

Investment Performance Review  
Period Ending March 31, 2018

# Monroe County Employees Retirement System

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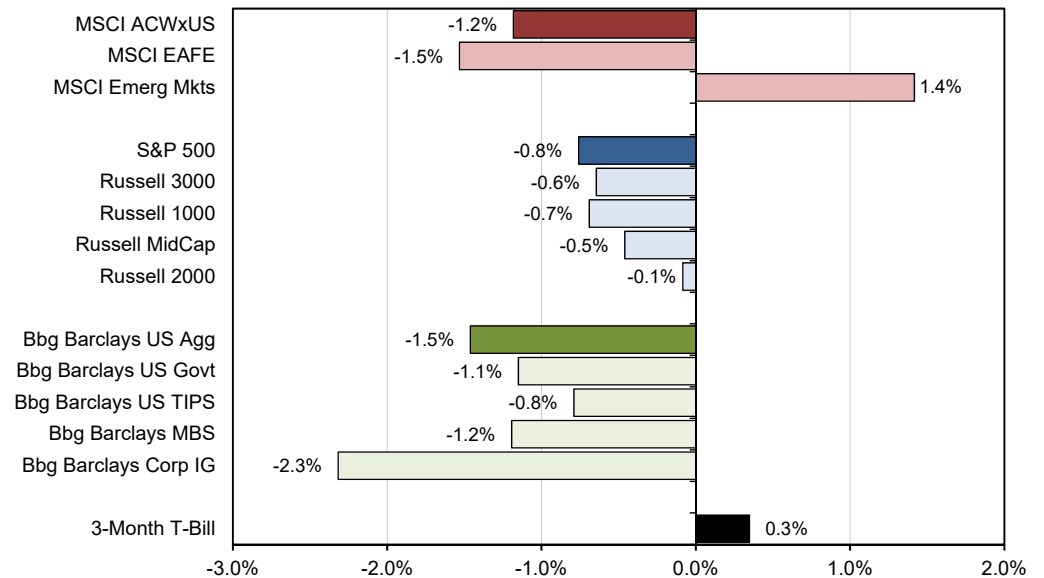


# 1st Quarter 2018 Market Environment

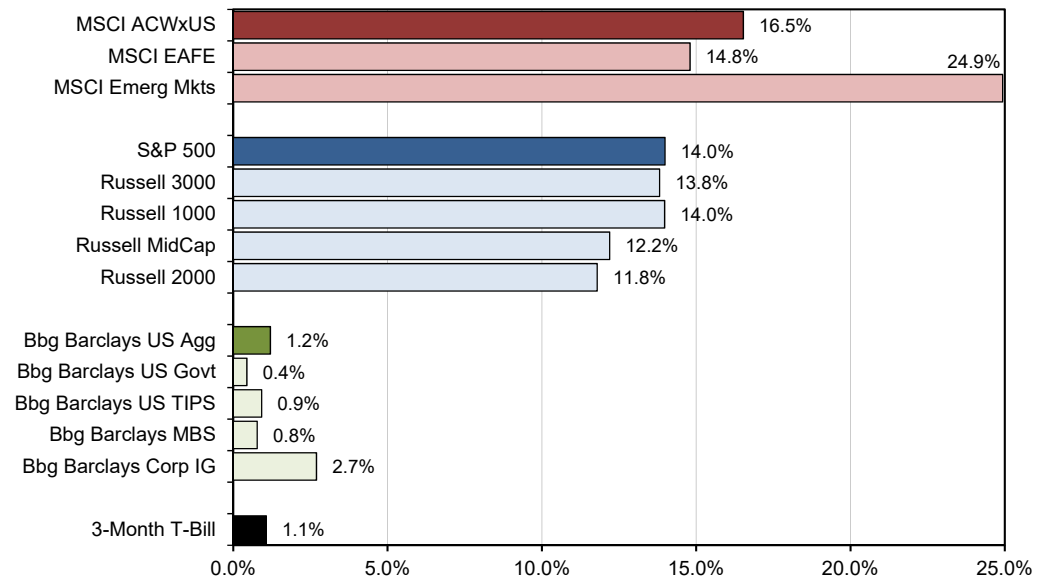


- Market returns were broadly negative across major equity and fixed income indices as we finished a highly volatile 1<sup>st</sup> quarter of 2018. Broad domestic and international equity markets pulled back modestly following a very strong 2017. Fixed income indices also posted negative results, producing returns in-line with those of equities during the quarter. However, when viewed over the past 1-year period, returns remain positive for major indices as improving macroeconomic data and robust corporate earnings worldwide outweighed the near-term market uncertainty. The US stock market represented by the Russell 3000 Index returned -0.6% and 13.8% for the quarter and 1-year period respectively. While the Russell 3000 outperformed the international MSCI ACWI ex US Index during the 1<sup>st</sup> quarter, international stocks have performed better over the last 12 months. While the US economy continues to show signs of expansion, investors focused on the future path of Federal Reserve (Fed) monetary policy and the emergence of new protectionist trade policies from the Trump administration during the quarter.
- International equity market benchmarks were mixed with developed markets posting modestly negative returns and emerging markets earning a slightly positive result. This is a continuation of the 2017 trend of emerging market outperformance relative to developed market equities. Emerging market stocks returned 1.4% and 24.9% over the quarter and 1-year period respectively. While the developed market MSCI EAFE Index lost ground through the 1<sup>st</sup> quarter, returning -1.5%, it still posted solid gains over the 1-year period returning 14.8%, narrowly outpacing major US indices. The strength in fundamentals abroad, ongoing US Dollar (USD) weakness and relatively accommodative global central bank policies continue to act as a tailwind to international markets relative to their US counterparts. Consequently, as the global recovery continues to take hold, international central banks have started to telegraph a greater likelihood of reduced stimulus in the future. Many international markets also saw their returns influenced, both positively and negatively, by ongoing political developments throughout the quarter.
- Interest rates on the US Treasury Yield Curve ended the 1<sup>st</sup> quarter of 2018 higher across all maturities. The movement in rates was considerable during the quarter as markets reacted to the greater likelihood of increasing inflation and a more restrictive than expected US monetary policy going forward. The Fed followed suit by increasing short-term interest rates by 25 basis points at their March meeting, the third increase in the last 12 months. The rising interest rate environment negatively impacted fixed income market returns for the quarter. The Bloomberg Barclays US Aggregate Index fell -1.5% for the quarter, but managed a positive 1.2% return for the 1-year period. Corporate credit reversed its 2017 trend of outperformance relative to other investment grade sectors returning -2.3% during the 1<sup>st</sup> quarter as credit spreads began to widen.

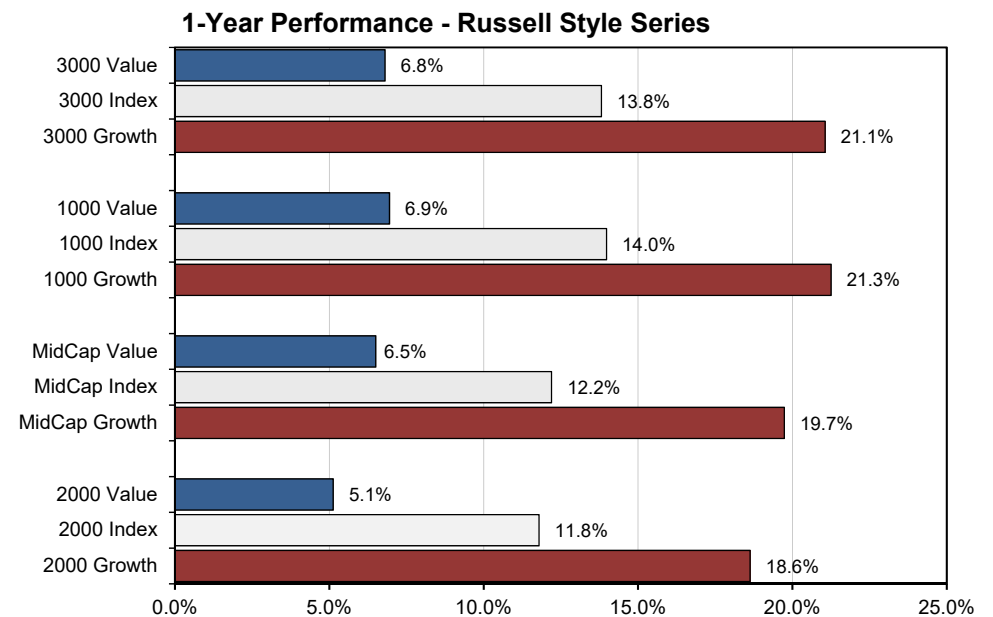
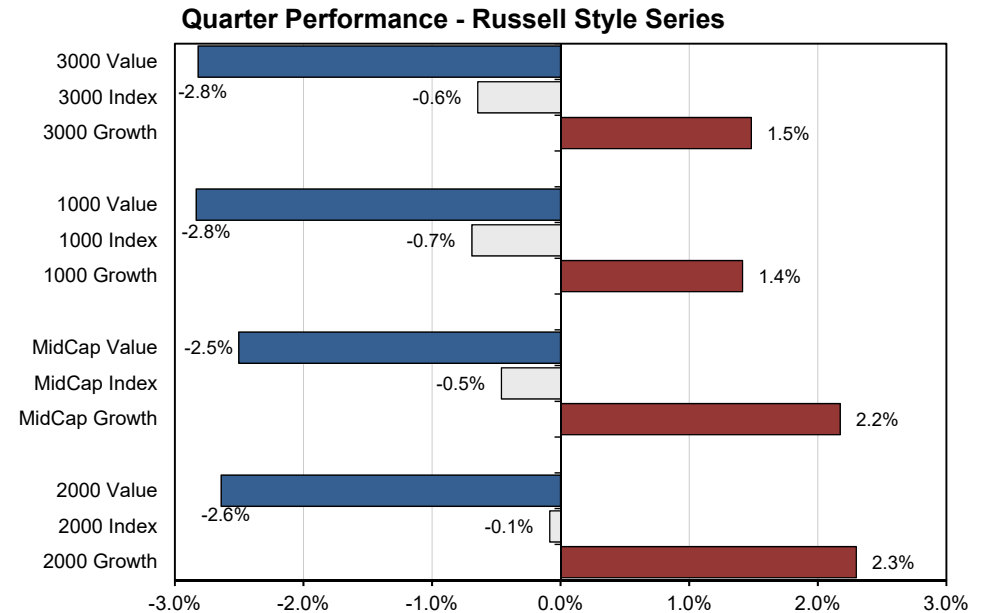
### Quarter Performance



