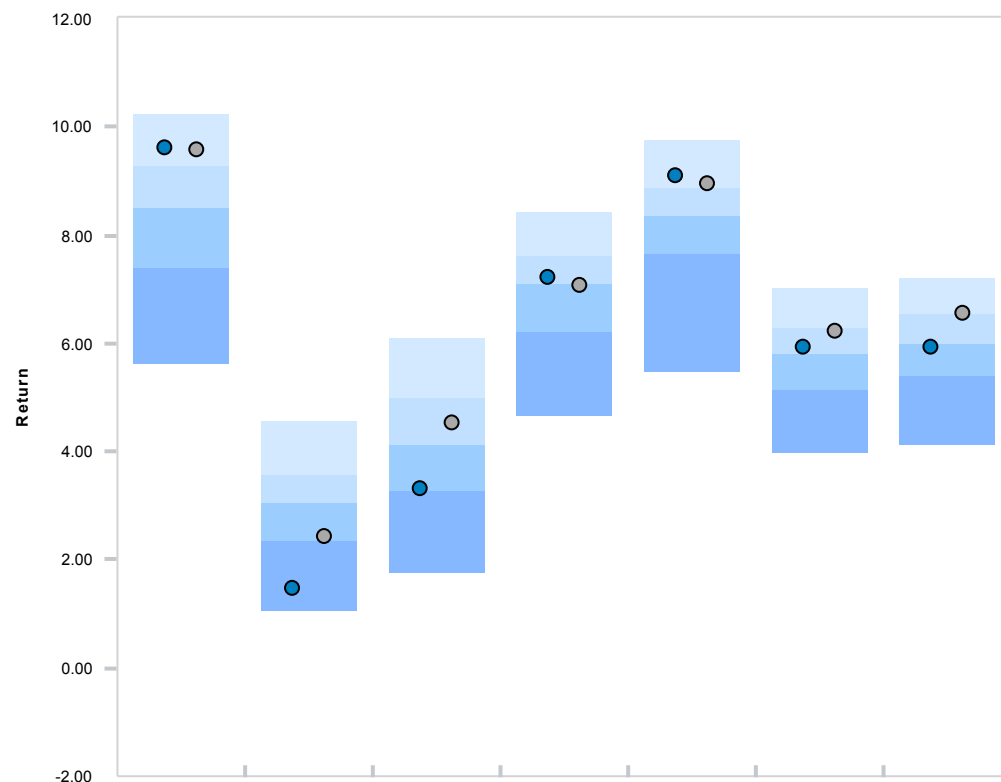


Schedule of Investable Assets

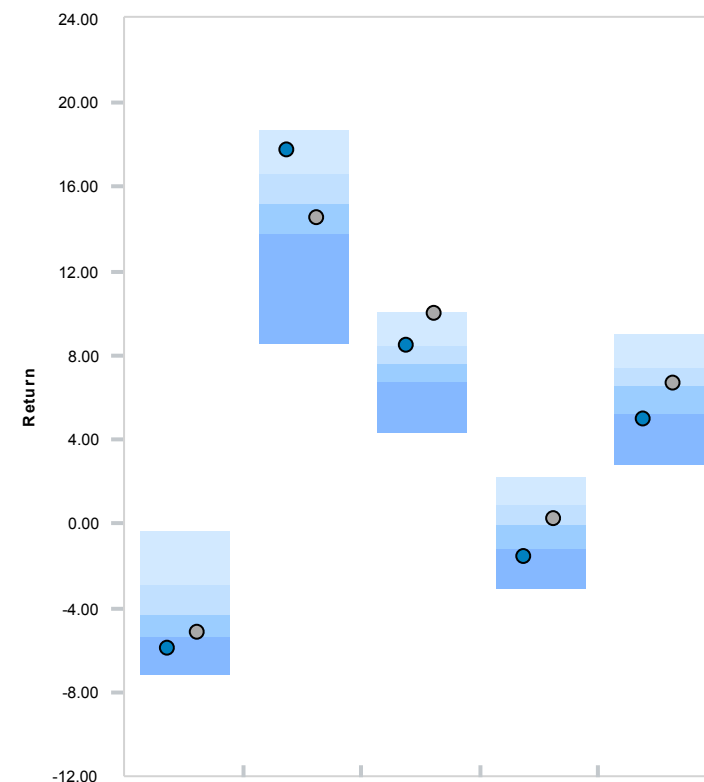
Periods Ending	Beginning Market Value \$	Contributions \$	Withdrawals \$	Gain/Loss \$	Net Cash Flow \$	Ending Market Value \$
10 YR	66,722,614	111,738,720	183,539,531	115,235,299	-71,800,811	110,157,102



Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fund	9.60 (17)	1.48 (92)	3.30 (75)	7.21 (46)	9.09 (21)	5.94 (45)	5.93 (54)
● Total Fund Policy	9.57 (17)	2.40 (74)	4.52 (39)	7.05 (52)	8.94 (23)	6.21 (32)	6.56 (24)
Median	8.50	3.04	4.13	7.11	8.37	5.80	6.01

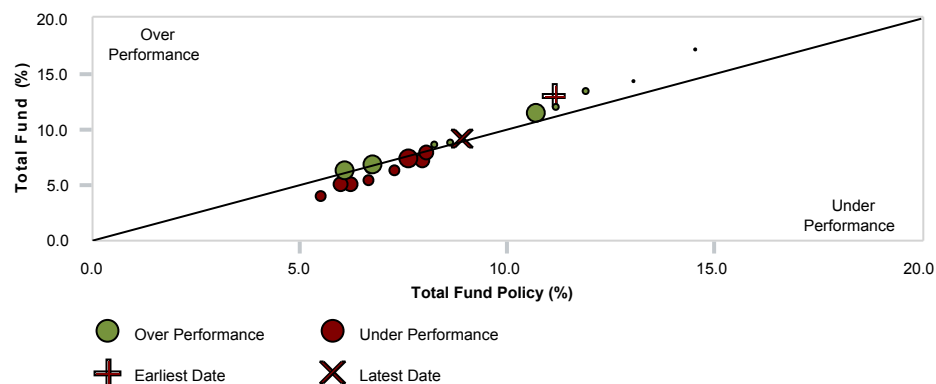


	2018	2017	2016	2015	2014
● Total Fund	-5.93 (86)	17.76 (9)	8.43 (26)	-1.58 (82)	4.92 (82)
● Total Fund Policy	-5.15 (72)	14.48 (64)	9.99 (6)	0.18 (45)	6.66 (46)
Median	-4.32	15.21	7.60	-0.05	6.52

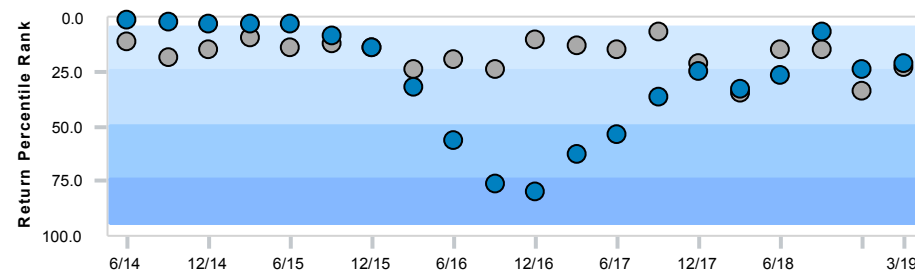
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Total Fund	-10.30 (95)	3.22 (23)	1.79 (22)	-0.19 (45)	3.68 (48)	4.02 (16)
Total Fund Policy	-9.38 (86)	3.13 (29)	2.06 (15)	-0.56 (72)	3.68 (48)	3.47 (49)
All Public Plans-Total Fund Median	-7.75	2.70	1.19	-0.27	3.64	3.46

3 Yr Rolling Under/Over Performance - 5 Years

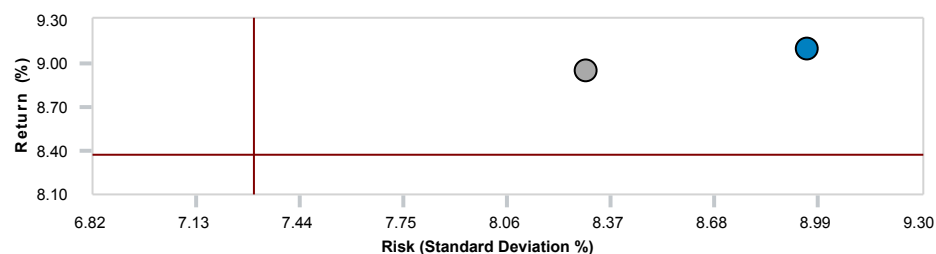


3 Yr Rolling Percentile Ranking - 5 Years



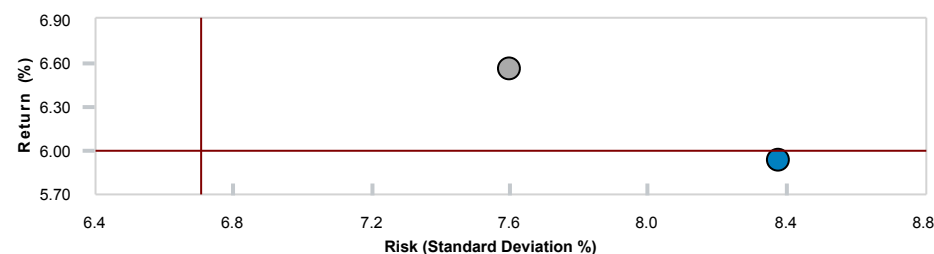
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Fund	20	11 (55%)	4 (20%)	3 (15%)	2 (10%)
Total Fund Policy	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Total Fund	9.09	8.96
Total Fund Policy	8.94	8.30
Median	8.37	7.30

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Total Fund	5.93	8.38
Total Fund Policy	6.56	7.60
Median	6.01	6.71

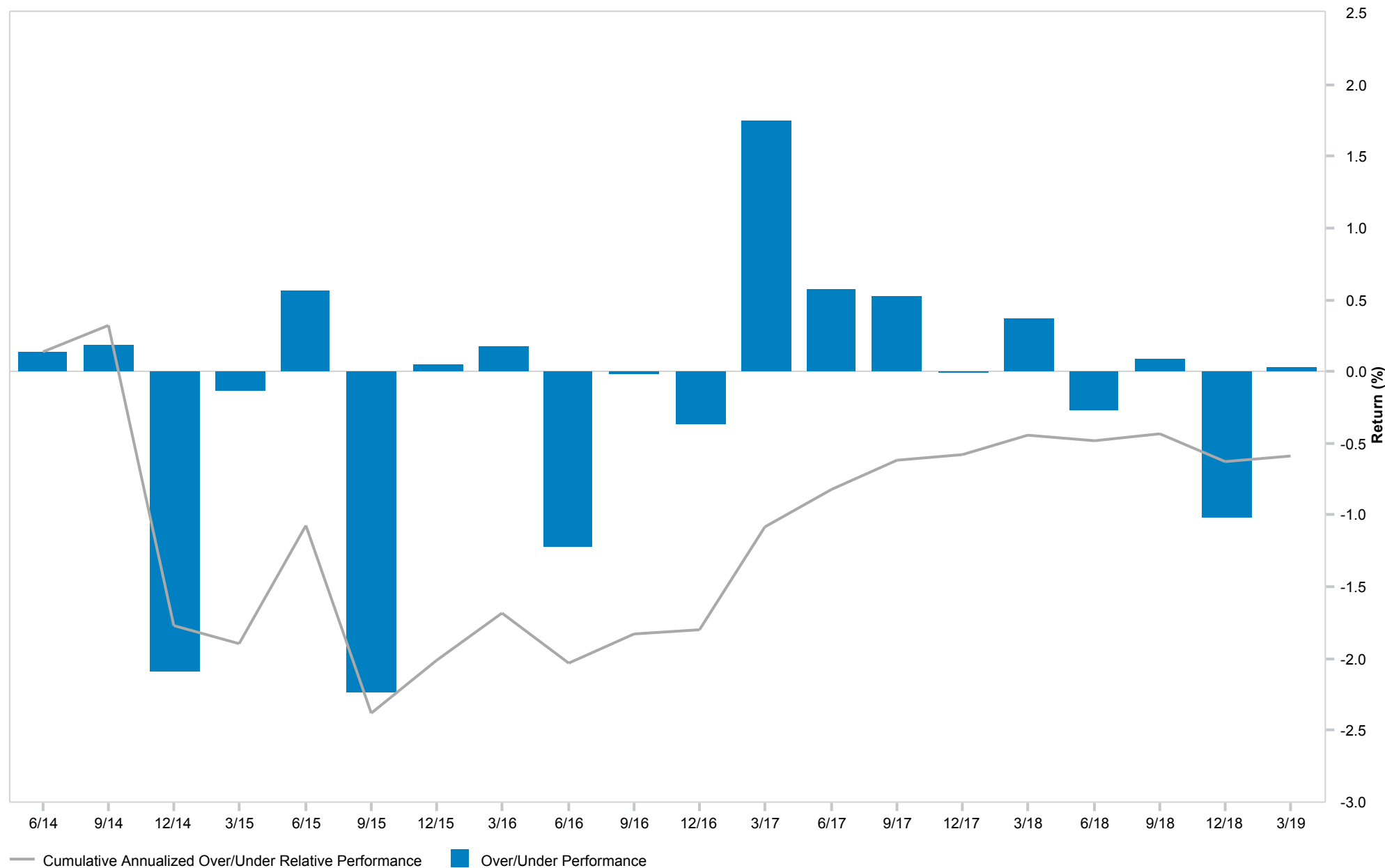
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.49	103.14	105.52	-0.40	0.14	0.89	1.07	5.95
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.94	1.00	5.42

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.78	98.51	110.85	-1.07	-0.30	0.65	1.08	5.75
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.79	1.00	4.93

Relative Performance



Calculation based on quarterly periodicity.
 Benchmark: 65% MSCI ACWi / 35% Barclays Global Agg



Comerica S&P 500 - Portfolio Description

- Strategy: S&P 500 Index Fund
- Vehicle: Commingled Fund
- Objective: To replicate the S&P 500
- Annual fees: .10% on first \$5M
.08% on next \$20M
.06% on next \$25M
- Benchmark: S&P 500 Index

Comerica S&P 500 - Strategy Details

The 500 Index Strategy seeks to provide investment results generally corresponding to the aggregate price and dividend performance of the publicly traded common stocks in the large- capitalization sector of the U.S. equity market. The fund pursues this objective by investing primarily in the 500 common stocks that compose the S&P 500 Index.

Champlain MidCap Equity - Portfolio Description

- Strategy: Mid Cap Equity
- Vehicle: Separately Managed Account
- Objective: To outperform the Russell Midcap Index
- Annual fees: .85% on first \$50MM
.75% on next \$50MM
.65% over \$100M
- Benchmark: Russell Midcap Index

Champlain MidCap Equity - Strategy Details

Champlain's mid cap strategy invests in a broadly diversified portfolio of approximately 50 to 75 common stocks of medium sized companies, and to a lesser extent small and large sized companies, which have attractive long-term fundamentals, appreciation potential, and valuations. They believe that investing in companies with sustainable competitive advantages, durable business models, sound balance sheets, credible and sincere management, and that are trading at valuations deemed reasonable by the team, can, over time, provide attractive returns with less risk than the overall market. Their investment processes are focused on absolute returns and avoiding large losses, which they believe is critical to wealth creation.

QMA Midcap Equity - Portfolio Description

- Strategy: US Mid Cap Fore Equity
- Vehicle: Commingled Account
- Objective: To outperform the Russell Midcap Index
- Annual fees: .45% on first \$50MM
.40% over \$50M
- Benchmark: Russell Midcap Index

QMA Midcap Equity - Strategy Details

At QMA, they believe that an adaptive, bottom-up, systematic investment process based on fundamental insights is the most efficient way to exploit market inefficiencies and add value. On a daily basis they assess the relative attractiveness of their universe, scoring stocks according to fundamentals most relevant to their growth characteristics-more emphasis on valuation for slowly growing companies and indicators of future growth prospects for faster growing companies. These scores form the basis of the construction process whereby they focus risk on a breadth of exposures most likely to produce alpha and limit exposures to uncompensated off-benchmark risk. Rebalancing is done with experienced judgment to maintain desired portfolio alpha exposures and risk limits and with careful attention to trading costs.



SouthernSun Smallcap Equity - Portfolio Description

- Strategy: Small Cap
- Vehicle: Separately Managed Account
- Objective: To outperform the Russell 2000 Index
- Annual fees: 1.00% on first \$15M
- 0.85% over \$15M
- Benchmark: Russell 2000 Index

SouthernSun Smallcap Equity - Strategy Details

The Small Cap strategy targets companies with market caps of \$500 million to \$3.5 billion at time of initial purchase. While idea generation may come from traditional screening, new names are often sourced through research on existing portfolio holdings, industry trade publications, and industry conferences. The Investment Team relies almost solely on internally conducted research for idea generation. This strategy is generally closed to new investors.

Walhausen SMID Value Equity - Portfolio Description

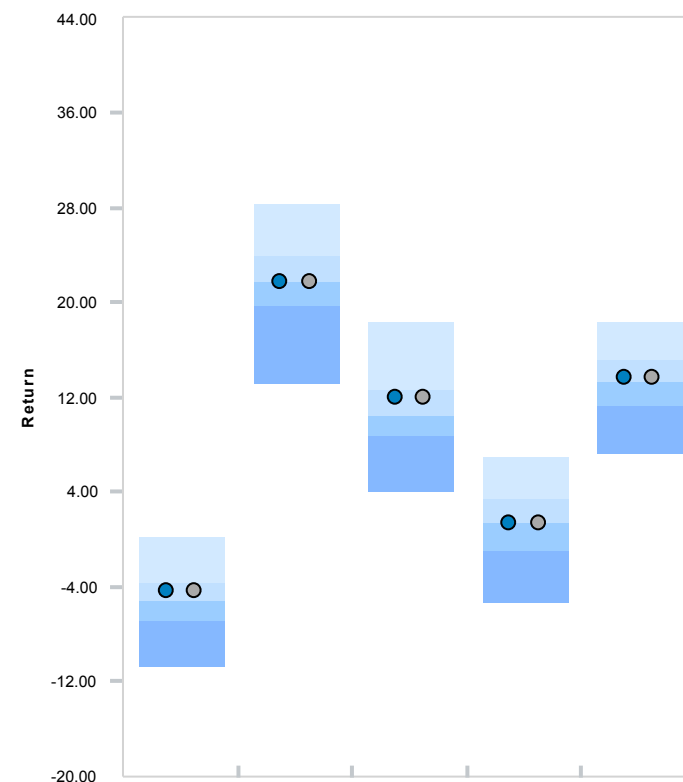
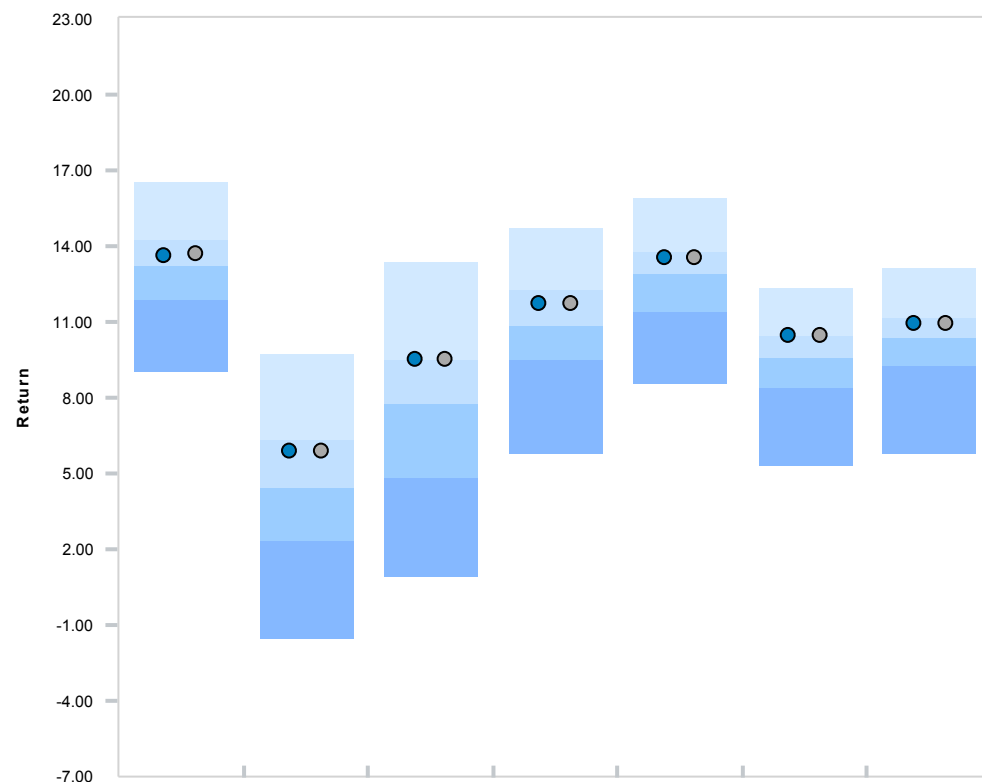
- Strategy: Select Value (SMID)
- Vehicle: Separately Managed Account
- Objective: To outperform the Russell 2500 Index
- Annual fees: 1.00% of Assets
- Benchmark: Russell 2500 Index

Walhausen SMID Value Equity - Strategy Details

This portfolio is constructed to provide strong returns with moderate volatility. It incorporates 40-50 equally weighted holdings, broadly diversified across industry sectors. Positions are reduced when they begin to exceed 3.0% of the portfolio. Companies included in the portfolio have a market capitalization between \$700 million and \$7.0 billion. The majority (about 80%) of the portfolio is with companies which have consistently high returns on capital, ample free cash flow, well proven management and sell at moderate valuations. Many of these stocks are frequently too dull to attract much "Wall Street" attention and thus have carried low valuations and lower volatility. The remaining 20% of the fund is invested in "Special Situations." For these stocks a focused approach is utilized to find 8-10 names with unusual potential returns. The goal is for both parts of the strategy to outperform over the market cycle, and to deliver annualized returns 200 basis points above the Russell 2500 Value index.



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



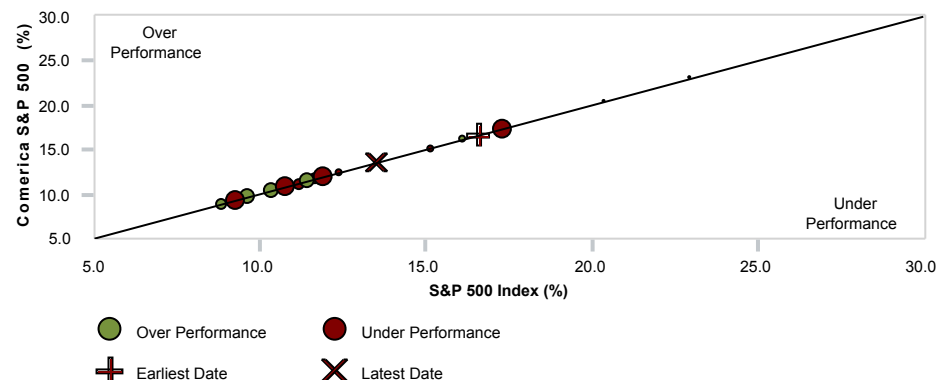
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Comerica S&P 500	13.60 (42)	5.88 (31)	9.50 (25)	11.71 (35)	13.49 (34)	10.45 (25)	10.91 (36)
● S&P 500 Index	13.65 (38)	5.86 (31)	9.50 (25)	11.72 (34)	13.51 (33)	10.46 (25)	10.91 (35)
Median	13.23	4.42	7.74	10.87	12.88	9.55	10.38

	2018	2017	2016	2015	2014
● Comerica S&P 500	-4.35 (36)	21.80 (51)	11.94 (34)	1.44 (50)	13.66 (45)
● S&P 500 Index	-4.38 (37)	21.83 (50)	11.96 (34)	1.38 (52)	13.69 (44)
Median	-5.24	21.83	10.52	1.43	13.42

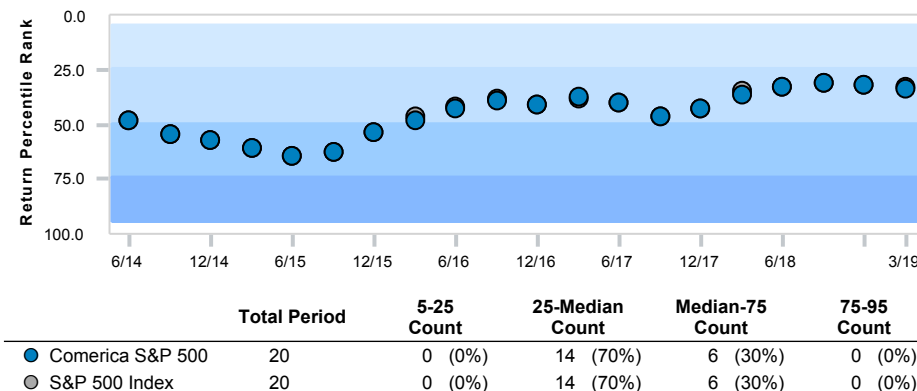
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Comerica S&P 500	-13.47 (41)	7.70 (35)	3.43 (35)	-0.77 (66)	6.63 (53)	4.48 (59)
S&P 500 Index	-13.52 (44)	7.71 (34)	3.43 (33)	-0.76 (64)	6.64 (51)	4.48 (59)
IM U.S. Large Cap Core Equity (SA+CF) Median	-13.84	7.15	2.90	-0.44	6.66	4.63

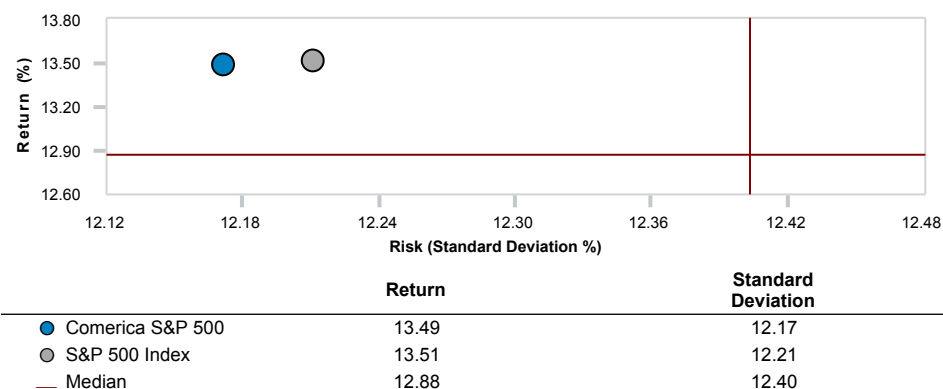
3 Yr Rolling Under/Over Performance - 5 Years



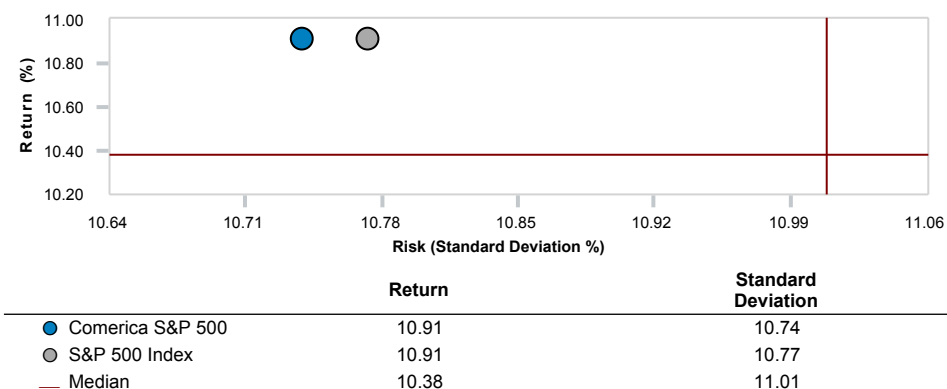
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



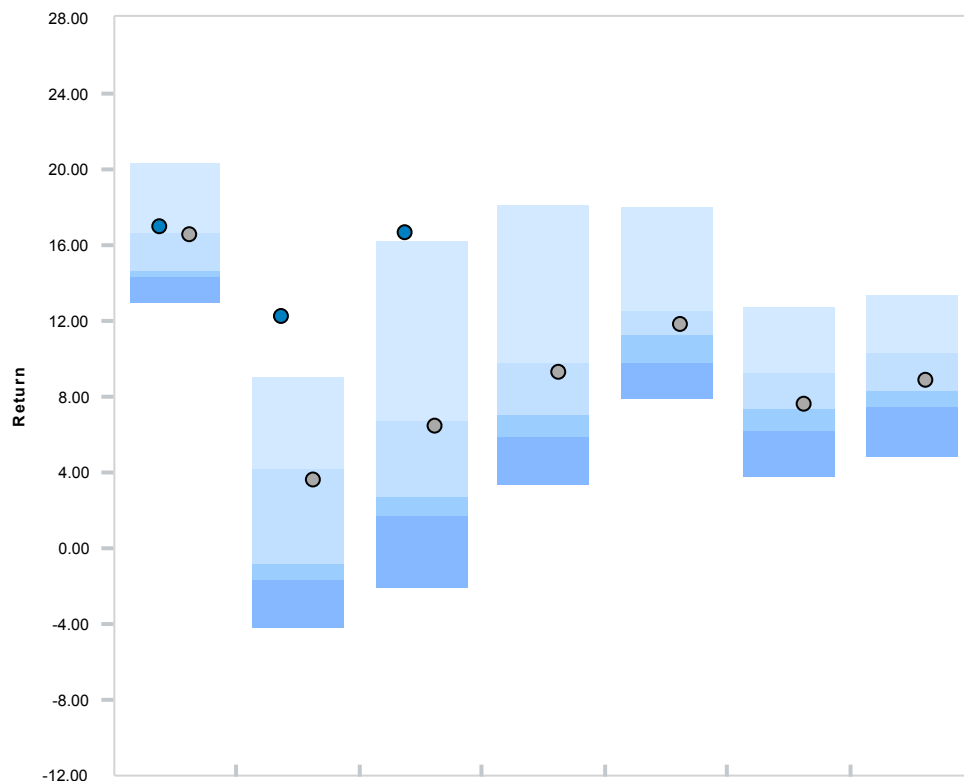
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Comerica S&P 500	0.04	99.84	99.84	0.01	-0.55	1.15	1.00	7.09
S&P 500 Index	0.00	100.00	100.00	0.00	N/A	1.15	1.00	7.11