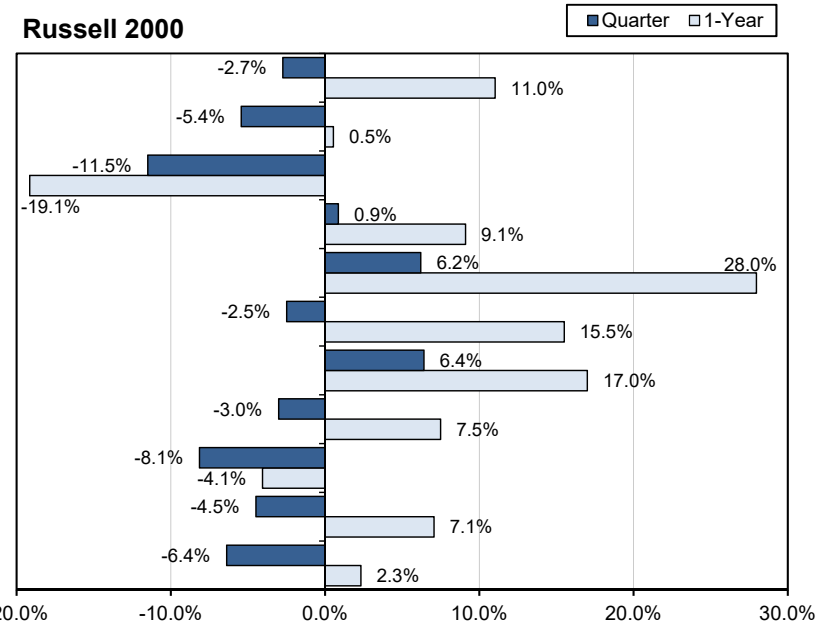
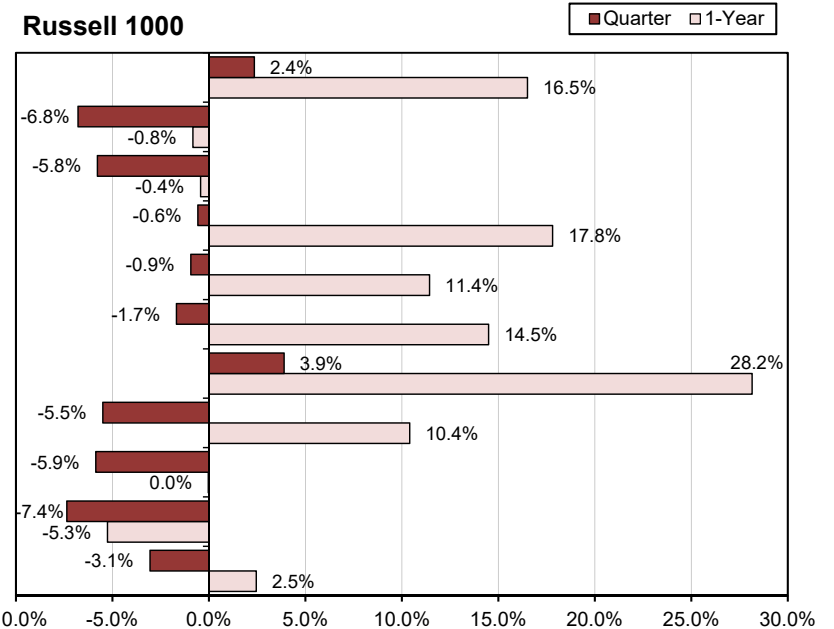
### 1-Year Performance



- US equity index returns were mixed across the style and capitalization spectrum to start 2018 with growth indices being the best performers. Markets were highly volatile throughout the quarter. Investors initially cheered the passage of the republican party tax reforms containing reductions to both individual and corporate income tax rates, increasing expectations for consumer spending and corporate earnings going forward. However, high US wage growth in January raised investor concerns that inflation could be picking up more quickly than the market expected, and would therefore require increased Fed action to prevent overheating of the economy. Market volatility rose and the S&P 500 Index had its first correction since 2015, falling over 10%. The market began a recovery from its February low as later economic releases made it appear that fears over inflation had likely been overstated. However, volatility returned in March when the Trump administration announced a series of protectionist tariff policies, with emphasis placed on China, increasing the potential for a global trade war. Despite the considerable market volatility, most US economic data was positive during the quarter and congress passed a new federal budget deal that will increase government spending by about \$300 billion over the next two years which can be used to stimulate the economy over the short-term.
- During the quarter, small cap stocks outperformed mid and large cap equities. The small cap Russell 2000 Index returned -0.1% during the period, while the large cap Russell 1000 Index returned -0.7%. The opposite was true over the 1-year period as large cap names were the best performers. The Russell 1000 returned 14.0% over the trailing year while the Russell 2000 posted a return of 11.8%. This large cap outperformance can be partially explained by their greater exposure to foreign markets relative to small cap companies. This can be especially beneficial during periods of USD weakness, such as that experienced over the last year. Large cap companies generate more revenue outside of the US which can expose them to faster growing markets, foreign tax benefits or strengthening foreign currencies.
- Growth indices outperformed value indices across the market cap spectrum for the fifth straight quarter and were all able to post a positive return for the 1<sup>st</sup> quarter of 2018. Performance for growth indices more than doubled value index performance for each respective cap segment for the year. Growth benchmarks benefitted from larger exposures to more cyclical names within the information technology, consumer discretionary, health care and industrials sectors. They also benefitted from underweights to more defensive “bond proxy” sectors such as REITs, utilities and telecom. Lower exposure to the energy sector also acted as tailwind to growth benchmarks.



- Sector performance was largely negative across large cap sectors for the 1<sup>st</sup> quarter of 2018. Only two of eleven sectors had positive returns for the quarter and only three of eleven economic sectors outpaced the Russell 1000 Index return. Cyclical sectors tended to do well through the quarter with the higher yielding bond proxy sectors lagging on a relative basis as interest rates rose sharply during the period. Technology stocks continued their 2017 gains over the quarter, gaining 3.9% and consumer discretionary stocks performed well on the back of a strong holiday season earning a 2.4% return. The largest detractors for the quarter were the more defensive telecom services, consumer staples and real estate sectors which returned -7.4%, -6.8% and -5.9% respectively. Over the trailing 1-year period, technology was the best performing sector by a relatively wide margin returning an impressive 28.2%. Consumer discretionary and financials also returned greater than 15%. Seven of eleven large cap economic sectors posted positive returns for the 1-year period with six posting double digit returns. Telecom services was the largest underperformer losing -5.3%. The three other sectors with negative returns for the trailing year (real estate, energy and consumer staples) fell by less than 1.0%.
- Small cap sector results were mixed relative to their large capitalization counterparts. Only three of eleven economic sectors outpaced the Russell 2000 Index return for the quarter and posted positive results for the period. Like the large cap index sector performance, higher dividend yielding sectors also tended to trail more economically sensitive sectors. Technology was the best performing sector returning 6.4%. However, there were several notable differences, particularly in consumer discretionary and energy where there was significant underperformance relative to their large cap counterparts. Small cap sectors trailed large cap sectors in those two categorizations by over 5.0% during the quarter. Similarly, the small cap health care sector had much stronger performance than the large cap health care sector posting a 6.2% gain for the quarter. Over the 1-year period, nine of eleven sectors have posted gains with four of eleven sectors having returns greater than 10%. Health care stocks were the best performers within the Russell 2000 for the year returning a solid 28.0%. Energy and real estate were the only Russell 2000 sectors to post a negative return, falling -19.1% and -4.1% respectively.
- Using S&P 500 sector valuations as a proxy for the market, forward P/E ratios for eight of the GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the utilities, materials and energy sectors appear the most extended. In contrast the telecommunications, technology and health care sectors were trading at a discount to their long-term average P/E ratios.