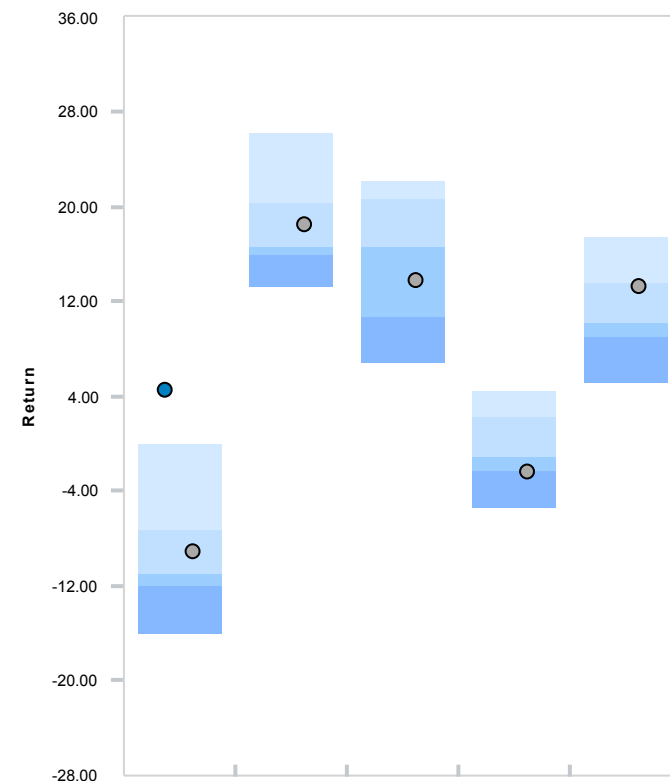
Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Comerica S&P 500	0.04	99.92	99.87	0.01	-0.09	0.93	1.00	6.92
S&P 500 Index	0.00	100.00	100.00	0.00	N/A	0.93	1.00	6.93

Peer Group Analysis - IM U.S. Mid Cap Core Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Champlain MC Equity	16.90 (21)	12.21 (1)	16.65 (2)	N/A	N/A	N/A	N/A
● Russell Midcap Index	16.54 (30)	3.55 (33)	6.47 (29)	9.30 (26)	11.82 (35)	7.62 (40)	8.81 (43)
Median	14.58	-0.80	2.74	7.06	11.24	7.34	8.37



	2018	2017	2016	2015	2014
● Champlain MC Equity	4.54 (2)	N/A	N/A	N/A	N/A
● Russell Midcap Index	-9.06 (34)	18.52 (35)	13.80 (61)	-2.44 (82)	13.22 (28)
Median	-11.01	16.66	16.68	-0.97	10.25

Comparative Performance

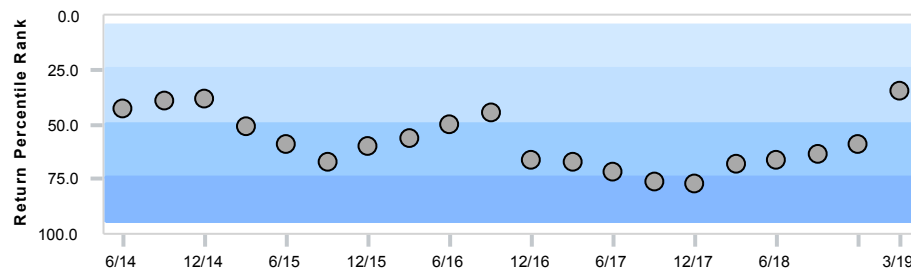
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Champlain MC Equity	-11.50 (4)	8.46 (2)	3.95 (43)	4.77 (6)	6.35 (44)	N/A
Russell Midcap Index	-15.37 (26)	5.00 (36)	2.82 (59)	-0.46 (40)	6.07 (68)	3.47 (49)
IM U.S. Mid Cap Core Equity (SA+CF) Median	-17.15	4.37	3.64	-0.76	6.27	3.42



3 Yr Rolling Under/Over Performance - 5 Years

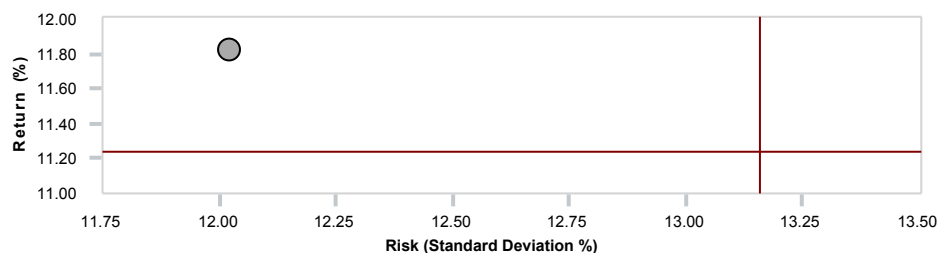
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3 Yr Rolling Percentile Ranking - 5 Years



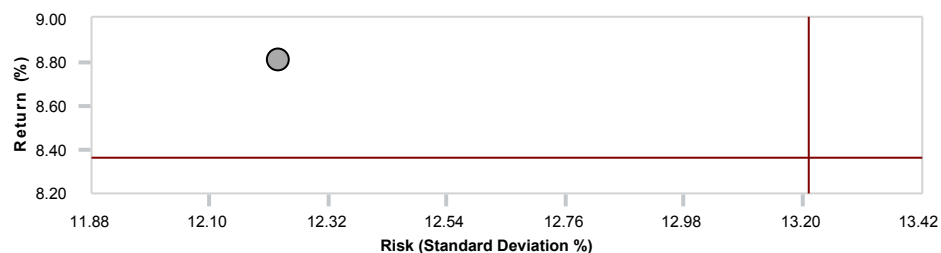
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Champlain MC Equity	0	0	0	0	0
● Russell Midcap Index	20	0 (0%)	6 (30%)	12 (60%)	2 (10%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Champlain MC Equity	N/A	N/A
● Russell Midcap Index	11.82	12.02
— Median	11.24	13.16

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Champlain MC Equity	N/A	N/A
● Russell Midcap Index	8.81	12.23
— Median	8.37	13.21

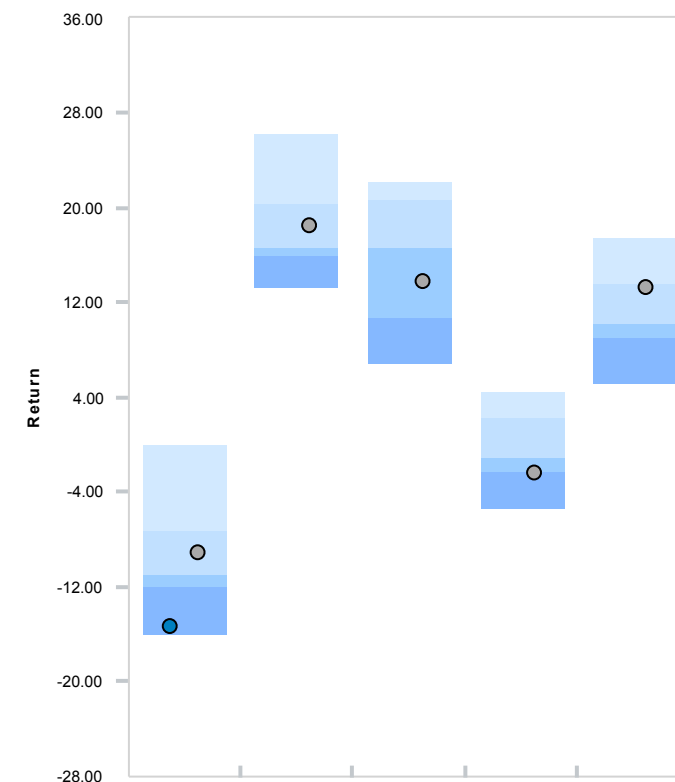
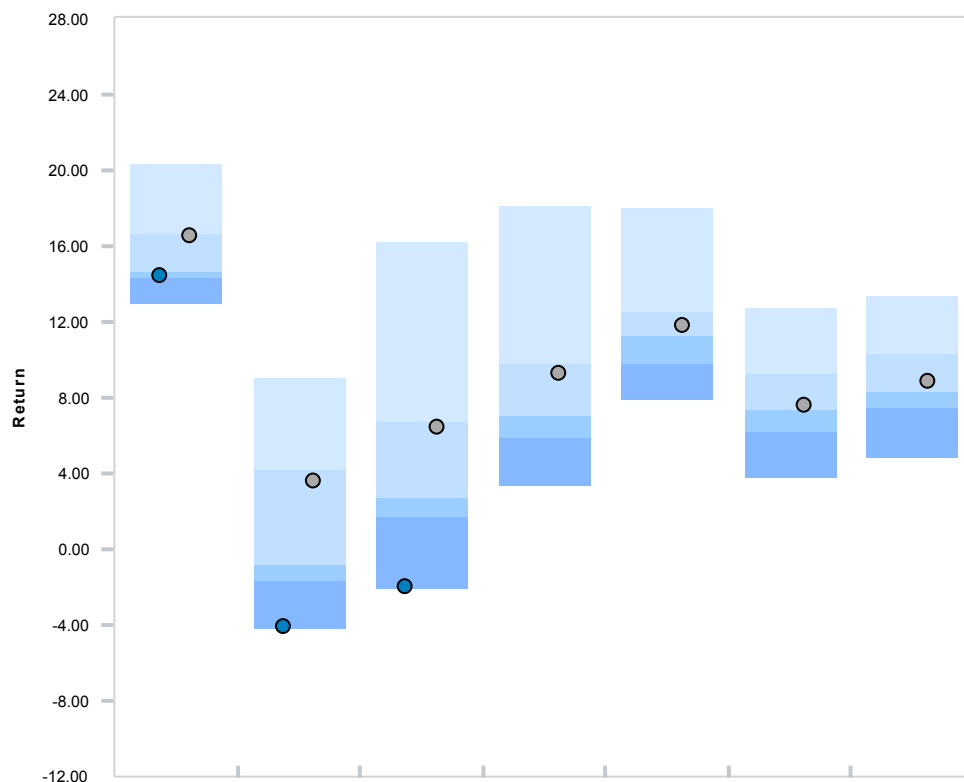
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Champlain MC Equity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.90	1.00	8.08

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Champlain MC Equity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.70	1.00	7.93

Peer Group Analysis - IM U.S. Mid Cap Core Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● QMA US MC Equity	14.44 (68)	-4.07 (90)	-1.99 (95)	N/A	N/A	N/A	N/A
● Russell Midcap Index	16.54 (30)	3.55 (33)	6.47 (29)	9.30 (26)	11.82 (35)	7.62 (40)	8.81 (43)
Median	14.58	-0.80	2.74	7.06	11.24	7.34	8.37

	2018	2017	2016	2015	2014
● QMA US MC Equity	-15.29 (92)	N/A	N/A	N/A	N/A
● Russell Midcap Index	-9.06 (34)	18.52 (35)	13.80 (61)	-2.44 (82)	13.22 (28)
Median	-11.01	16.66	16.68	-0.97	10.25

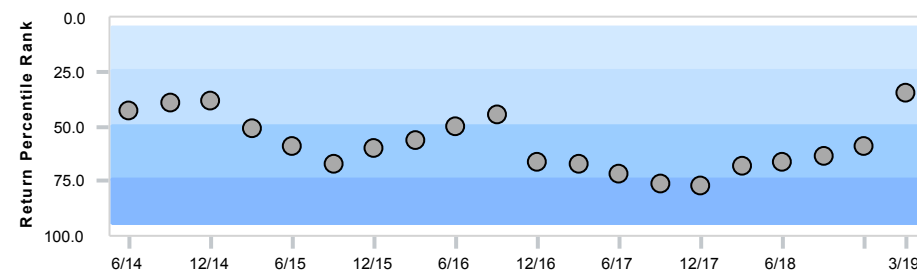
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
QMA US MC Equity	-18.37 (84)	2.69 (95)	2.16 (78)	-1.08 (68)	6.18 (65)	N/A
Russell Midcap Index	-15.37 (26)	5.00 (36)	2.82 (59)	-0.46 (40)	6.07 (68)	3.47 (49)
IM U.S. Mid Cap Core Equity (SA+CF) Median	-17.15	4.37	3.64	-0.76	6.27	3.42

3 Yr Rolling Under/Over Performance - 5 Years

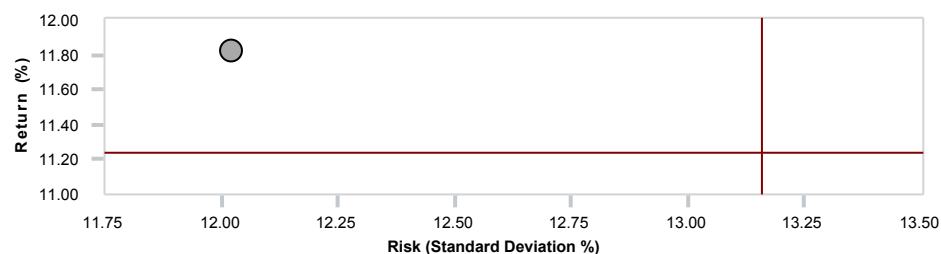
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3 Yr Rolling Percentile Ranking - 5 Years



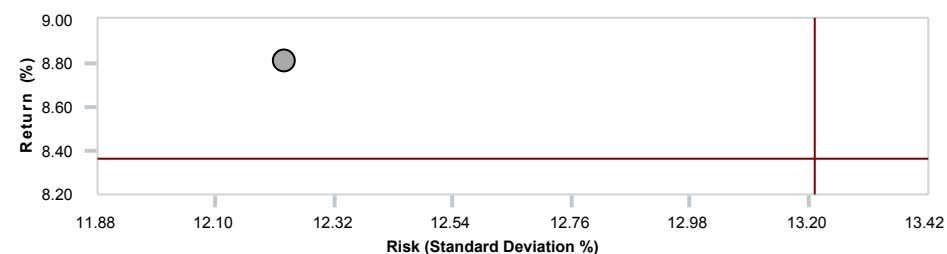
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● QMA US MC Equity	0	0	0	0	0
● Russell Midcap Index	20	0 (0%)	6 (30%)	12 (60%)	2 (10%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● QMA US MC Equity	N/A	N/A
● Russell Midcap Index	11.82	12.02
— Median	11.24	13.16

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● QMA US MC Equity	N/A	N/A
● Russell Midcap Index	8.81	12.23
— Median	8.37	13.21

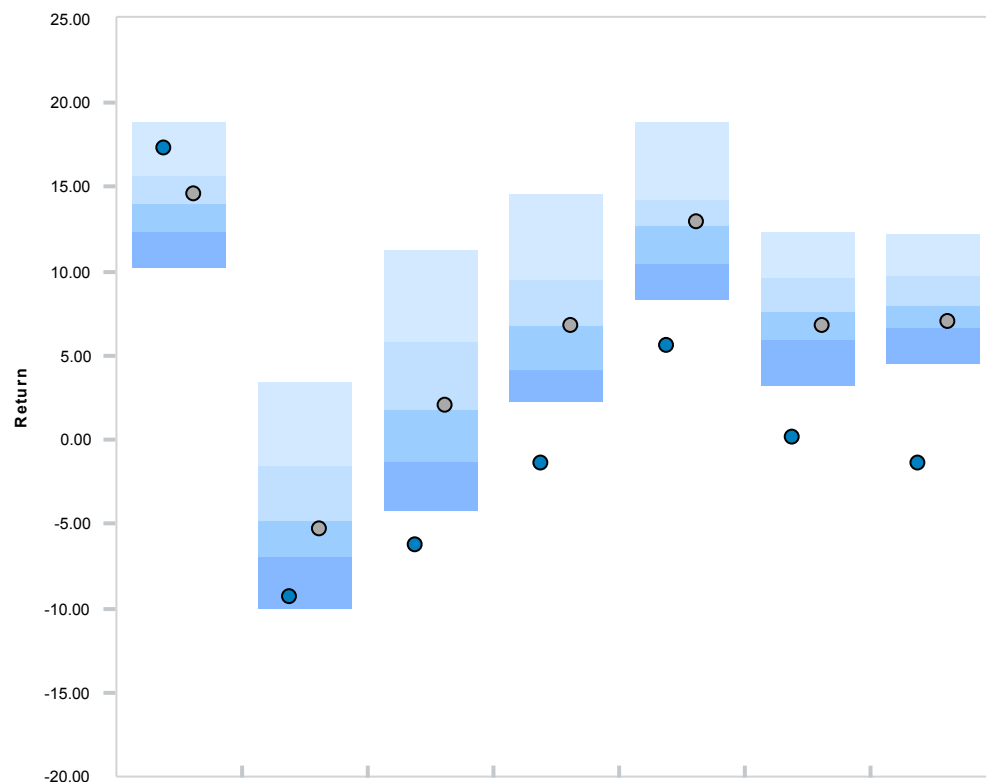
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
QMA US MC Equity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.90	1.00	8.08

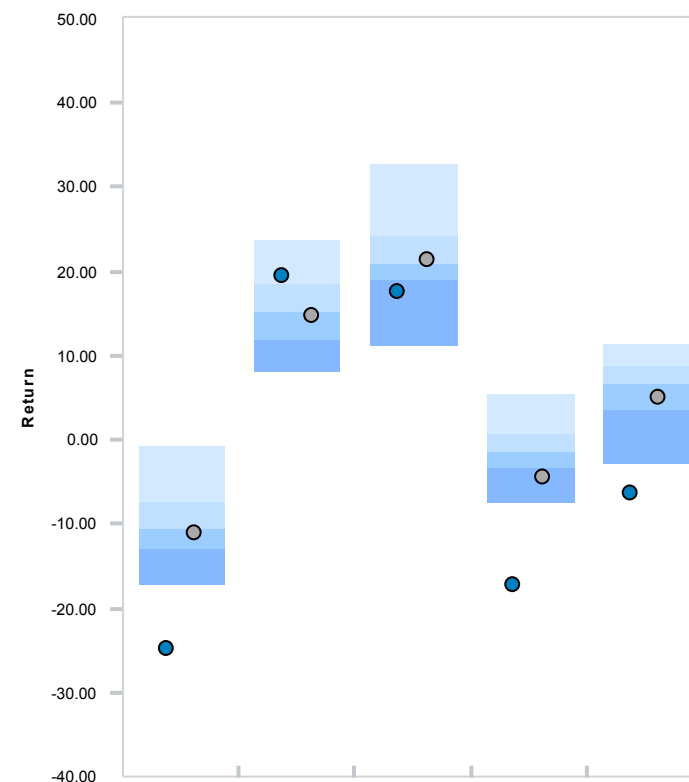
Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
QMA US MC Equity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.70	1.00	7.93

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● SouthernSun SC	17.27 (14)	-9.33 (93)	-6.23 (99)	-1.44 (100)	5.55 (100)	0.10 (100)	-1.39 (100)
● Russell 2000 Index	14.58 (42)	-5.29 (57)	2.05 (49)	6.81 (49)	12.92 (43)	6.77 (66)	7.05 (72)
Median	13.99	-4.85	1.77	6.73	12.65	7.64	7.92

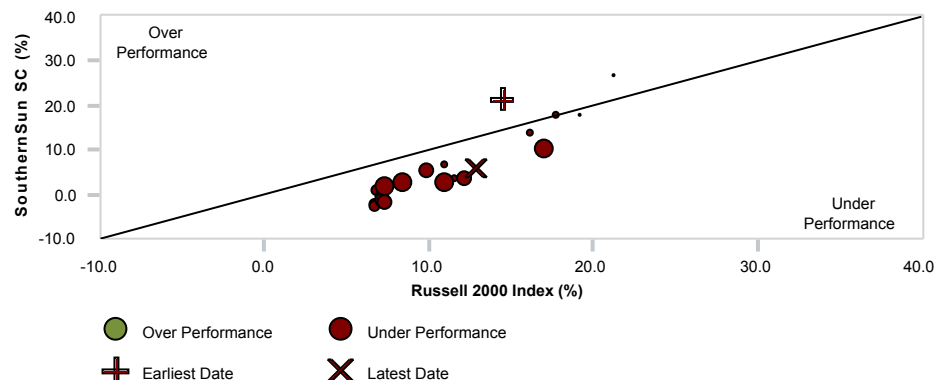


	2018	2017	2016	2015	2014
● SouthernSun SC	-24.95 (100)	19.53 (21)	17.63 (83)	-17.16 (100)	-6.30 (99)
● Russell 2000 Index	-11.01 (55)	14.65 (56)	21.31 (47)	-4.41 (82)	4.89 (66)
Median	-10.69	15.13	20.77	-1.35	6.72

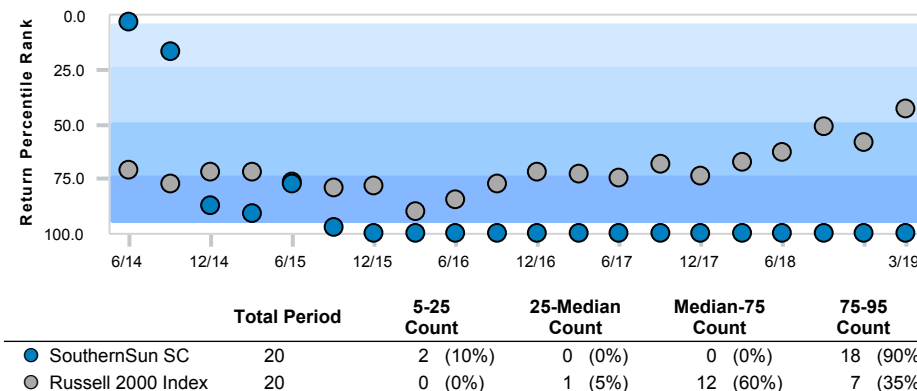
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
SouthernSun SC	-21.91 (90)	-0.99 (99)	3.41 (97)	-6.14 (100)	1.52 (94)	6.67 (28)
Russell 2000 Index	-20.20 (62)	3.58 (62)	7.75 (30)	-0.08 (51)	3.34 (58)	5.67 (47)
IM U.S. Small Cap Core Equity (SA+CF) Median	-19.75	3.97	6.83	-0.07	3.49	5.58

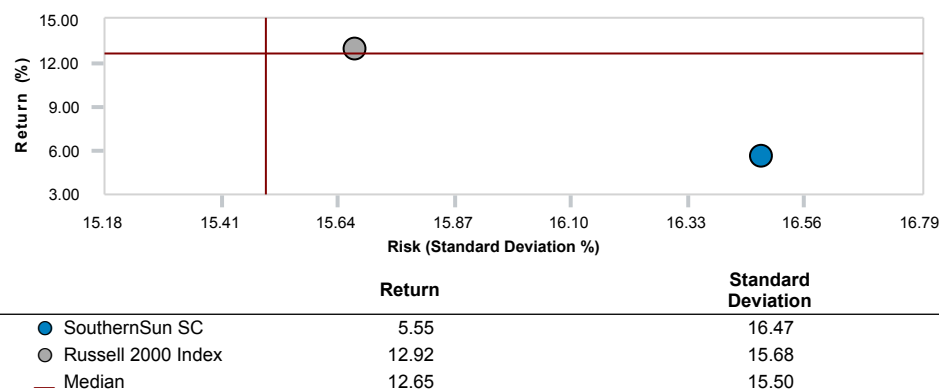
3 Yr Rolling Under/Over Performance - 5 Years



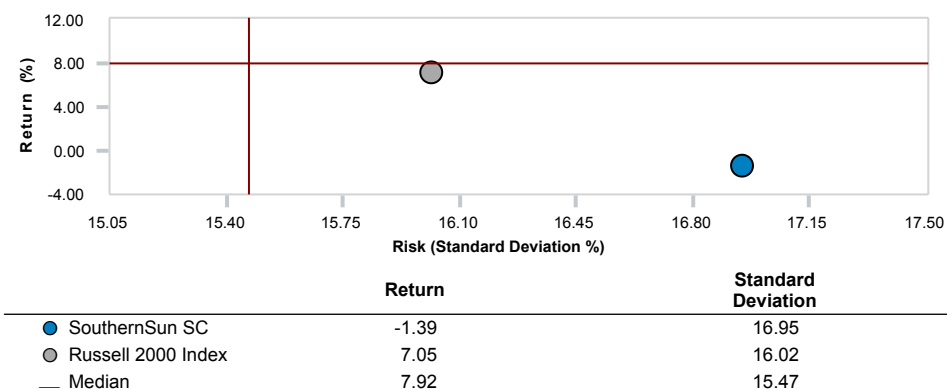
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



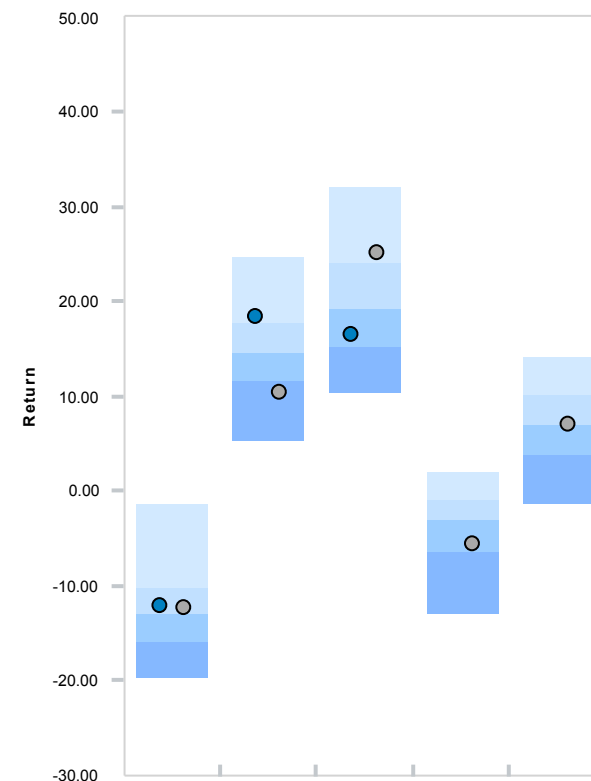
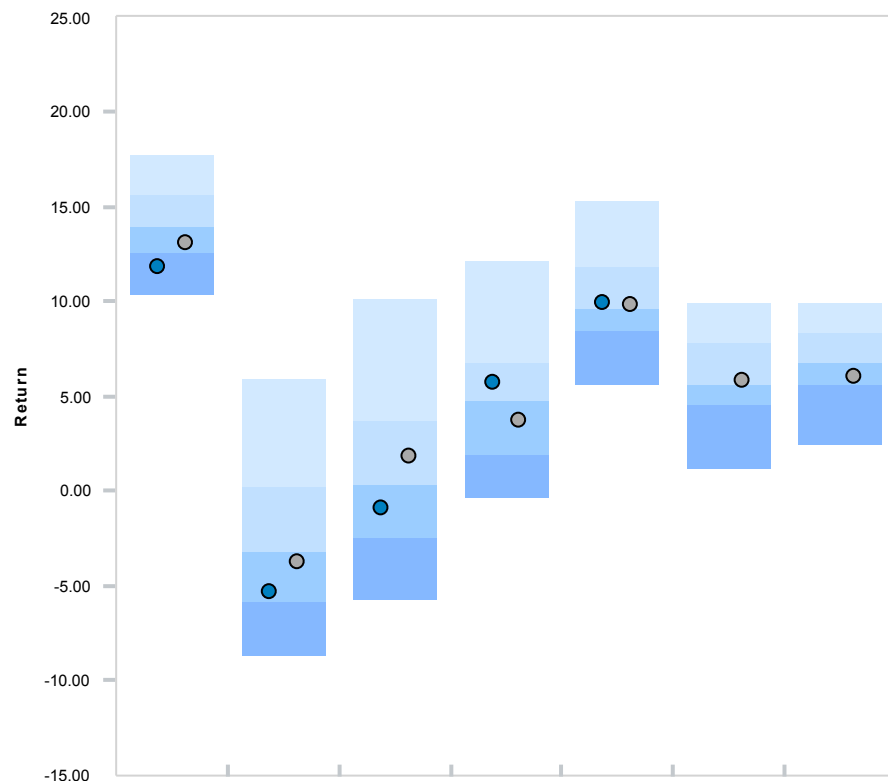
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
SouthernSun SC	6.99	78.01	106.06	-5.87	-0.95	0.34	0.95	11.31
Russell 2000 Index	0.00	100.00	100.00	0.00	N/A	0.78	1.00	10.21

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
SouthernSun SC	8.43	72.62	106.06	-7.19	-0.96	-0.04	0.92	12.09
Russell 2000 Index	0.00	100.00	100.00	0.00	N/A	0.46	1.00	10.82

Peer Group Analysis - IM U.S. SMID Cap Value Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Walthausen & Co. SMID Value	11.83 (86)	-5.27 (70)	-0.89 (59)	5.78 (36)	9.94 (43)	N/A	N/A
● Russell 2500 Value Index	13.12 (66)	-3.75 (57)	1.84 (41)	3.76 (60)	9.85 (44)	5.88 (46)	6.02 (66)
Median	13.93	-3.21	0.41	4.75	9.61	5.61	6.82

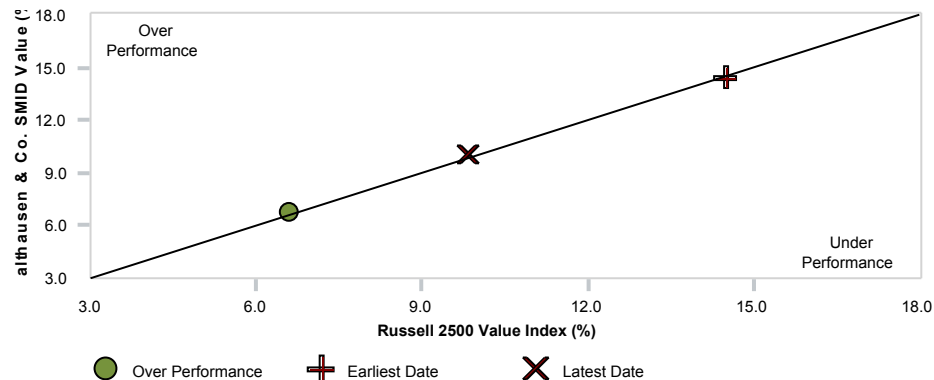
	2018	2017	2016	2015	2014
● Walthausen & Co. SMID Value	12.04 (40)	18.43 (19)	16.63 (68)	N/A	N/A
● Russell 2500 Value Index	12.36 (43)	10.36 (85)	25.20 (23)	-5.49 (66)	7.11 (50)
Median	12.96	14.60	19.34	-3.14	7.03

Comparative Performance

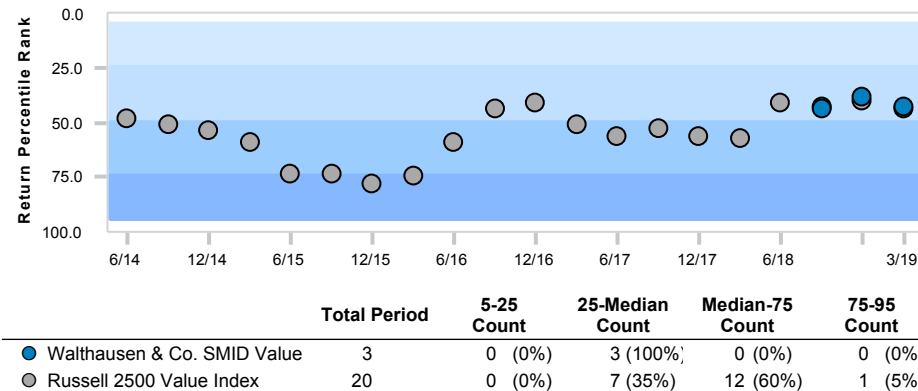
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Walthausen & Co. SMID Value	-17.80 (60)	3.05 (47)	4.62 (25)	-0.75 (35)	5.08 (49)	4.35 (39)
Russell 2500 Value Index	-17.12 (40)	2.67 (54)	5.80 (16)	-2.65 (81)	4.25 (65)	3.83 (58)
IM U.S. SMID Cap Value Equity (SA+CF) Median	-17.50	2.88	3.18	-1.36	4.97	3.94