**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of March 31, 2018

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.41%	-0.5%	18.6%	Information Technology
Microsoft Corp	2.74%	7.2%	41.5%	Information Technology
Amazon.com Inc	2.33%	23.8%	63.3%	Consumer Discretionary
Berkshire Hathaway Inc B	1.54%	0.6%	19.7%	Financials
JPMorgan Chase & Co	1.52%	3.4%	28.0%	Financials
Facebook Inc A	1.51%	-9.4%	12.5%	Information Technology
Johnson & Johnson	1.38%	-7.7%	5.5%	Health Care
Exxon Mobil Corp	1.27%	-9.9%	-5.5%	Energy
Alphabet Inc C	1.25%	-1.4%	24.4%	Information Technology
Alphabet Inc A	1.24%	-1.5%	22.3%	Information Technology

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
bluebird bio Inc	0.52%	-4.1%	87.8%	Health Care
MGIC Investment Corp	0.49%	-7.9%	28.3%	Financials
Sterling Bancorp	0.49%	-8.1%	-3.7%	Financials
Wintrust Financial Corp	0.49%	4.7%	25.5%	Financials
Umpqua Holdings Corp	0.48%	3.9%	25.1%	Financials
Idacorp Inc	0.45%	-2.7%	9.2%	Utilities
Hancock Holding Co	0.44%	4.9%	15.8%	Financials
LivaNova PLC	0.44%	10.7%	80.6%	Health Care
WGL Holdings Inc	0.44%	-2.0%	3.8%	Utilities
Radian Group Inc	0.42%	-7.6%	6.1%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
XL Group Ltd	0.06%	57.8%	41.6%	Financials
Abiomed Inc	0.05%	55.3%	132.4%	Health Care
Netflix Inc	0.48%	53.9%	99.8%	Consumer Discretionary
Validus Holdings Ltd	0.02%	44.6%	23.1%	Financials
Herbalife Ltd	0.02%	43.9%	67.6%	Consumer Staples
Agios Pharmaceuticals Inc	0.02%	43.0%	40.0%	Health Care
Match Group Inc	0.01%	41.9%	172.1%	Information Technology
Square Inc A	0.05%	41.9%	184.7%	Information Technology
CSRA Inc	0.03%	38.6%	43.0%	Information Technology
DST Systems Inc	0.02%	34.8%	37.9%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Atara Biotherapeutics Inc	0.13%	115.5%	89.8%	Health Care
Iovance Biotherapeutics Inc	0.12%	111.3%	126.8%	Health Care
Cambium Learning Group Inc	0.01%	97.2%	128.6%	Consumer Discretionary
G1 Therapeutics Inc	0.01%	86.7%	N/A	Health Care
Arsanis Inc	0.00%	79.4%	N/A	Health Care
Eastman Kodak Co	0.00%	72.6%	-53.5%	Information Technology
American Public Education Inc	0.07%	71.7%	87.8%	Consumer Discretionary
Infinita Corp	0.16%	71.6%	6.2%	Information Technology
Novavax Inc	0.04%	69.4%	64.1%	Health Care
WMIH Corp	0.03%	67.2%	-2.1%	Financials

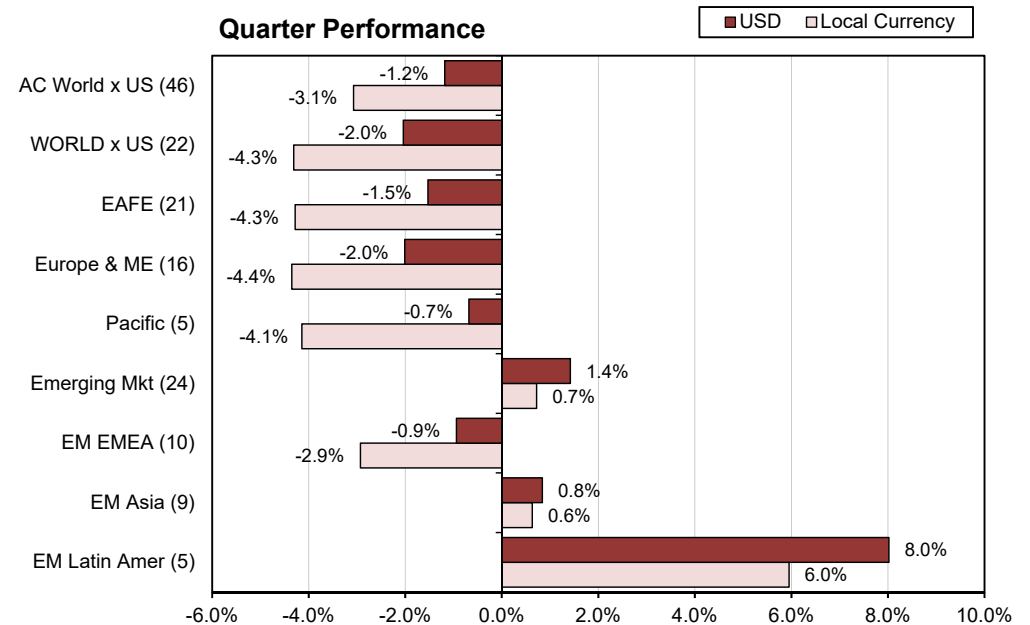
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Colony NorthStar Inc A	0.01%	-49.8%	-52.7%	Real Estate
Weatherford International PLC	0.01%	-45.1%	-65.6%	Energy
Akorn Inc	0.01%	-41.9%	-22.3%	Health Care
Universal Display Corp	0.02%	-41.5%	17.4%	Information Technology
Macquarie Infrastructure Corp	0.01%	-40.3%	-49.7%	Industrials
Patterson Companies Inc	0.01%	-38.0%	-49.6%	Health Care
Mallinckrodt PLC	0.01%	-35.8%	-67.5%	Health Care
L Brands Inc	0.04%	-35.8%	-14.5%	Consumer Discretionary
OPKO Health Inc	0.00%	-35.3%	-60.4%	Health Care
Coherent Inc	0.02%	-33.6%	-8.9%	Information Technology

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Dermira Inc	0.01%	-71.3%	-76.6%	Health Care
Ascent Capital Group Inc A	0.00%	-68.0%	-74.0%	Consumer Discretionary
Roadrunner Transportation Systems Inc	0.01%	-67.1%	-63.0%	Industrials
Tintri Inc	0.00%	-66.5%	N/A	Information Technology
Westmoreland Coal Co	0.00%	-66.1%	-97.2%	Energy
Protagonist Therapeutics Inc	0.01%	-58.7%	-32.9%	Health Care
RAIT Financial Trust	0.00%	-56.9%	-94.5%	Real Estate
Ultra Petroleum Corp	0.08%	-54.0%	-67.4%	Energy
Melinta Therapeutics Inc	0.01%	-53.2%	-60.5%	Health Care
Tetraphase Pharmaceuticals Inc	0.02%	-51.3%	-66.6%	Health Care

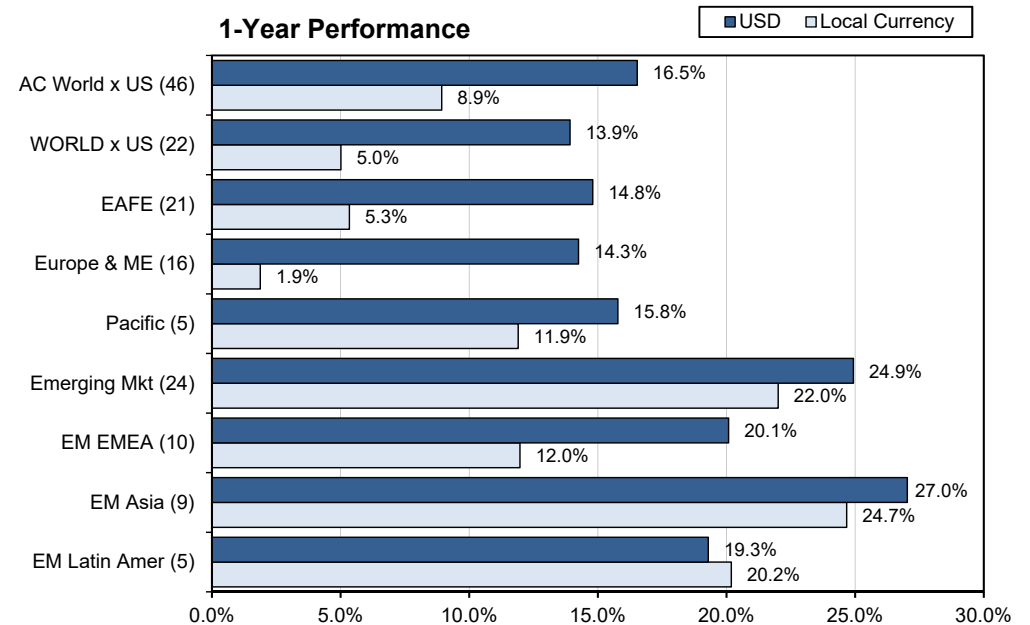


- Similar to domestic equities, broad international equity returns pulled back during the 1<sup>st</sup> quarter. Performance was largely driven by the same catalysts as the US equity markets, as global macroeconomic data remained generally positive. US investors in international markets had a currency effect tailwind as the USD continued its 2017 fall, weakening against most other currencies during the 1<sup>st</sup> quarter. The MSCI ACWI ex US Index lost -1.2% in USD terms and -3.1% in local currency terms. Emerging markets were a bright spot for the quarter with the MSCI Emerging Markets Index finishing with a slight gain. The returns over the 1-year period are substantially better with MSCI ACWI ex US returning 16.5% in USD terms and 8.9% in local currency terms.
- Results for developed market international indices were negative to start 2018 in both USD and local currency terms with the MSCI EAFE Index returning -1.5% and -4.3% respectively. Investors ignored broadly positive global economic data, focusing their attention on US monetary policy uncertainty and the outlook for global trade relations. There were several newsworthy political events during the quarter. In Europe, Italian elections resulted in a hung parliament with the populist Five Star Movement winning the largest number of seats. There is currently no clear path for a coalition government to be formed and it is possible elections may need to be re-held. In contrast, German Chancellor Merkel succeeded in forming a “grand coalition” government during March. In the UK, continued progress was made on “Brexit” as the UK and European Union were able to agree to initial terms on a transition period following the UK’s separation that should allow for an orderly withdrawal. In Japan, Prime Minister Abe was engulfed in a scandal regarding a discounted land sale to a school operator with ties to his wife and its subsequent coverup. The MSCI EAFE Index returned 14.8% and 5.3% for the last twelve months in USD and local currency terms respectively.
- The MSCI Emerging Market Index outperformed developed markets for the 1<sup>st</sup> quarter, posting a narrow gain of 1.4% and 0.7% in USD and local currency terms respectively. While emerging markets were also affected by the rise in global market volatility, strong GDP and corporate earnings growth combined with USD weakness helped them to finish the quarter ahead. China modestly outperformed despite late quarter trade tensions with the US. Brazil was the index’s strongest performer, returning 12.4% in USD terms, after former President Lula da Silva had a corruption and money laundering conviction upheld, likely preventing him from running for office again and opening the door for future economic reforms. Russian equities also performed well after Standard & Poor’s raised the countries credit rating to investment grade for the first time in over a decade citing prudent policy responses to sanctions and falling commodity prices. Indian stocks underperformed after fraud allegations emerged at a state-run bank. One year returns for the MSCI Emerging Market Index were 24.9% in USD terms and 22.0% in terms of local currency.

**Quarter Performance**



**1-Year Performance**



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of March 31, 2018

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	12.6%	0.7%	19.2%
Consumer Staples	11.1%	-3.0%	10.4%
Energy	5.3%	-2.0%	21.4%
Financials	21.1%	-2.2%	13.6%
Health Care	10.2%	-0.9%	7.0%
Industrials	14.6%	-1.5%	17.4%
Information Technology	6.6%	1.1%	26.2%
Materials	8.0%	-3.8%	19.8%
Real Estate	3.5%	-1.5%	13.1%
Telecommunication Services	3.8%	-3.9%	3.1%
Utilities	3.3%	1.3%	12.1%
<b>Total</b>	<b>100.0%</b>	<b>-1.5%</b>	<b>14.8%</b>

MSCI - ACWIXUS	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	11.4%	-1.0%	18.6%
Consumer Staples	9.5%	-2.8%	11.0%
Energy	6.7%	-1.8%	15.4%
Financials	23.1%	-1.1%	15.9%
Health Care	7.7%	-0.3%	9.1%
Industrials	11.8%	-1.6%	16.3%
Information Technology	11.8%	1.8%	34.3%
Materials	8.0%	-2.9%	18.4%
Real Estate	3.2%	-1.7%	16.5%
Telecommunication Services	3.9%	-4.1%	3.6%
Utilities	3.0%	1.2%	10.9%
<b>Total</b>	<b>100.0%</b>	<b>-1.2%</b>	<b>16.5%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Consumer Discretionary	9.5%	-6.1%	16.5%
Consumer Staples	6.4%	-0.8%	15.8%
Energy	7.2%	7.5%	24.7%
Financials	24.0%	4.2%	25.6%
Health Care	2.8%	7.0%	34.6%
Industrials	5.2%	-0.8%	10.1%
Information Technology	27.8%	2.1%	40.1%
Materials	7.3%	0.7%	20.0%
Real Estate	2.8%	-2.1%	32.5%
Telecommunication Services	4.6%	-3.7%	4.5%
Utilities	2.4%	3.0%	9.2%
<b>Total</b>	<b>100.0%</b>	<b>1.4%</b>	<b>24.9%</b>

Country	MSCI-EAFE Weight	MSCI-ACWIXUS Weight	Quarter Return	1-Year Return
Japan	24.6%	16.8%	0.8%	19.6%
United Kingdom	17.3%	11.8%	-3.9%	11.9%
France	10.9%	7.5%	0.3%	20.4%
Germany	9.7%	6.6%	-3.6%	13.6%
Switzerland	7.8%	5.3%	-4.3%	8.2%
Australia	6.6%	4.5%	-6.2%	1.4%
Netherlands	3.7%	2.5%	1.0%	19.9%
Hong Kong	3.6%	2.5%	-1.4%	18.4%
Spain	3.2%	2.2%	-1.7%	8.8%
Sweden	2.7%	1.8%	-2.4%	7.6%
Italy	2.5%	1.7%	5.4%	27.5%
Denmark	1.8%	1.2%	-1.5%	25.1%
Singapore	1.4%	0.9%	2.8%	22.8%
Belgium	1.1%	0.8%	0.5%	13.3%
Finland	1.0%	0.7%	8.2%	23.5%
Norway	0.7%	0.5%	2.3%	29.3%
Ireland	0.5%	0.3%	-5.9%	7.2%
Israel	0.5%	0.3%	-5.3%	-8.4%
Austria	0.3%	0.2%	2.2%	48.5%
New Zealand	0.2%	0.1%	-5.1%	4.0%
Portugal	0.2%	0.1%	3.1%	17.9%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>68.3%</b>	<b>-1.5%</b>	<b>14.8%</b>
Canada		6.2%	-7.4%	4.9%
<b>Total Developed Countries</b>		<b>74.5%</b>	<b>-2.0%</b>	<b>13.9%</b>
China		7.6%	1.8%	38.9%
Korea		3.9%	-0.5%	25.4%
Taiwan		3.0%	5.7%	20.6%
India		2.1%	-7.0%	10.2%
Brazil		1.9%	12.4%	26.4%
South Africa		1.7%	-4.2%	25.0%
Russia		0.9%	9.4%	20.6%
Mexico		0.7%	0.9%	0.9%
Malaysia		0.6%	8.5%	25.3%
Thailand		0.6%	9.0%	35.0%
Indonesia		0.5%	-7.2%	7.8%
Chile		0.3%	1.5%	24.5%
Poland		0.3%	-8.2%	20.7%
Philippines		0.3%	-11.6%	3.8%
Turkey		0.3%	-5.0%	18.6%
United Arab Emirates		0.2%	-1.0%	-0.4%
Qatar		0.1%	2.5%	-11.0%
Colombia		0.1%	4.9%	15.4%
Peru		0.1%	10.3%	44.7%
Greece		0.1%	-6.8%	24.3%
Hungary		0.1%	-1.0%	38.6%
Czech Republic		0.1%	6.4%	36.4%
Egypt		0.0%	10.9%	14.5%
Pakistan		0.0%	11.4%	-14.0%
<b>Total Emerging Countries</b>		<b>25.5%</b>	<b>1.4%</b>	<b>24.9%</b>
<b>Total ACWIXUS Countries</b>		<b>100.0%</b>	<b>-1.2%</b>	<b>16.5%</b>

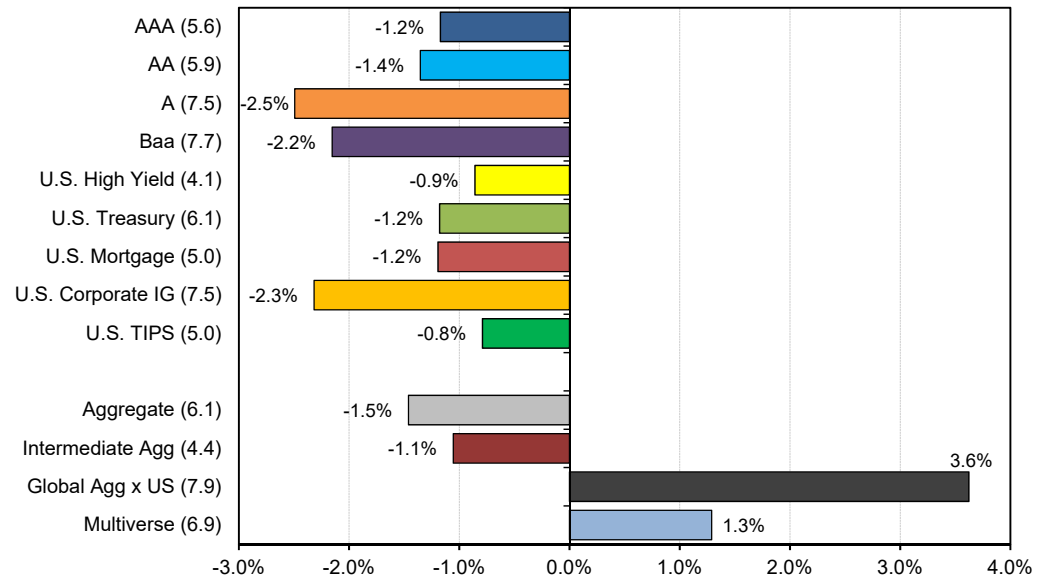
Source: MSCI Global Index Monitor (Returns are Net in USD)