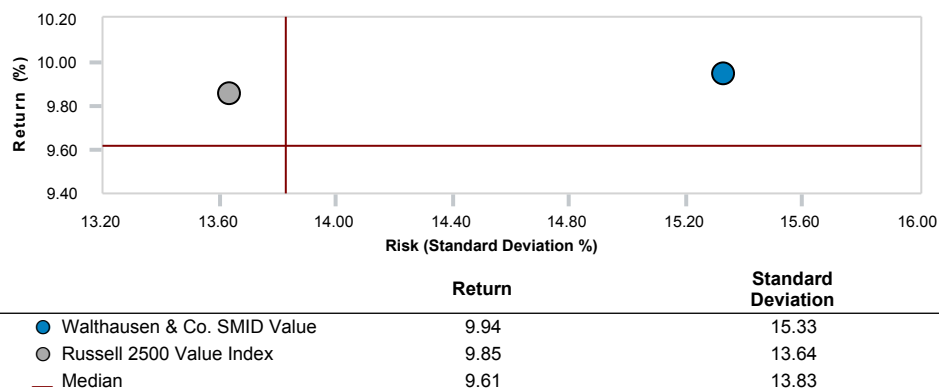
3 Yr Rolling Under/Over Performance - 5 Years



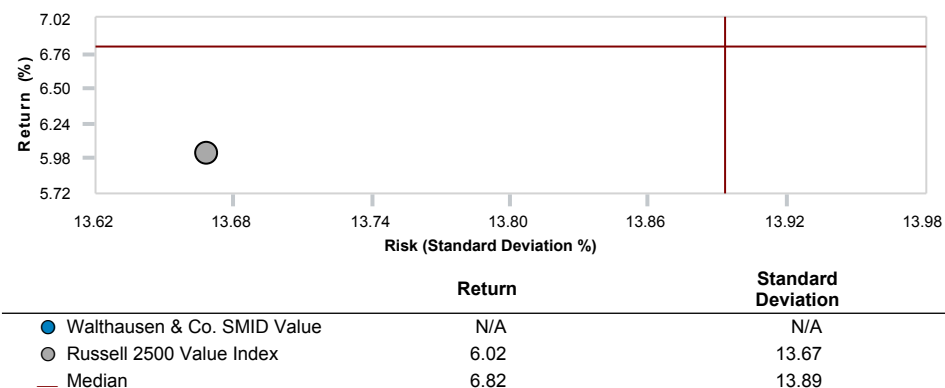
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Walthausen & Co. SMID Value	4.05	103.55	103.86	-0.58	0.08	0.62	1.09	9.97
Russell 2500 Value Index	0.00	100.00	100.00	0.00	N/A	0.67	1.00	8.96

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Walthausen & Co. SMID Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2500 Value Index	0.00	100.00	100.00	0.00	N/A	0.44	1.00	9.01

LSV International - Portfolio Description

- Strategy: International Large Cap Value Equity
- Vehicle: Commingled Fund
- Objective: To outperform the MSCI EAFE Index
- Annual fees: .75% on first \$25M
• .65% on next \$25M
- Benchmark: MSCI EAFE Index

LSV International - Strategy Details

The International Large Cap Value Equity strategy's primary emphasis is the use of quantitative techniques to select individual securities in what would be considered a bottom-up approach. A risk control discipline limits the over- or under-exposure of the portfolio to industry concentrations. Value factors and security selection dominate sector/industry factors as explanators of performance. The portfolio decision making process is strictly quantitative and driven by (1) a proprietary model which ranks securities based on fundamental measures of value and indicators of near-term appreciation potential and, (2) a risk control process that controls for residual benchmark risk while maximizing the expected return of the portfolio. There is no subjective modification applied to the results of the process. This leads to a high degree of consistency in the practical application of our investment philosophy.

WCM Intl Growth - Portfolio Description

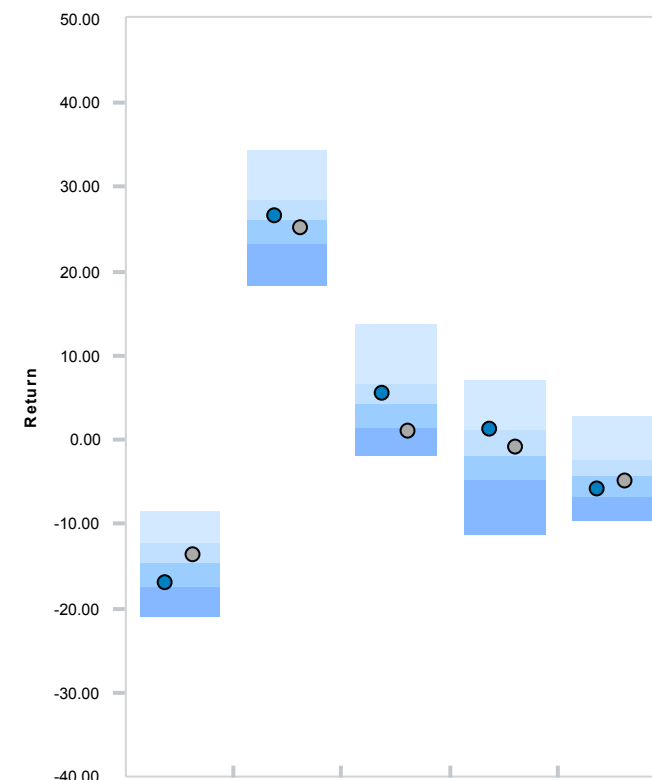
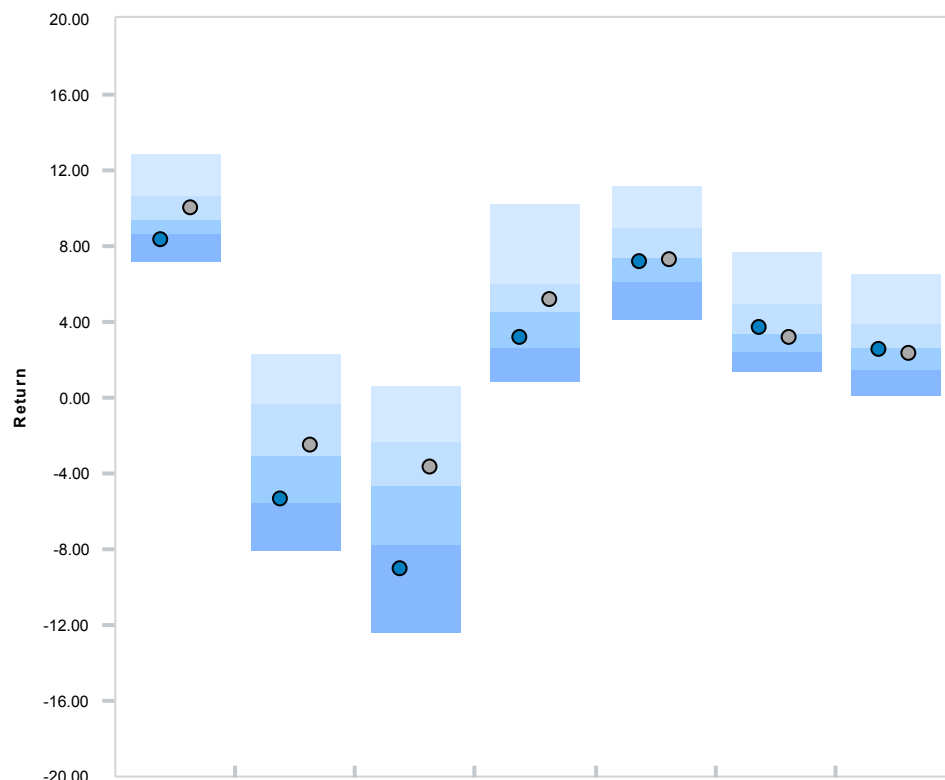
- Strategy: Focused Growth International
- Vehicle: Separately Managed Account
- Objective: To outperform the MSCI EAFE Index
- Annual fees: 1.00% on all assets
- Benchmark: MSCI EAFE Index

WCM Intl Growth - Strategy Details

This is a concentrated, large cap, quality, international growth product. They are distinct from the broad international indices with a traditional growth bias, seeking select quality growth businesses from conventional growth sectors. That combined with a concentrated focus (between 25-40) means the product will have investment characteristics distinct from any broad international benchmark. The product includes mega-, large- and mid-cap international shares from developed and emerging markets. The investment process includes top-down thematic analysis and bottom-up fundamental stock selection. They focus on each company's business model (economic moat), corporate culture, management, and valuation (using conservative DCF models). Currency hedging is not utilized in this strategy but careful attention is paid to region, country, and currency exposures. The projected annual turnover is 15-35%, suggesting tax efficiency for tax-sensitive clients.



Peer Group Analysis - IM International Large Cap Value Equity (SA+CF)



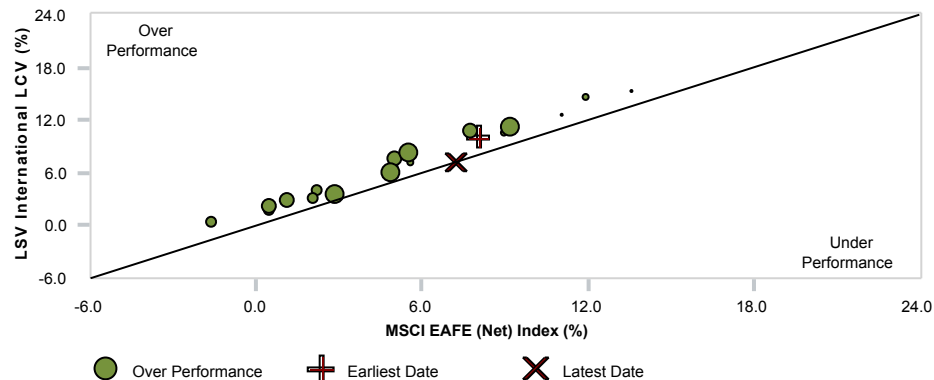
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● LSV International LCV	8.28 (82)	-5.41 (75)	-9.05 (83)	3.14 (69)	7.13 (54)	3.67 (44)	2.48 (56)
● MSCI EAFE (Net) Index	9.98 (39)	-2.51 (47)	-3.71 (41)	5.14 (39)	7.27 (51)	3.16 (60)	2.33 (62)
Median	9.41	-3.06	-4.68	4.47	7.35	3.39	2.60

	2018	2017	2016	2015	2014
● LSV International LCV	-16.98 (72)	26.52 (44)	5.49 (35)	1.32 (24)	-5.80 (66)
● MSCI EAFE (Net) Index	-13.79 (42)	25.03 (58)	1.00 (81)	-0.81 (39)	-4.90 (60)
Median	-14.71	26.02	4.19	-1.97	-4.26

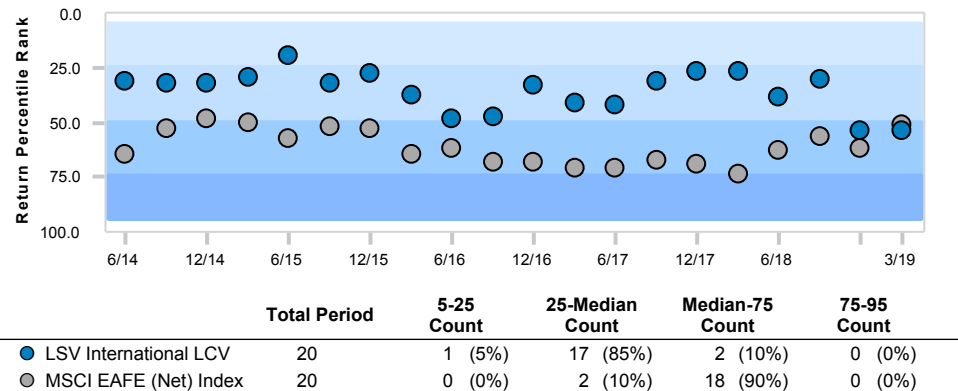
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
LSV International LCV	-14.19 (76)	1.80 (22)	-3.84 (85)	-1.16 (48)	3.38 (74)	7.29 (17)
MSCI EAFE (Net) Index	-12.54 (47)	1.35 (34)	-1.24 (21)	-1.53 (62)	4.23 (51)	5.40 (59)
IM International Large Cap Value Equity (SA+CF) Median	-12.88	0.88	-2.19	-1.26	4.27	5.65

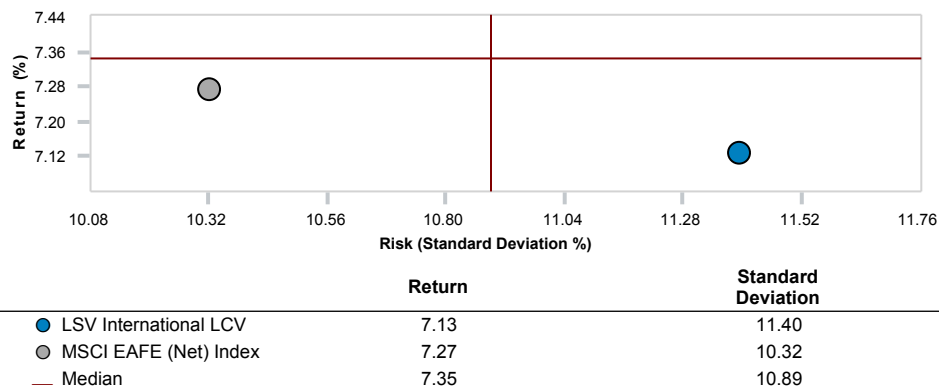
3 Yr Rolling Under/Over Performance - 5 Years



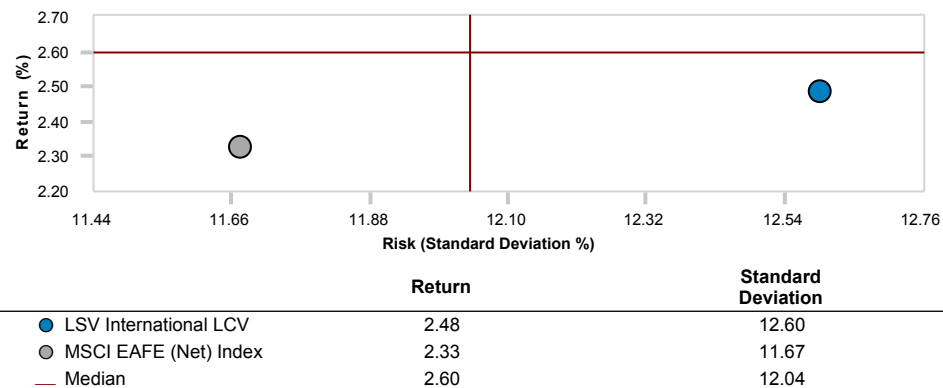
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



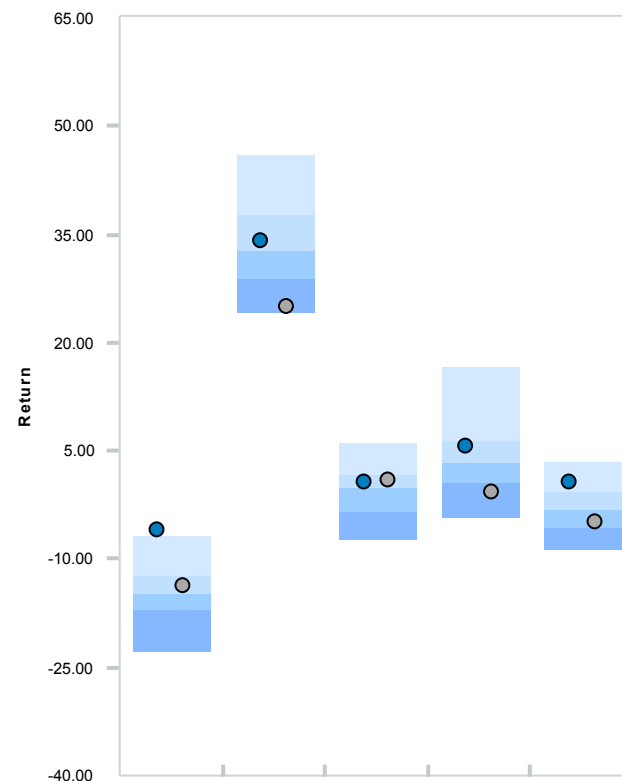
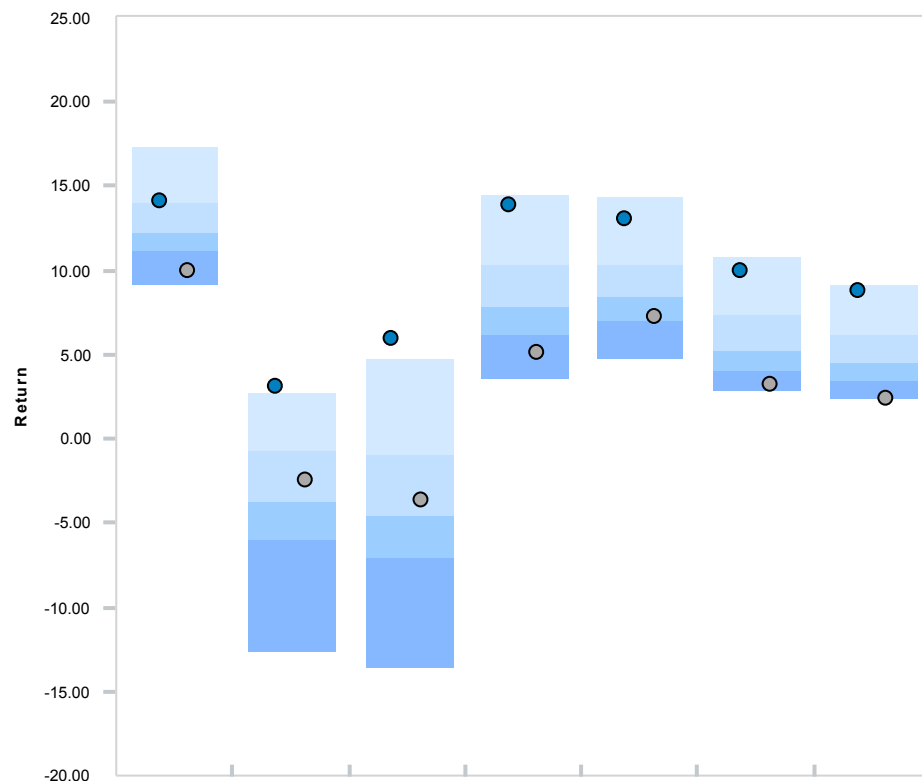
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
LSV International LCV	2.97	104.34	107.48	-0.53	-0.01	0.56	1.07	7.68
MSCI EAFE (Net) Index	0.00	100.00	100.00	0.00	N/A	0.62	1.00	6.86

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
LSV International LCV	2.69	103.60	102.53	0.10	0.10	0.20	1.06	8.57
MSCI EAFE (Net) Index	0.00	100.00	100.00	0.00	N/A	0.19	1.00	8.05

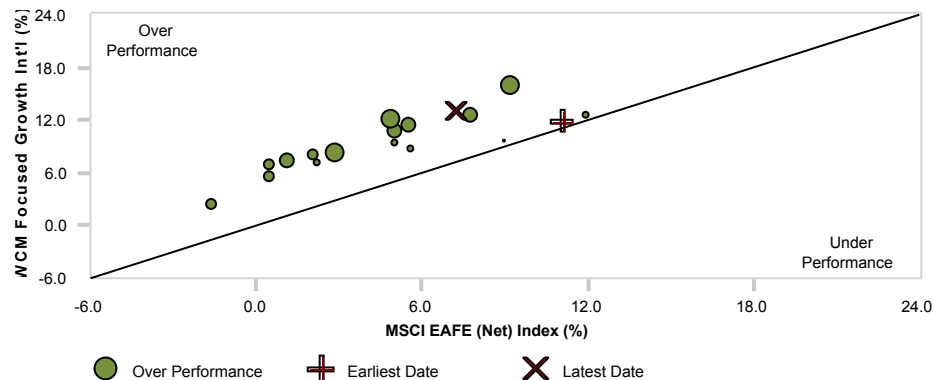
Peer Group Analysis - IM International Growth Equity (SA+CF)



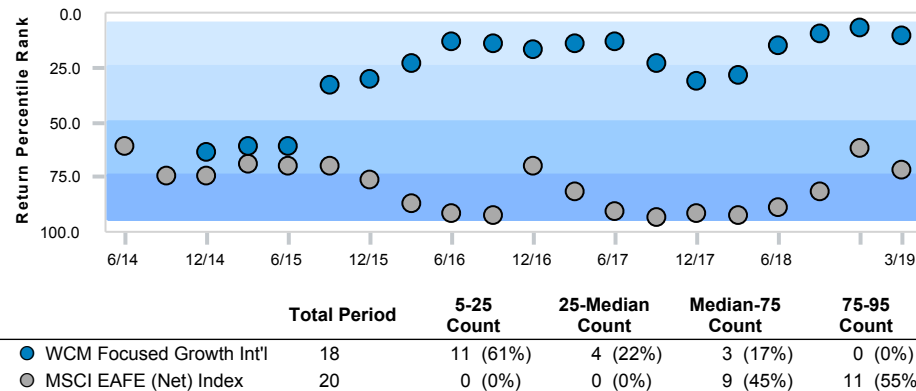
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
WCM Focused Growth Int'l	-12.86 (31)	3.68 (3)	2.70 (9)	1.35 (28)	5.20 (54)	5.26 (82)
MSCI EAFE (Net) Index	-12.54 (29)	1.35 (36)	-1.24 (59)	-1.53 (85)	4.23 (73)	5.40 (80)
IM International Growth Equity (SA+CF) Median	-14.77	0.49	-0.98	0.17	5.27	7.33

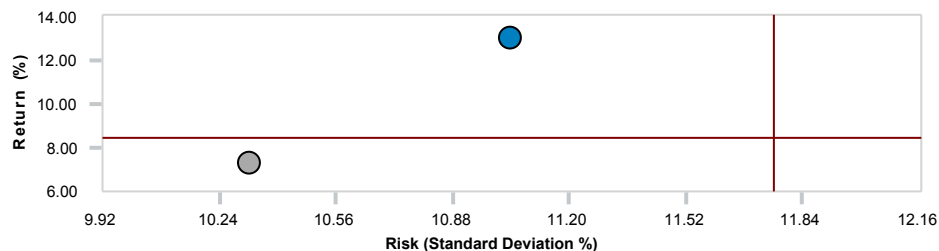
3 Yr Rolling Under/Over Performance - 5 Years



3 Yr Rolling Percentile Ranking - 5 Years

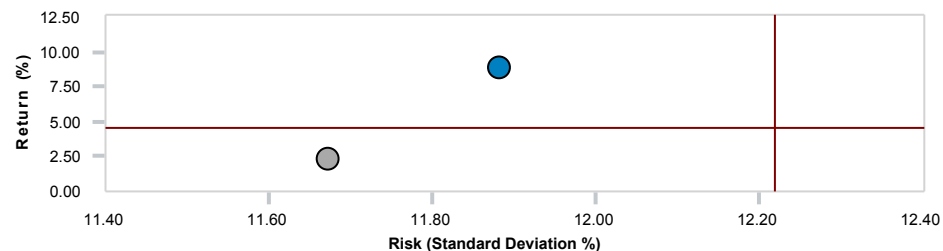


Peer Group Scattergram - 3 Years



	Return	Standard Deviation
WCM Focused Growth Int'l	12.99	11.04
MSCI EAFE (Net) Index	7.27	10.32
Median	8.44	11.76

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
WCM Focused Growth Int'l	8.78	11.88
MSCI EAFE (Net) Index	2.33	11.67
Median	4.50	12.22

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
WCM Focused Growth Int'l	6.08	99.23	50.63	6.26	0.88	1.06	0.90	7.46
MSCI EAFE (Net) Index	0.00	100.00	100.00	0.00	N/A	0.62	1.00	6.86

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
WCM Focused Growth Int'l	5.70	98.09	55.66	6.66	1.08	0.71	0.90	7.78
MSCI EAFE (Net) Index	0.00	100.00	100.00	0.00	N/A	0.19	1.00	8.05

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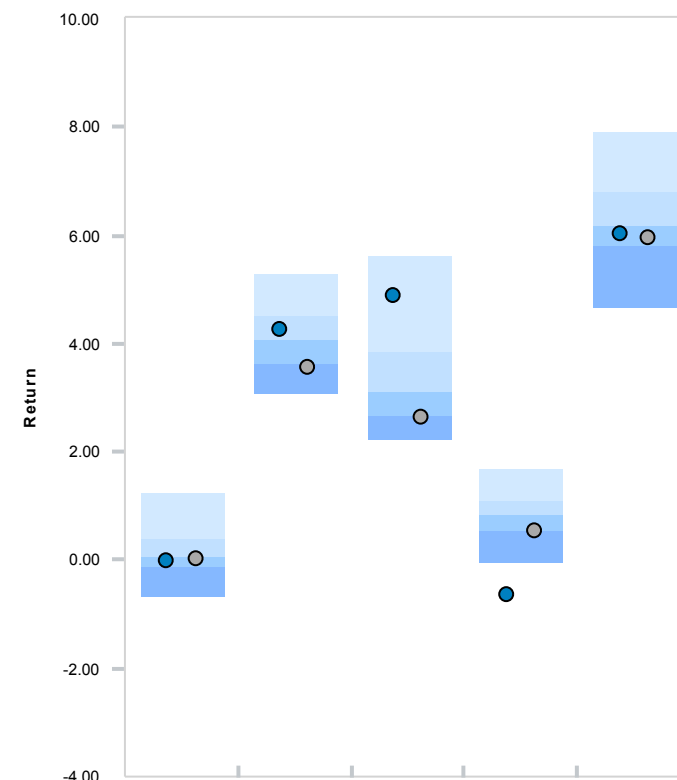
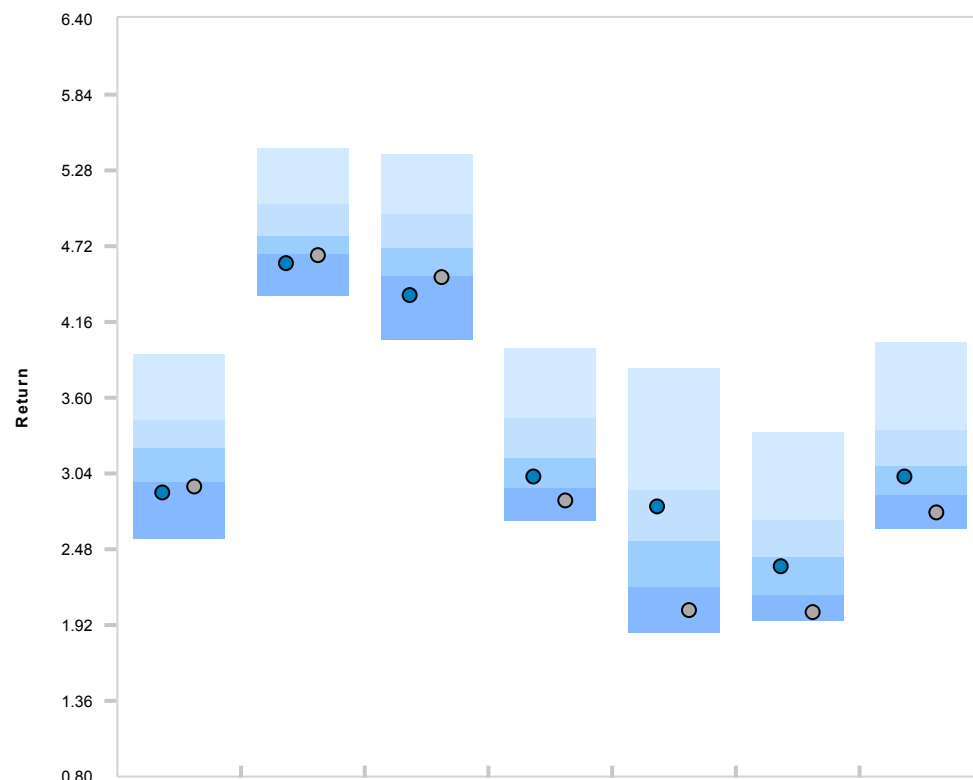
Pacific Moderate Duration - Portfolio Description

- Strategy: Moderate Duration
- Vehicle: Separately Managed Account
- Objective: To outperform the Bloomberg Barclays US Aggregate Index
- Annual fees: .30% on all assets
- Benchmark: Bloomberg Barclays US Aggregate Index

Pacific Moderate Duration - Strategy Details

The Moderate Duration product is a core bond strategy that seeks to outperform the Barclays Capital Aggregate Index on both an absolute and risk-adjusted basis over a full market cycle. The Moderate Duration product invests in U.S. Government securities, mortgage-backed securities, corporate debt securities and asset-backed securities. The product maintains duration of between 3.0 to 7.0 years and is generally within one year of the index.