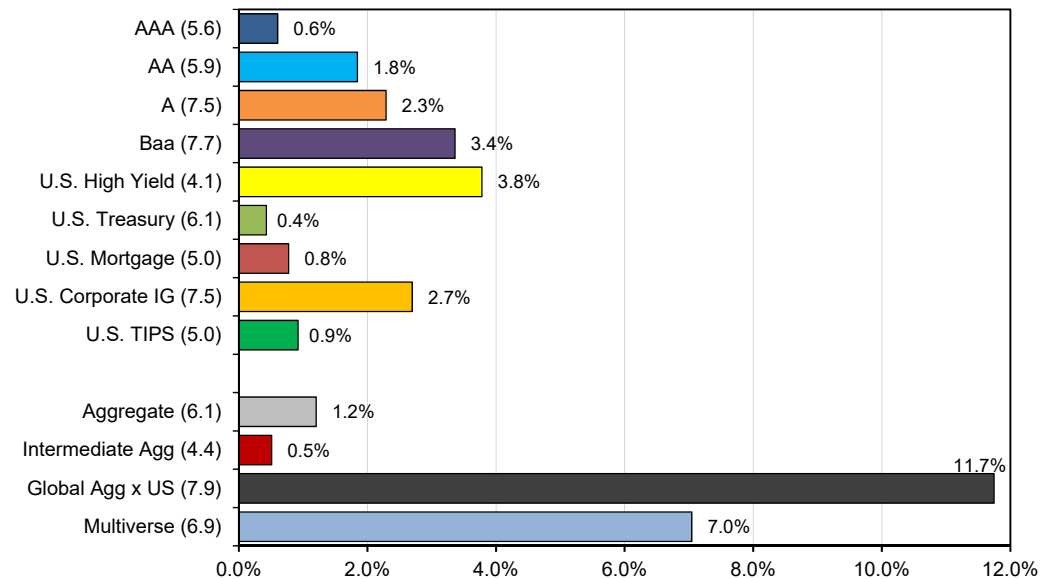


- Broad fixed income benchmarks were mostly negative during the 1<sup>st</sup> quarter, with international bonds being the exception. Early in the quarter, particularly strong January wage growth report caused investors to speculate that inflation was quickly increasing and that the Fed would need to tighten monetary policy to a greater degree than originally planned. This sent a shock through financial markets and caused interest rates to rise considerably. Economic releases later in the quarter showed that the fear of inflation was most likely overstated. Later in the quarter, the Federal Open Market Committee (FOMC), led by new Fed Chair Jerome Powell, decided to increase short-term interest rates by 25 basis points. The current Fed Funds Rate target sits at 1.50% - 1.75%. This rate increase was expected by the market and, importantly, the Fed did not change its plan for further rate increases for 2018. Concerns over new Treasury issuance needed to finance plans for increased fiscal spending also could have contributed to the rise in interest rates. The yield curve flattened through the quarter as short-term yields rose at a greater rate than longer-term yields. The Bloomberg Barclays US Aggregate Index fell -1.5% the quarter, but managed a positive 1.2% return for the trailing year.
- Within investment grade credit, higher quality corporate issues generally outperformed lower quality issues for the quarter as credit spreads widened and investors looked for safety amid increased financial market volatility. AAA rated credit was the best performing investment grade credit quality segment returning -1.2% for the quarter. Interestingly, high yield debt outperformed relative to investment grade credit, returning -0.9%, as spreads widened to a lesser degree for these issues and the index benefitted from a lower duration. Part of the reason for the increased spread widening for investment grade issues relative to high yield issues was selling pressure from companies repatriating foreign cash reserves in response to the new tax code. When viewed over the 1-year period, lower quality issues have advanced to a greater degree, partly due to the continued strength in the global economy. High yield debt returned 3.8% over the period whereas AAA rated issues returned 0.6%.
- US Treasury securities were the best performing investment grade sector through the quarter, narrowly outperforming US mortgage backed securities (MBS). This reversed the trend of corporate credit outperformance that was witnessed through 2017 as investors reacted to market volatility and moved into higher quality government issues. The Bloomberg Barclays US Corporate IG Index returned -2.3% for the quarter as widening credit spreads and a higher duration acted as headwinds to these issues. US Treasury and US MBS both posted a -1.2%. However, over the trailing year, Treasury securities were the worst performing investment grade sector returning 0.4%, while US investment grade corporate bonds were the best performing investment grade sector gaining 2.7%.