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

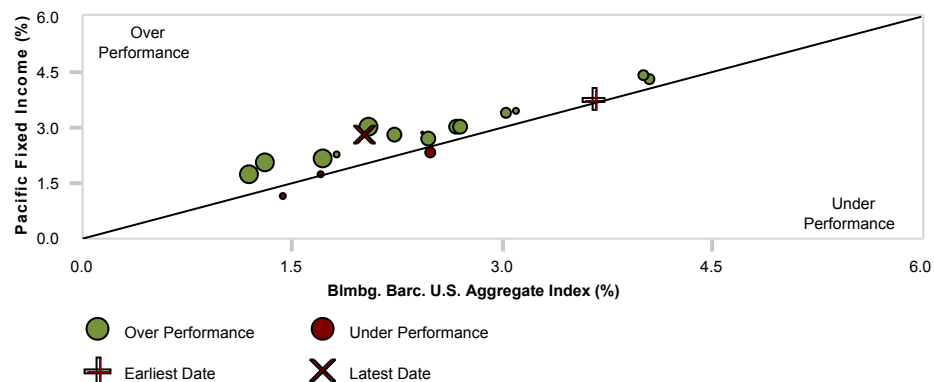


	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR		2018	2017	2016	2015	2014
● Pacific Fixed Income	2.90 (84)	4.59 (84)	4.36 (91)	3.00 (71)	2.80 (35)	2.35 (57)	3.01 (60)	● Pacific Fixed Income	-0.01 (66)	4.24 (35)	4.86 (9)	-0.65 (98)	6.02 (63)
● Blmbg Barc US Agg	2.94 (83)	4.65 (79)	4.48 (80)	2.83 (89)	2.03 (89)	2.01 (90)	2.74 (90)	● Blmbg Barc US Agg	0.01 (61)	3.54 (85)	2.65 (77)	0.55 (74)	5.97 (67)
Median	3.23	4.79	4.70	3.16	2.54	2.42	3.10	Median	0.07	4.06	3.11	0.82	6.16

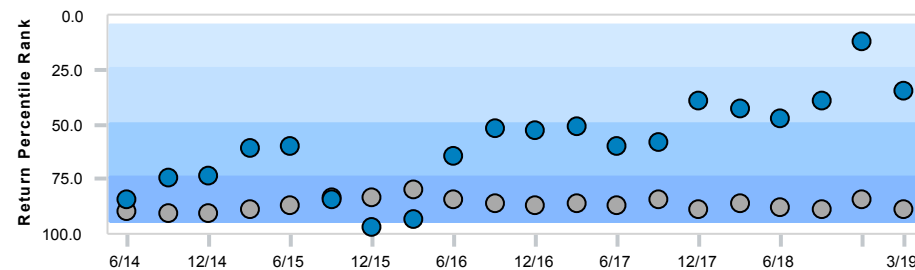
Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Pacific Fixed Income	1.59 (32)	0.06 (74)	-0.22 (88)	-1.42 (60)	0.64 (20)	1.00 (34)
Blmbg. Barc. U.S. Aggregate Index	1.64 (23)	0.02 (83)	-0.16 (73)	-1.46 (68)	0.39 (80)	0.85 (77)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.40	0.18	-0.09	-1.37	0.51	0.93

3 Yr Rolling Under/Over Performance - 5 Years

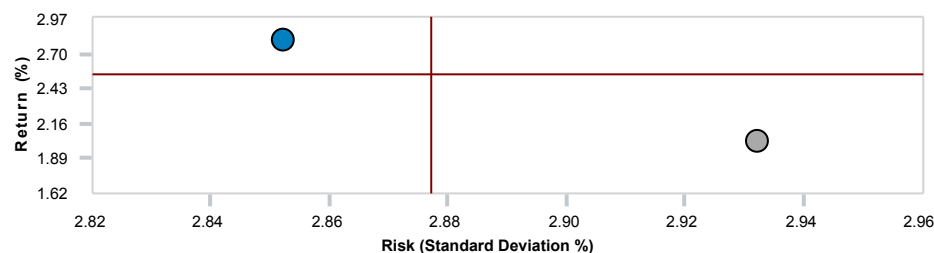


3 Yr Rolling Percentile Ranking - 5 Years



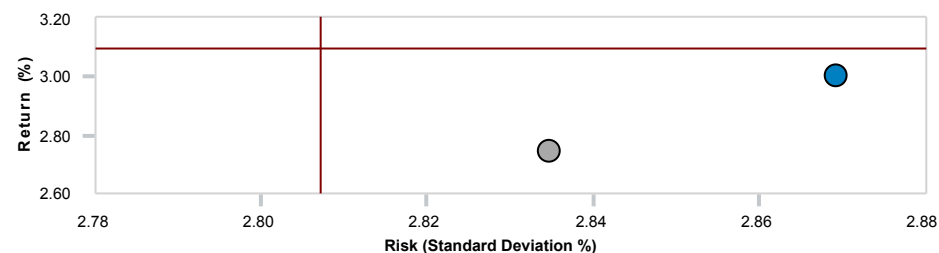
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Pacific Fixed Income	20	1 (5%)	5 (25%)	10 (50%)	4 (20%)
● Blmbg Barc US Agg	20	0 (0%)	0 (0%)	0 (0%)	20 (100%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Pacific Fixed Income	2.80	2.85
● Blmbg Barc US Agg	2.03	2.93
— Median	2.54	2.88

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Pacific Fixed Income	3.01	2.87
● Blmbg Barc US Agg	2.74	2.83
— Median	3.10	2.81

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Pacific Fixed Income	0.51	107.77	86.97	0.84	1.46	0.58	0.96	1.72
Blmbg. Barc. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.31	1.00	1.85

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Pacific Fixed Income	0.95	103.63	97.45	0.38	0.27	0.80	0.96	1.60
Blmbg. Barc. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.72	1.00	1.63

AEW Core Property - Portfolio Description

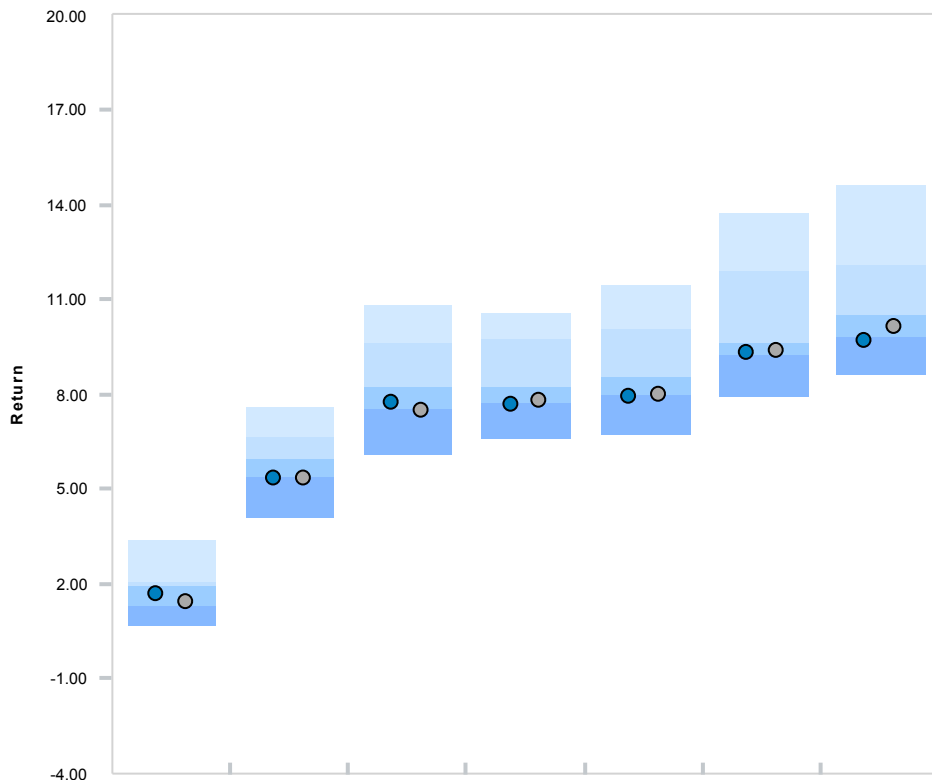
- Strategy: Core Property Trust
- Vehicle: Open Ended Commingled Real Estate Fund
- Objective: To outperform the NCREIF ODCE Index
- Annual fees: 1.10% on all assets
- Benchmark: NCREIF ODCE Index

AEW Core Property - Strategy Details

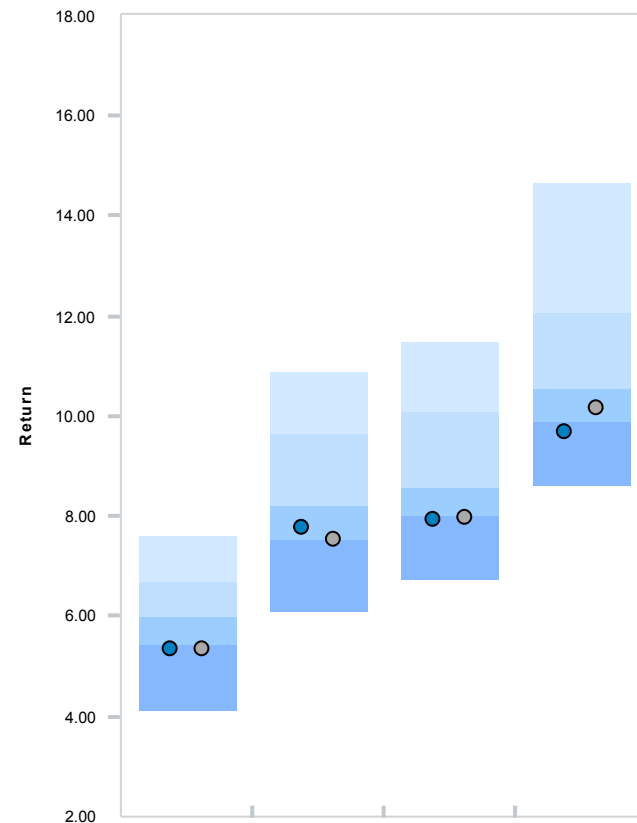
The AEW Core Property Trust combines research-driven strategies with on-the-ground market knowledge and experience to construct a diversified portfolio of multifamily, retail, office, industrial and, to a lesser extent, hotel properties. The Fund seeks to acquire primarily well-located, institutional-quality assets in markets throughout the U.S. - investments that are designed to provide durable income streams and appreciation over the mid- to long-term. AEW expects to invest primarily in major metropolitan markets that feature barriers to new supply - whether physical, governmental or economic - as well as solid population and job growth. With limited supply and increasing demand, these markets should provide an opportunity for peak-to-peak rent growth and thus, long-term value creation. The Fund also seeks to exploit America's changing demographics, and the impact they will have on economic growth and demand for real estate. The Fund also focuses on markets and properties that are positively influenced by globalization as it continues to change the nature of U.S. jobs and affect the movement of goods and services and consumer spending. Finally, the Fund's target markets also exhibit economic diversity in terms of the underlying industries that are driving the demand in the marketplace; providing both growth and diversification to the Fund.



Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● AEW Core Property Trust	1.71 (66)	5.34 (83)	7.77 (69)	7.68 (77)	7.94 (76)	9.31 (74)	9.68 (85)
● NCREIF-ODCE (VW)	1.42 (70)	5.36 (82)	7.52 (76)	7.79 (73)	7.97 (76)	9.37 (73)	10.18 (71)
Median	1.93	5.96	8.23	8.25	8.56	9.65	10.54



	FYTD	1 YR	3 YR	5 YR
● AEW Core Property Trust	5.34 (83)	7.77 (69)	7.94 (76)	9.68 (85)
● NCREIF-ODCE (VW)	5.36 (82)	7.52 (76)	7.97 (76)	10.18 (71)
Median	5.96	8.23	8.56	10.54

Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
AEW Core Property Trust	1.89 (32)	1.65 (81)	2.31 (44)	1.66 (87)	2.16 (56)	1.79 (45)
NCREIF Fund Index-ODCE (VW)	1.76 (53)	2.09 (54)	2.05 (67)	2.20 (52)	2.07 (68)	1.87 (43)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.76	2.10	2.22	2.21	2.25	1.75



Bloomfield Income Fund - Portfolio Description

- Strategy: Bloomfield Capital Income Fund II
- Objective: To provide an absolute return in excess of 9%
- Annual fees: 2.00% on Committed Capital

Bloomfield Income Fund - Strategy Details

The Bloomfield Capital Income Fund II is a real estate opportunity fund focused on two primary strategies. 1. Originating senior secured, high yield, interim and bridge loans on income producing real estate in the U.S. and 2. Acquiring a diverse portfolio of commercial mortgage loans, deeds of trust, and other real estate related opportunistic investments. The Fund's objective is to build a diverse portfolio of senior, secured mortgages providing investors with consistent income and superior risk adjusted returns. Bloomfield Capital targets a double-digit yield on secure, risk-mitigated investments. The portfolio management team implements conservative underwriting techniques to provide a margin of safety.

Metropolitan MREP VI - Portfolio Description

- Strategy: Metropolitan Real Estate MREP VI Fund
- Vehicle: Real Estate Fund of Funds
- Objective: To outperform the NCREIF Property Index
- Annual fees: 1.35% on first \$5M
- 1.00% on the next \$20M
- Benchmark: NCREIF Property Index

Metropolitan MREP VI - Strategy Details

Invest in a diversified portfolio of private real estate funds or other investment vehicles with direct or indirect exposure to real estate. The manager invests in funds with exposure to office, retail, industrials, multi-family, and other types of properties located primarily in the United States. The manager selects value added and opportunistic funds with superior performance track records. The manager diversifies the strategy across property types, geographic markets, managers, and strategies.

RMK Timber - Portfolio Description

- Strategy: RMK Global Timberland Resources US Fund
RMK Global Timberland Resources Intl Alternative Investment
- Objective: To outperform the NCREIF Timberland Index
- Management fees: US Fund: 1.00%
Intl Fund: 1.25%
- Performance Fee: US Fund: 20% (6% Hurdle)
Intl Fund: 20% (10% Hurdle)

RMK Timber - Strategy Details

The portfolio team develops an investment strategy for the Fund based on the current environment and market forecasts for timberlands, and related end products. RMK utilizes industry contacts to identify attractive acquisition targets that achieve the Fund's investment strategy. Prior to purchasing a tract of land, the team performs rigorous due diligence and develops an asset management plan. The portfolio is actively managed, evaluating the benefits of harvesting the forests, letting the trees further mature, or selling the timberland. The manager will diversify the portfolio by growth stage/maturity of the forests, geographic locations (50% US exposure / 50% International exposure), and species.



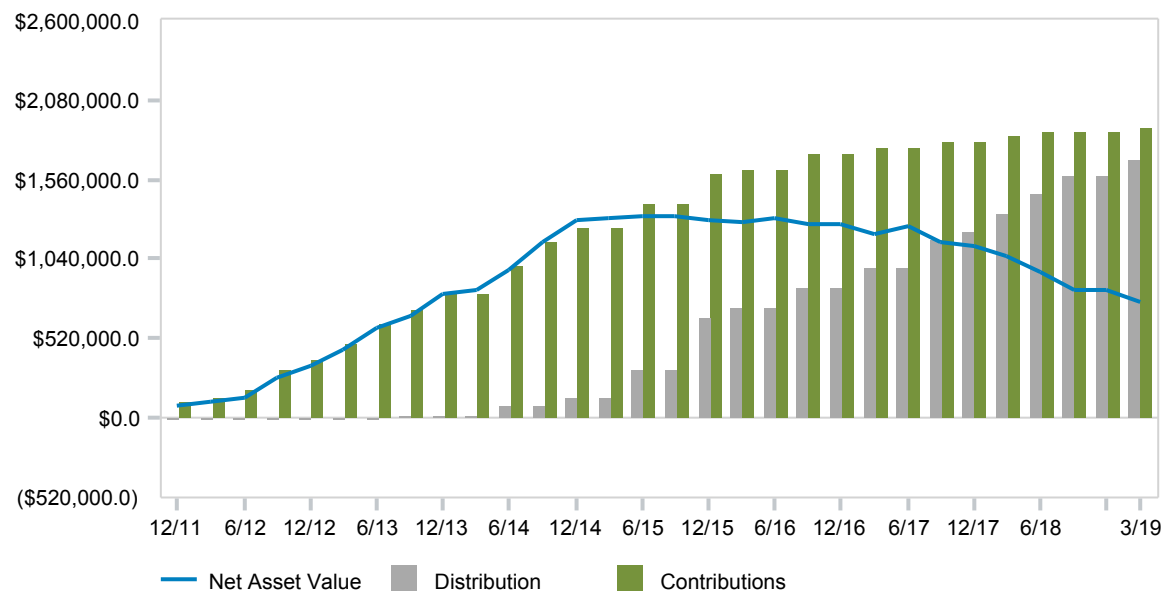
Fund Information

Type of Fund:	Fund Of Funds	Vintage Year:	2008
Strategy Type:	Real Estate	Management Fee:	1%
Target IRR:	9%	Inception:	03/19/2008
General Partner:	MREP6, LLC		
Investment Strategy:	Private Equity Real Estate value add/opportunistic multi-manager		

Cash Flow Summary

Capital Committed:	\$2,000,000
Capital Invested:	\$1,887,530
Management Fees:	-
Expenses:	-
Interest:	\$1,188
Total Contributions:	\$1,888,718
Remaining Capital Commitment:	\$112,470
Total Distributions:	\$1,679,798
Market Value:	\$757,131
Inception Date:	11/30/2011
Inception IRR:	8.7
TVPI:	1.3