**Quarter Performance**

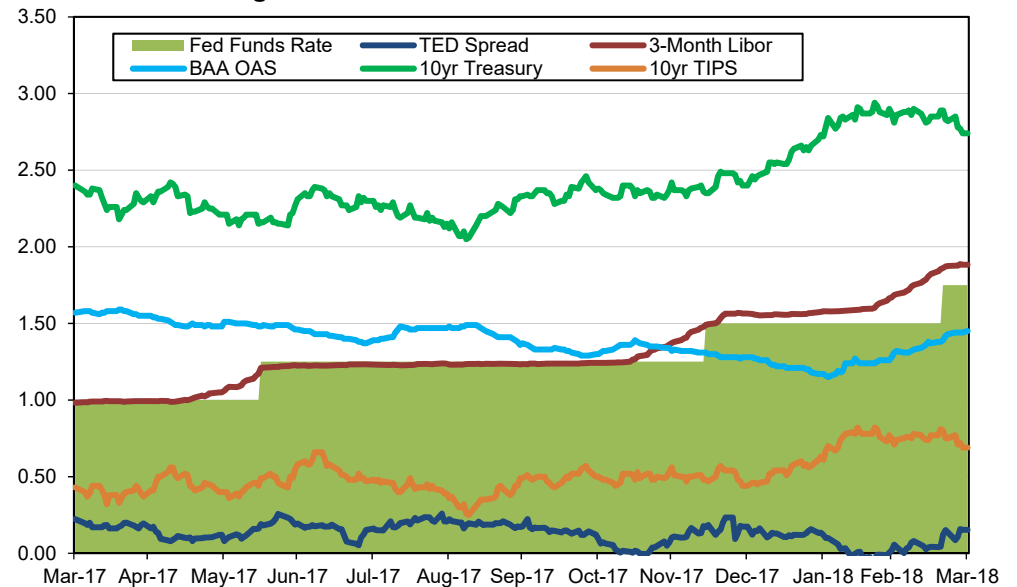


**1-Year Performance**

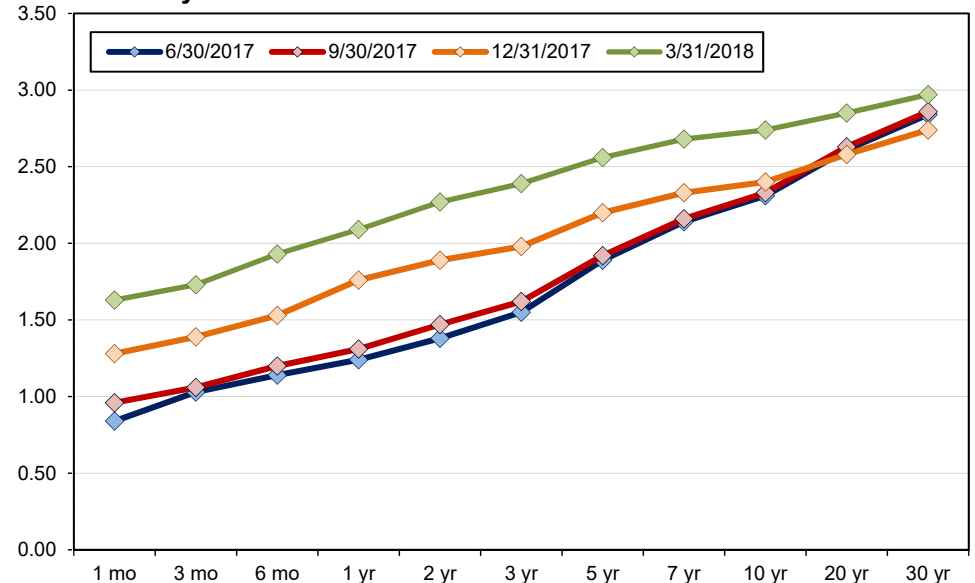


- In contrast to their domestic counterparts, global fixed income indices posted gains for the quarter. Global benchmarks are impacted by the same local yield and duration factors as domestic benchmarks. While these indices have relatively high durations, which would have acted as a headwind in the current quarter as interest rates increased, the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. This currency effect can add additional return to foreign issues as it did during calendar year 2017, or it can further exacerbate negative performance as it did in 2016. Global bonds outperformed domestic issues during the quarter and 1-year period partially due to a currency effect tailwind caused by a weakening USD. Returns on global bonds represented by the Bloomberg Barclays Global Aggregate ex US Index were 3.6% and 11.7% for the 1<sup>st</sup> quarter and trailing twelve months respectively. As the global economy continues to recover, several international central banks have started to move toward a less accommodative posture. Notably, the ECB, has extended its current quantitative easing program well into 2018, but has reduced the amount of monthly asset purchases from 60 billion euro per month to 30 billion euro per month. They also signaled that they would end the program entirely if the eurozone recovery continues to flourish. Similarly, the Bank of Japan (BoJ) inferred that they could end their quantitative easing program sometime in 2019 if target metrics were met. Lastly, the BoE voted to raise interest rates for the first time in a decade during the 4<sup>th</sup> quarter of 2017 and indicated rates may rise again more quickly than expected.
- 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) rose significantly during the 1<sup>st</sup> quarter, rising from 2.40%, to a peak of 2.94%, before falling to 2.74% to end the period. 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 steady decline in credit spreads throughout 2017. However, the trend begins to reverse in early February. This increase is equivalent to an interest rate increase on corporate bonds, which produces a headwind for corporate bond index returns. These credit spreads have widened by about 17 basis points over the last 3-months. The green shading at the bottom of the graph illustrates the gradual increase in the Federal Funds Rate due to a less accommodative US monetary policy.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen more than interest rates on the long end of the curve. The significant upward shift in interest rates that occurred in the 1<sup>st</sup> quarter is clearly visible.

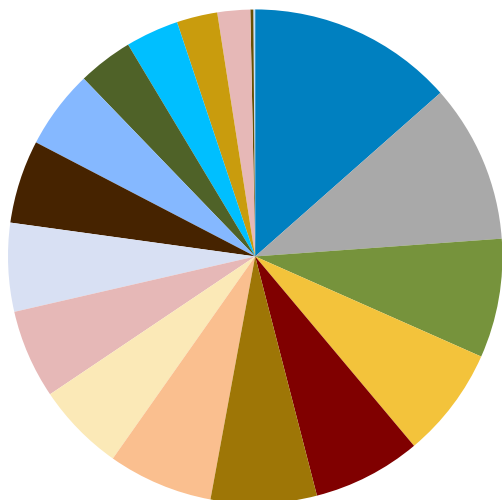
1-Year Trailing Market Rates



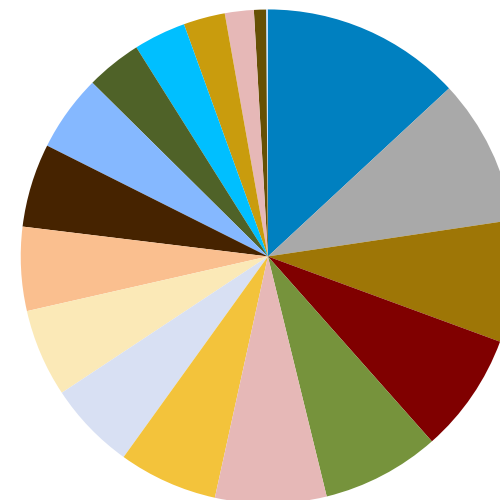
Treasury Yield Curve



**Asset Allocation By Manager as of  
December 31, 2017 : \$207,268,964**



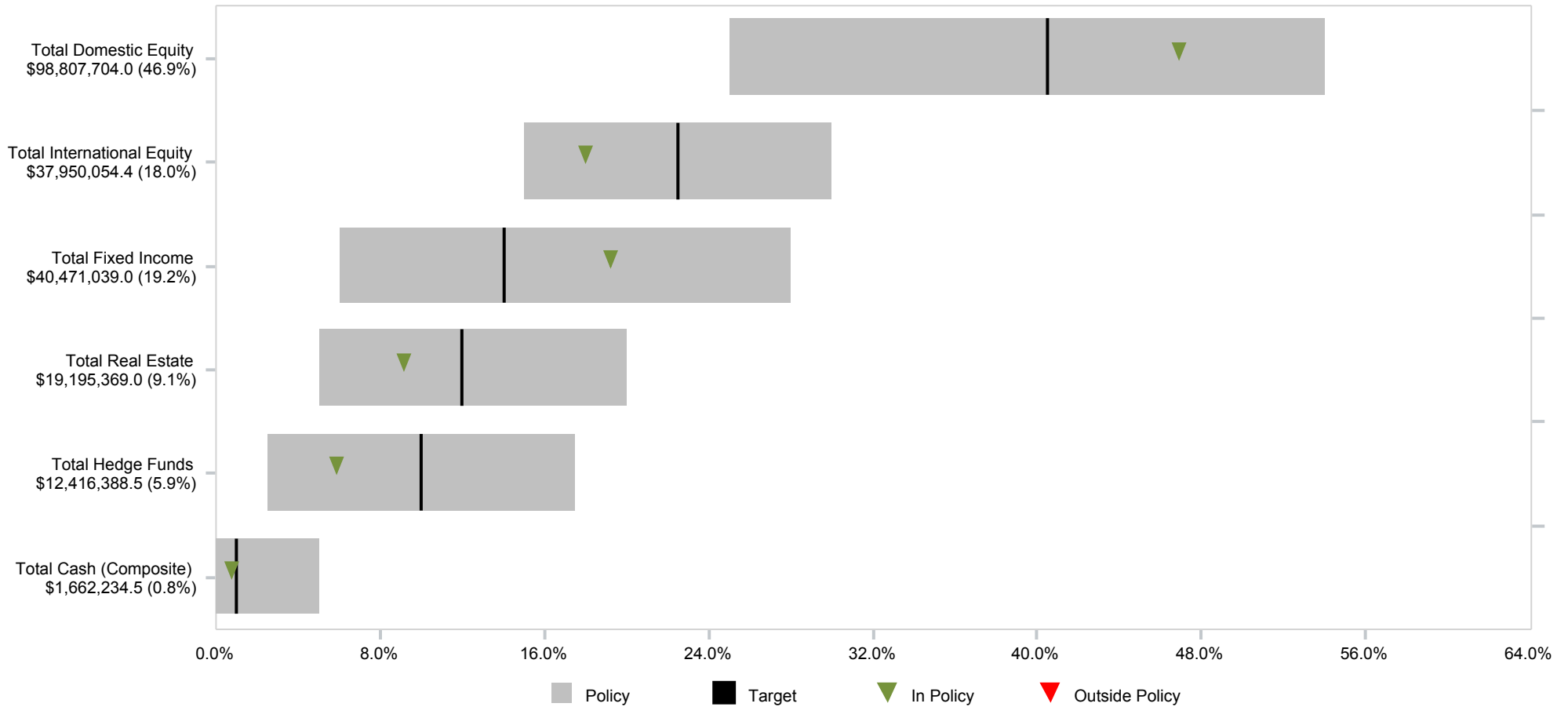
**Asset Allocation By Manager as of  
March 31, 2018 : \$210,502,789**



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Boyd Watterson Asset MGMT	27,935,534	13.5	Boyd Watterson Asset MGMT	27,551,448	13.1
Seizert SMID Cap Core	21,499,083	10.4	Seizert SMID Cap Core	20,098,380	9.5
Clarkston Capital	16,140,123	7.8	Seizert Large Value	16,782,306	8.0
Vanguard Russell 1000 Growth (VONG)	15,041,681	7.3	Clearbridge LCG	16,529,206	7.9
Clearbridge LCG	14,684,559	7.1	Clarkston Capital	16,259,322	7.7
Seizert Large Value	14,335,275	6.9	Lazard Emerging	15,287,749	7.3
Delaware Large Value	14,234,154	6.9	Vanguard Russell 1000 Growth (VONG)	13,631,788	6.5
Renaissance Int'l Equity	12,069,395	5.8	Corbin- Pinehurst	12,159,836	5.8
Lazard Emerging	12,049,311	5.8	Renaissance Int'l Equity	12,111,077	5.8
Corbin- Pinehurst	12,013,668	5.8	Delaware Large Value	11,534,852	5.5
Titanium GSA Fund	11,295,566	5.4	Titanium GSA Fund	11,526,520	5.5
Cambiar International	10,674,624	5.2	Cambiar International	10,551,228	5.0
Intercontinental Real Estate	7,476,836	3.6	Intercontinental Real Estate	7,668,849	3.6
Boyd Watterson Limited Duration Fund (BWDTX)	7,208,543	3.5	Boyd Watterson Limited Duration Fund (BWDTX)	7,188,877	3.4
Brandywine Global Fixed	5,504,537	2.7	Brandywine Global Fixed	5,730,713	2.7
Tortoise MLP & Pipeline (TORIX)	4,443,590	2.1	Tortoise MLP & Pipeline (TORIX)	3,971,850	1.9
Cash Account	405,933	0.2	Cash Account	1,662,235	0.8
Mesirow Financial	256,553	0.1	Mesirow Financial	256,553	0.1