Cash Flow Analysis



Fund Information

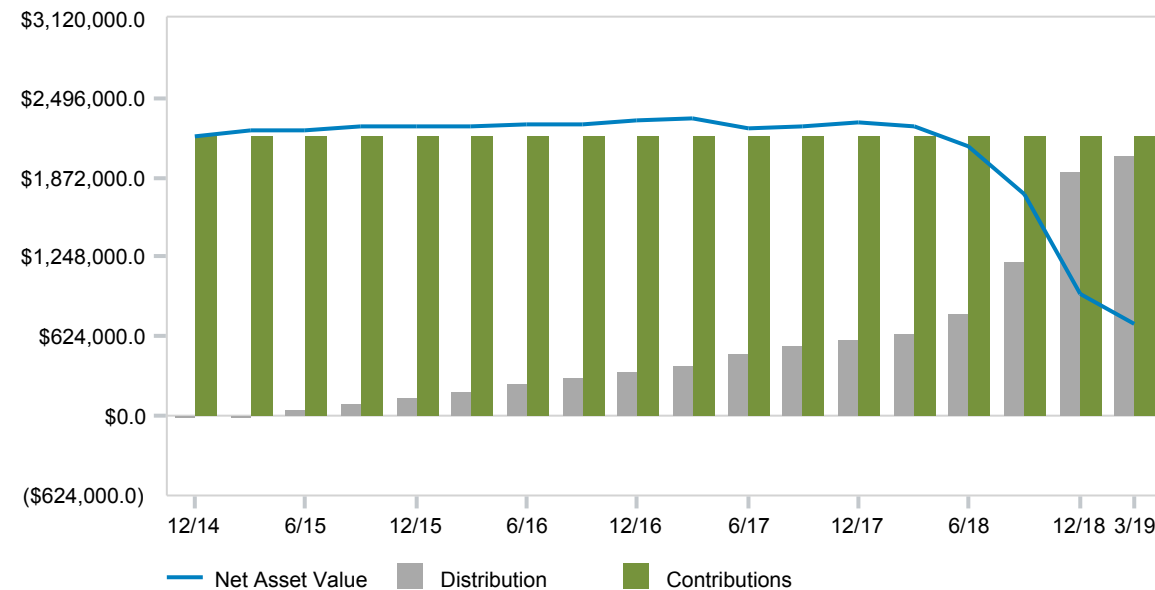
Type of Fund:	Direct	Vintage Year:	2011
Strategy Type:	Other	Management Fee:	2.00%
Target IRR:	9.00%	Inception:	11/13/2011
General Partner:	Bloomfield Capital Partners, LLC		
Investment Strategy:	Bloomfield Capital Income Fund II invests primarily in debt obligations consisting of commercial mortgage loans, deeds of trust and other real estate and/or debt-related investments, with the objective of creating a diversified portfolio producing strong and consistent returns while providing considerable downside protection.		

The Fund's investment strategy has a primary focus on commercial real estate loans and investments collateralized by significant margins of protective collateral such as real estate and other assets including but not limited to cash, marketable securities, equity interests, corporate interests and personal/corporate guarantees.

Cash Flow Summary

Capital Committed:	\$2,200,000
Capital Invested:	\$2,200,000
Management Fees:	\$317,000
Expenses:	\$135,239
Interest:	-
Total Contributions:	\$2,200,000
Remaining Capital Commitment:	-
Total Distributions:	\$2,045,864
Market Value:	\$730,961
Inception Date:	12/22/2014
Inception IRR:	7.0
TVPI:	1.3

Cash Flow Analysis



Fund Information

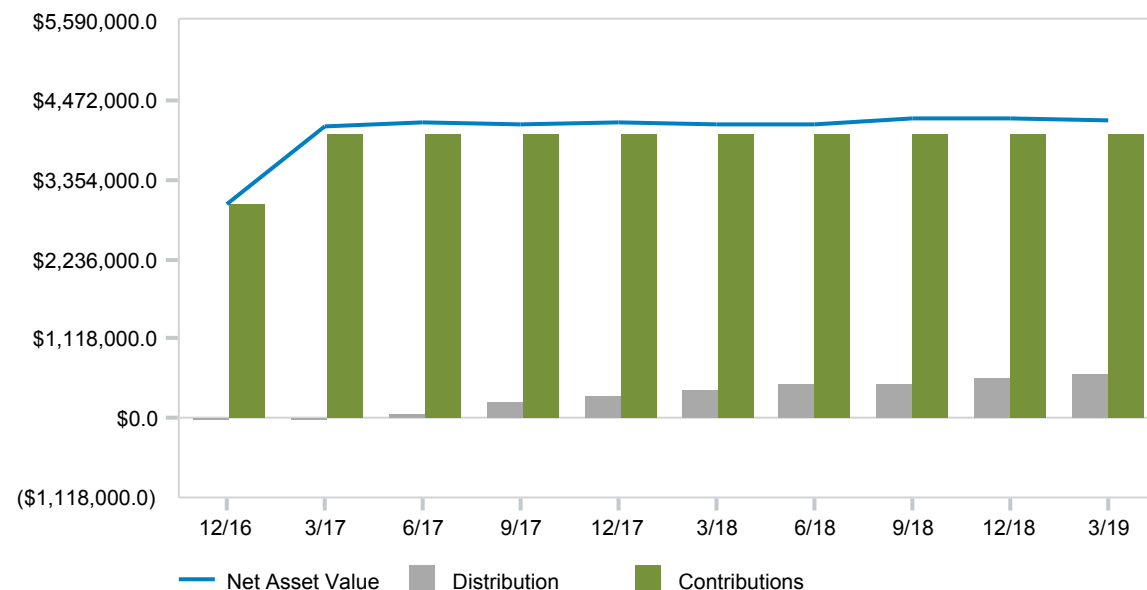
Type of Fund:	Direct	Vintage Year:	2015
Strategy Type:	Other	Management Fee:	2.00%
Target IRR:	8.00%	Inception:	11/01/2015
General Partner:	Bloomfield Capital Partners, LLC		
Investment Strategy:	Bloomfield Capital Income Fund III invests primarily in debt obligations consisting of commercial mortgage loans, deeds of trust and other real estate and/or debt-related investments, with the objective of creating a diversified portfolio producing strong and consistent returns while providing considerable downside protection.		

The Fund's investment strategy has a primary focus on commercial real estate loans and investments collateralized by significant margins of protective collateral such as real estate and other assets including but not limited to cash, marketable securities, equity interests, corporate interests and personal/corporate guarantees.

Cash Flow Summary

Capital Committed:	\$4,000,000
Capital Invested:	\$4,000,000
Management Fees:	\$248,970
Expenses:	\$85,895
Interest:	-
Total Contributions:	\$4,000,000
Remaining Capital Commitment:	-
Total Distributions:	\$633,425
Market Value:	\$4,173,041
Inception Date:	12/31/2016
Inception IRR:	9.3
TVPI:	1.2

Cash Flow Analysis



Fund Information

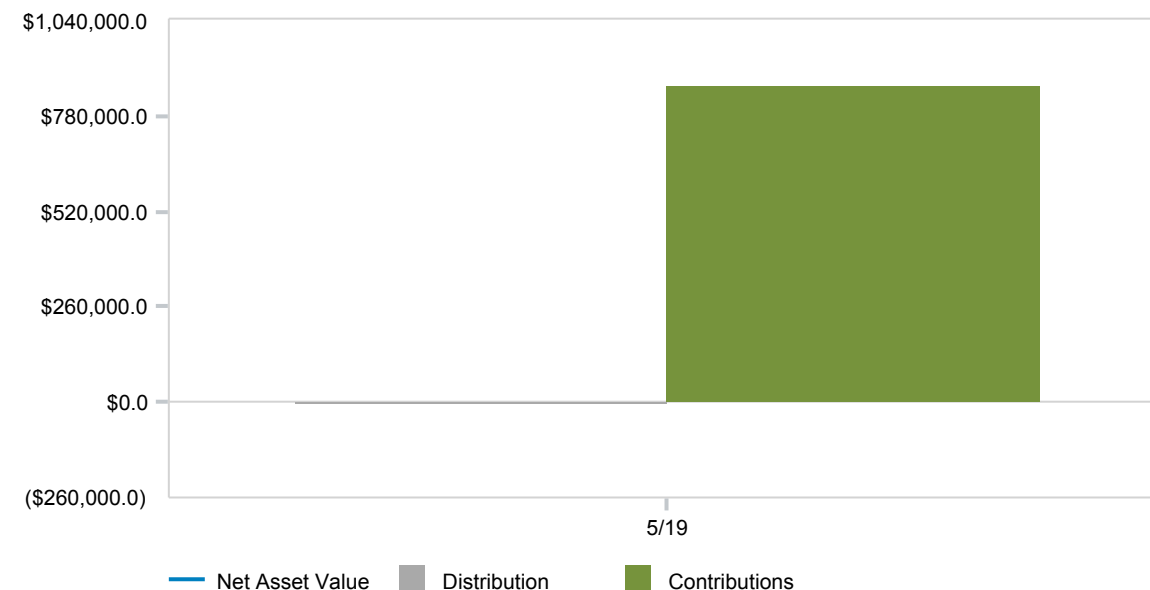
Type of Fund:	Direct	Vintage Year:	2018
Strategy Type:	Real Estate	Management Fee:	1.5%
Target IRR:	8.5% (Series A only)	Inception:	11/16/2018
General Partner:	Bloomfield Capital Partners V, LLC		

Investment Strategy: The investment strategy of each Series of the Fund will have a primary focus on private credit and specialty finance assets (which is expected to include real estate debt and other general debt and debt-related investments) with short to intermediate-term durations and often contractual cash flows. The Managing Member's goal is to preserve invested capital, and generate returns that have a low correlation to traditional public markets (although there can be no assurances that this goal will be realized). The Fund will target middle market opportunities in real estate debt and other general debt and debt-related transactions (including REO properties, and preferred equity, that would include debt-like characteristics). The Fund generally will not invest in traditional leveraged common equity positions in real estate; however, the Fund may acquire REO and similar non-traditional properties and may also take incidental or pledged equity positions in connection with certain loans in order to obtain supplemental collateral to enhance the strength of the primary credit investment, and/or to expedite any requisite foreclosure process with such loan for the benefit of the Fund. The primary focus of private credit and specialty finance assets (including real estate debt and other general debt and debt-related investments) will be to capitalize on gap, transitional, bridge, special situation and opportunistic financings that are time sensitive, complex, and that the Managing Member believes offer attractive risk-adjusted returns. Each Series of the Fund may also variously co-invest in opportunities originated by other investors where the overall investment opportunity is of the same or similar nature as the Series typically invests.

Cash Flow Summary

Capital Committed:	\$2,000,000
Capital Invested:	\$862,613
Management Fees:	-
Expenses:	-
Interest:	-
Total Contributions:	\$862,613
Remaining Capital Commitment:	\$1,137,387
Total Distributions:	-
Market Value:	\$864,211
Inception Date:	02/14/2019
Inception IRR:	0.3
TVPI:	1.0

Cash Flow Analysis



Benchmark History
Investment Policy Benchmarks
As of March 31, 2019

Total Fund Policy	
Allocation Mandate	Weight (%)
Jan-1985	
S&P 500 Index	20.50
S&P MidCap 400 Index	16.00
Russell 2000 Index	14.00
MSCI EAFE (Net) Index	15.00
Blmbg. Barc. U.S. Aggregate Index	30.00
NCREIF Fund Index-ODCE (VW)	4.50

Jan-2017	
S&P 500 Index	20.00
Russell Midcap Index	14.00
Russell 2000 Index	14.00
MSCI EAFE (Net) Index	15.50
Blmbg. Barc. U.S. Aggregate Index	20.00
Blmbg. Barc. Global Multiverse	2.00
NCREIF Fund Index-ODCE (VW)	6.00
HFRI FOF: Diversified Index	5.00
NCREIF Timberland Index	3.50

Total Fixed Income Policy	
Allocation Mandate	Weight (%)
Jan-1976	
Blmbg. Barc. U.S. Aggregate Index	100.00

Total Real Estate Policy	
Allocation Mandate	Weight (%)
Jan-1978	
NCREIF Property Index	100.00

Total Domestic Equity Policy	
Allocation Mandate	Weight (%)
Jan-1985	
S&P 500 Index	40.00
S&P MidCap 400 Index	32.00
Russell 2000 Index	28.00

Total International Equity Policy	
Allocation Mandate	Weight (%)
Jan-1970	
MSCI EAFE (Net) Index	100.00

Total Timber Policy	
Allocation Mandate	Weight (%)
Apr-1987	
NCREIF Timberland Index	100.00



Plan Disclosures:

- All composite returns (except Timber and Real Estate) prior to March 31, 2015 was obtained from prior consultant.
- Though there was no changes made to any of the composites (except Timber and Real Estate) from 3/31/2015 and back to inception, and are shown as reported by prior consultant, there are changes made to individual portfolios.
- AEW Core Property- obtained all historical statements and built history.
- Bloomfield Capital Income Fund- obtained all historical statements and built history.
- Metropolitan Real Estate VI- obtained all historical statements and built history.
- RMK Timberland Intl Fund- obtained all historical statements and built history.
- RMK Timberland US Fund- obtained all historical statements and built history.
- After rebuilding history for all Real Estate Funds and all Timber funds, recalculated composite returns for each composite.

Southfield Employees Retirement System

Fee Analysis

As of March 31, 2019

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Comerica S&P 500 Index Fund	0.09	22,135,838	19,109	0.12 % of First \$2 M 0.10 % of Next \$3 M 0.08 % of Next \$20 M 0.06 % of Next \$25 M 0.04 % of Next \$50 M 0.02 % Thereafter
Champlain MC Equity	0.85	8,873,771	75,427	0.85 % of Assets
QMA US MC Equity	0.00	7,219,696	325	0.00 % of Assets
SouthernSun SC	1.00	11,078,374	110,784	1.00 % of First \$15 M 0.85 % Thereafter
Walhausen & Co. SMID Value	0.94	5,701,783	53,465	0.95 % of First \$5 M 0.85 % of Next \$20 M 0.75 % of Next \$25 M 0.65 % Thereafter
Total Domestic Equity	0.47	55,009,462	259,110	
WCM Focused Growth International	0.75	9,772,334	73,293	0.75 % of Assets
LSV International LCV	0.75	9,181,039	68,858	0.75 % of First \$25 M 0.65 % of Next \$25 M 0.55 % of Next \$50 M 0.45 % Thereafter
Total International Equity	0.75	18,953,373	142,150	
Pacific Fixed Income	0.30	10,546,228	31,639	0.30 % of Assets
Templeton Global Bond R6 (FBNRX)	0.51	3,339,772	17,033	0.51 % of Assets
Bloomfield Capital Income Fund II	2.00	730,961	14,619	2.00 % of Assets
Bloomfield Capital Income Fund III	2.00	4,173,041	83,461	2.00 % of Assets
Bloomfield Capital Income Fund V	1.50	864,211	12,963	1.50 % of Assets
Total Fixed Income	0.81	19,654,213	159,715	
AEW Core Property Trust	1.25	6,954,410	86,930	1.25 % of Assets
Metropolitan Real Estate V	1.00	757,131	7,571	1.00 % of Assets
Total Real Estate	1.23	7,711,541	94,501	
Magnitude Institutional	1.00	2,788,023	27,880	1.00 % of Assets
Titan Masters Int'l Fund	0.70	2,595,215	18,167	0.70 % of Assets
Total Hedge Fund of Funds	0.86	5,383,239	46,047	
RMK Timberland US Fund	1.00	2,079,392	20,794	1.00 % of Assets
RMK Timberland Intl Fund	1.25	879,399	10,992	1.25 % of Assets
Total Timber Funds	1.07	2,958,791	31,786	
Cash		486,483	-	



Southfield Employees Retirement System**Fee Analysis**

As of March 31, 2019

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Fund	0.67	110,157,102	733,309	



Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

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