**Executive Summary**



**Asset Allocation Compliance**

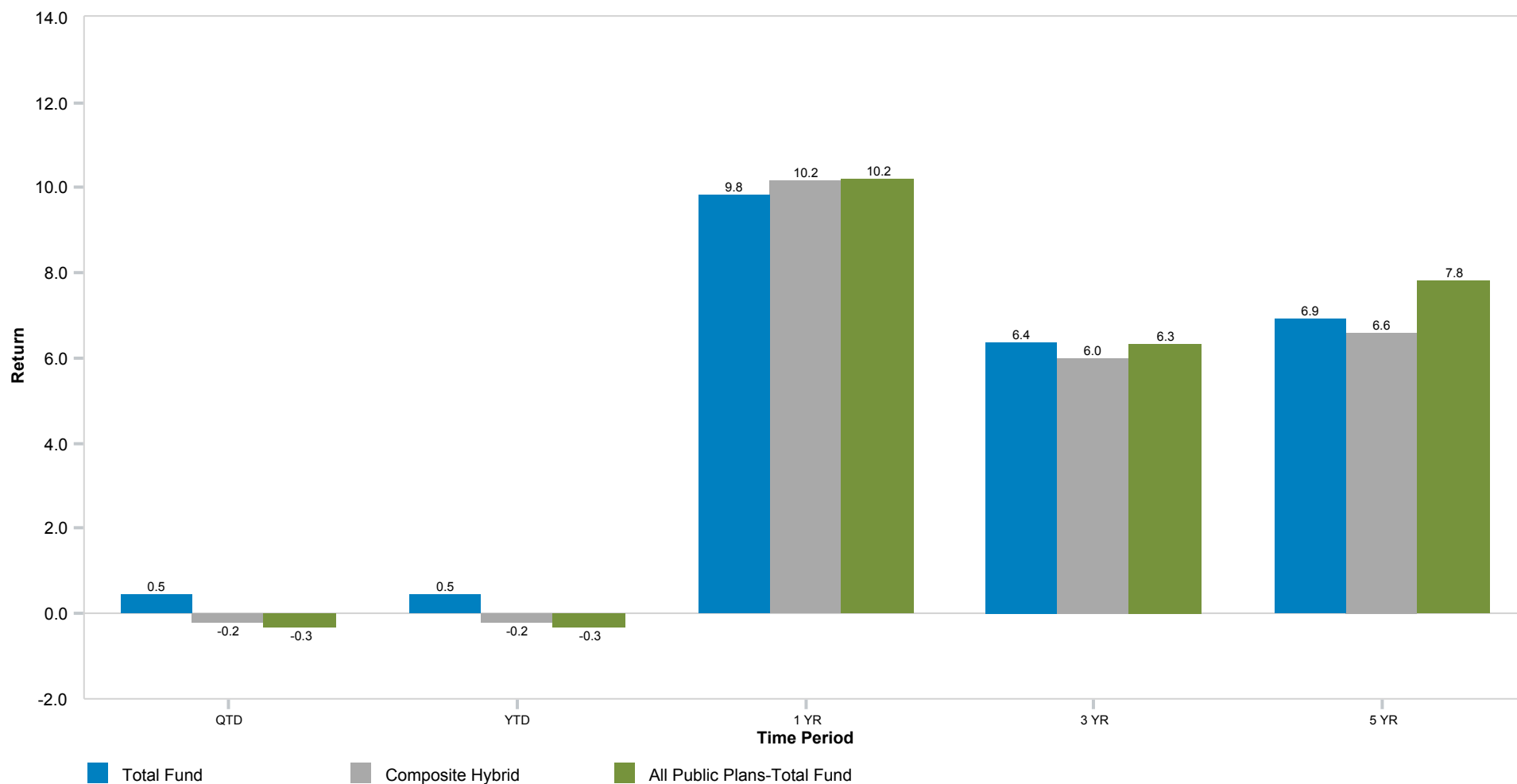
	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Min. Rebal. (\$000)	Target Rebal. (\$000)	Max. Rebal. (\$000)
Total Fund	210,502,789	100.0	-	100.0	-	-	-	-
Total Domestic Equity	98,807,704	46.9	25.0	40.5	54.0	-46,182,007	-13,554,074	14,863,802
Total International Equity	37,950,054	18.0	15.0	22.5	30.0	-6,374,636	9,413,073	25,200,782
Total Fixed Income	40,471,039	19.2	6.0	14.0	28.0	-27,840,872	-11,000,648	18,469,742
Total Real Estate	19,195,369	9.1	5.0	12.0	20.0	-8,670,230	6,064,966	22,905,189
Total Hedge Funds	12,416,389	5.9	2.5	10.0	17.5	-7,153,819	8,633,890	24,421,600
Total Cash (Composite)	1,662,235	0.8	0.0	1.0	5.0	-1,662,235	442,793	8,862,905



Gain/Loss Summary

	QTD	YTD	1 YR	3 YR	5 YR
<b>Total Fund</b>					
<b>Beginning Market Value</b>	<b>207,268,964</b>	<b>207,268,964</b>	<b>196,725,490</b>	<b>193,241,989</b>	<b>179,632,915</b>
Net Contributions	2,569,655	2,569,655	-4,184,431	-14,861,562	-26,850,240
ROI (Income + Gain/Loss)	978,506	978,506	18,614,627	32,775,259	58,373,010
<b>Ending Market Value</b>	<b>210,502,789</b>	<b>210,502,789</b>	<b>210,502,789</b>	<b>210,502,789</b>	<b>210,502,789</b>

Comparative Performance



**Comparative Performance Trailing Returns**  
**Monroe County Employees Retirement System**  
As of March 31, 2018

**Comparative Performance**

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception	Inception Date	
<b>Total Fund</b>	<b>0.46</b>	<b>(10)</b>	<b>0.46</b>	<b>(10)</b>	<b>9.84</b>	<b>(60)</b>	<b>6.38</b>	<b>(48)</b>	<b>6.94</b>	<b>(81)</b>	<b>6.26</b>	<b>(93)</b>	<b>5.39</b>	<b>(94)</b>	<b>7.82</b>	<b>(76)</b>	<b>07/01/1990</b>
Composite Hybrid	-0.22	(42)	-0.22	(42)	10.17	(51)	6.02	(64)	6.58	(89)	6.97	(78)	6.02	(83)	7.76	(81)	
All Public Plans-Total Fund Median	-0.34		-0.34		10.20		6.33		7.84		7.50		6.63		8.17		
<b>Total Fund (Net of Fees)</b>	<b>0.34</b>		<b>0.34</b>		<b>9.31</b>		<b>5.67</b>		<b>6.28</b>		<b>5.70</b>		<b>5.00</b>		<b>7.66</b>		<b>07/01/1990</b>
<b>Total Equity</b>																	
<b>Total Domestic Equity</b>																	
Delaware Large Value	-0.92	(20)	-0.92	(20)	9.21	(67)	8.70	(54)	N/A		N/A		N/A		8.55	(44)	09/01/2014
Russell 1000 Value Index	-2.83	(77)	-2.83	(77)	6.95	(89)	7.88	(70)	10.78	(76)	11.00	(66)	7.78	(82)	7.17	(74)	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95		-1.95		10.53		8.88		11.99		11.70		9.03		8.29		
Seizert Large Value	-0.68	(16)	-0.68	(16)	12.27	(33)	10.93	(13)	N/A		N/A		N/A		9.32	(28)	09/01/2014
Russell 1000 Value Index	-2.83	(77)	-2.83	(77)	6.95	(89)	7.88	(70)	10.78	(76)	11.00	(66)	7.78	(82)	7.17	(74)	
IM U.S. Large Cap Value Equity (SA+CF) Median	-1.95		-1.95		10.53		8.88		11.99		11.70		9.03		8.29		
Vanguard Russell 1000 Growth (VONG)	1.48	(28)	1.48	(28)	21.22	(20)	N/A		N/A		N/A		N/A		22.29	(26)	12/01/2016
Russell 1000 Growth Index	1.42	(28)	1.42	(28)	21.25	(20)	12.90	(9)	15.53	(10)	14.09	(7)	11.34	(9)	24.33	(18)	
IM U.S. Large Cap Equity (MF) Median	-0.68		-0.68		14.14		9.53		12.29		11.60		8.70		16.72		
Clearbridge LCG	1.70	(56)	1.70	(56)	20.34	(56)	N/A		N/A		N/A		N/A		19.58	(78)	12/01/2016
Russell 1000 Growth Index	1.42	(61)	1.42	(61)	21.25	(46)	12.90	(30)	15.53	(39)	14.09	(33)	11.34	(41)	24.33	(42)	
IM U.S. Large Cap Growth Equity (SA+CF) Median	1.99		1.99		20.83		11.66		15.03		13.38		10.99		23.26		
Clarkston Capital	0.94	(33)	0.94	(33)	11.84	(57)	N/A		N/A		N/A		N/A		11.84	(57)	04/01/2017
Russell 2500 Index	-0.24	(53)	-0.24	(53)	12.31	(54)	8.15	(59)	11.55	(66)	10.88	(67)	10.28	(71)	12.31	(54)	
IM U.S. SMID Cap Equity (SA+CF) Median	-0.15		-0.15		12.41		8.69		12.07		11.64		11.10		12.41		
Seizert SMID Cap Core	1.53	(26)	1.53	(26)	4.35	(95)	6.89	(78)	N/A		N/A		N/A		6.40	(91)	01/01/2014
Russell 2500 Index	-0.24	(53)	-0.24	(53)	12.31	(54)	8.15	(59)	11.55	(66)	10.88	(67)	10.28	(71)	8.68	(60)	
IM U.S. SMID Cap Equity (SA+CF) Median	-0.15		-0.15		12.41		8.69		12.07		11.64		11.10		9.08		
Tortoise MLP & Pipeline (TORIX)	-10.62	(31)	-10.62	(31)	-13.63	(17)	N/A		N/A		N/A		N/A		-0.40	(12)	07/01/2016
Alerian MLP Index	-11.12	(48)	-11.12	(48)	-20.07	(64)	-11.24	(55)	-5.85	(66)	-0.04	(57)	5.60	(N/A)	-8.45	(82)	
IM Energy MLP (MF) Median	-11.24		-11.24		-18.87		-11.11		-4.70		0.23		N/A		-5.27		

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through 02/28/2018.



**Comparative Performance Trailing Returns  
Monroe County Employees Retirement System**

As of March 31, 2018

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception		Inception Date	
<b>Total International Equity</b>																		
<b>Total Developed Markets Int'l Equity</b>																		
Cambiar International	-1.04	(69)	-1.04	(69)	15.33	(76)	N/A		N/A		N/A		N/A		12.87	(82)	04/01/2016	
MSCI EAFE (Net) Index	-1.53	(80)	-1.53	(80)	14.80	(80)	5.55	(87)	6.50	(73)	5.31	(72)	2.74	(92)	13.23	(78)		
IM International Equity (SA+CF) Median	-0.09		-0.09		19.48		8.42		7.97		6.59		4.84		16.68			
Renaissance Int'l Equity	0.40	(40)	0.40	(40)	16.38	(70)	6.48	(74)	9.12	(33)	6.36	(55)	N/A		10.96	(51)	11/01/2008	
MSCI EAFE (Net) Index	-1.53	(80)	-1.53	(80)	14.80	(80)	5.55	(87)	6.50	(73)	5.31	(72)	2.74	(92)	8.27	(93)		
IM International Equity (SA+CF) Median	-0.09		-0.09		19.48		8.42		7.97		6.59		4.84		10.99			
<b>Emerging Markets Int'l Equity</b>																		
Lazard Emerging	3.51	(14)	3.51	(14)	22.35	(64)	11.31	(31)	5.83	(55)	4.83	(40)	N/A		4.91	(57)	12/01/2010	
MSCI Emerging Markets (Net) Index	1.42	(59)	1.42	(59)	24.93	(47)	8.81	(64)	4.99	(71)	2.47	(84)	3.02	(86)	3.61	(80)		
IM Emerging Markets Equity (SA+CF) Median	1.81		1.81		24.56		9.86		6.05		4.48		4.41		5.22			
<b>Total Domestic Fixed Income</b>																		
<b>Total Fixed Income</b>																		
<b>Total Domestic Fixed Income</b>																		
Boyd Watterson Asset MGMT	-1.24	(70)	-1.24	(70)	1.42	(65)	1.31	(73)	1.74	(70)	2.64	(72)	3.55	(66)	5.58	(74)	07/01/1990	
Bloomberg Barclays Intermediate US Govt/Credit Idx	-0.98	(57)	-0.98	(57)	0.35	(97)	0.94	(88)	1.25	(84)	2.25	(80)	2.92	(79)	5.41	(77)		
IM U.S. Fixed Income (SA+CF) Median	-0.87		-0.87		1.98		1.92		2.39		3.60		4.29		6.14			
Boyd Watterson Limited Duration Fund (BWDTX)	-0.27	(64)	-0.27	(64)	3.01	(3)	3.30	(2)	N/A		N/A		N/A		2.92	(2)	12/01/2013	
ICE BofAML 1-3 Year U.S. Corporate	-0.38	(76)	-0.38	(76)	0.81	(48)	1.36	(20)	1.46	(10)	1.91	(10)	2.84	(6)	1.40	(15)		
IM U.S. Short Duration Fixed Income (MF) Median	-0.17		-0.17		0.76		0.77		0.70		1.02		1.61		0.79			
<b>Total Global Fixed Income</b>																		
Brandywine Global Fixed	4.22	(2)	4.22	(2)	11.57	(7)	3.35	(58)	2.53	(57)	4.96	(25)	5.70	(31)	6.04	(37)	06/01/2004	
FTSE World Government Bond Index	2.50	(10)	2.50	(10)	8.49	(18)	3.45	(55)	1.19	(88)	1.47	(90)	1.97	(95)	3.65	(95)		
IM Global Fixed Income (SA+CF) Median	0.44		0.44		5.55		3.57		2.91		3.83		4.09		5.30			

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through 02/28/2018.



**Comparative Performance Trailing Returns  
Monroe County Employees Retirement System**

As of March 31, 2018

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
<b>Total Alternatives</b>									
<b>Total Real Estate</b>									
Intercontinental Real Estate	2.79 (7)	2.79 (7)	9.17 (25)	12.32 (22)	N/A	N/A	N/A	11.97 (29)	01/01/2014
NCREIF Property Index	1.70 (96)	1.70 (96)	7.12 (94)	8.72 (89)	10.00 (92)	10.55 (91)	6.09 (24)	9.81 (91)	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.23	2.23	8.62	10.38	12.13	12.25	5.37	11.43	
Titanium GSA Fund	2.36 (40)	2.36 (40)	8.87 (45)	10.19 (64)	N/A	N/A	N/A	9.22 (98)	01/01/2014
NCREIF Property Index	1.70 (96)	1.70 (96)	7.12 (94)	8.72 (89)	10.00 (92)	10.55 (91)	6.09 (24)	9.81 (91)	
IM U.S. Private Real Estate (SA+CF) Median	2.23	2.23	8.62	10.38	12.13	12.25	5.37	11.43	
<b>Total Hedge Fund</b>									
Corbin- Pinehurst	1.22 (3)	1.22 (3)	5.95 (13)	3.42 (7)	N/A	N/A	N/A	4.74 (1)	07/01/2013
HFRI Fund of Funds Composite Index	0.57 (5)	0.57 (5)	5.86 (14)	1.96 (19)	3.44 (5)	2.62 (31)	1.58 (40)	3.62 (3)	
IM Alternative Multi-Strategy (MF) Median	-0.88	-0.88	1.87	0.39	1.66	2.07	1.40	1.95	
Mesirow Financial	0.00	0.00	-0.19	-0.94	N/A	N/A	N/A	1.94	07/01/2013
HFRI Fund of Funds Composite Index	0.57	0.57	5.86	1.96	3.44	2.62	1.58	3.62	
<b>Total Cash</b>									
Cash Account	0.22 (79)	0.22 (79)	1.07 (81)	0.43 (100)	1.30 (25)	N/A	N/A	1.14 (41)	07/01/2011
90 Day U.S. Treasury Bill	0.35 (43)	0.35 (43)	1.11 (80)	0.49 (100)	0.31 (100)	0.24 (100)	0.32 (100)	0.25 (100)	
IM U.S. Cash Fixed Income (SA+CF) Median	0.35	0.35	1.37	1.06	0.82	0.90	1.27	0.86	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through 02/28/2018.





**Comparative Performance Calendar Year Returns  
Monroe County Employees Retirement System**

As of March 31, 2018

Comparative Performance												
	2017		2016		2015		2014		2013		2012	
<b>Total Fund</b>	<b>13.95</b>	<b>(76)</b>	<b>7.59</b>	<b>(43)</b>	<b>-0.11</b>	<b>(56)</b>	<b>4.70</b>	<b>(89)</b>	<b>12.52</b>	<b>(90)</b>	<b>9.39</b>	<b>(95)</b>
Composite Hybrid	15.13	(58)	6.34	(77)	-0.60	(68)	3.93	(93)	14.79	(76)	9.74	(94)
All Public Plans-Total Fund Median	15.43		7.32		0.07		6.78		16.90		12.48	
<b>Total Fund (Net of Fees)</b>	<b>13.32</b>		<b>6.86</b>		<b>-0.88</b>		<b>4.10</b>		<b>11.88</b>		<b>9.08</b>	
<b>Total Equity</b>												
<b>Total Domestic Equity</b>												
Delaware Large Value	14.09	(86)	15.94	(37)	0.25	(24)	N/A		N/A		N/A	
Russell 1000 Value Index	13.66	(88)	17.34	(25)	-3.83	(69)	13.45	(35)	32.53	(62)	17.51	(29)
IM U.S. Large Cap Value Equity (SA+CF) Median	17.22		14.58		-2.25		12.24		34.27		15.66	
Seizert Large Value	17.83	(43)	19.12	(16)	-3.17	(62)	N/A		N/A		N/A	
Russell 1000 Value Index	13.66	(88)	17.34	(25)	-3.83	(69)	13.45	(35)	32.53	(62)	17.51	(29)
IM U.S. Large Cap Value Equity (SA+CF) Median	17.22		14.58		-2.25		12.24		34.27		15.66	
Vanguard Russell 1000 Growth (VONG)	30.05	(16)	N/A		N/A		N/A		N/A		N/A	
Russell 1000 Growth Index	30.21	(15)	7.08	(60)	5.67	(19)	13.05	(20)	33.48	(39)	15.26	(51)
IM U.S. Large Cap Equity (MF) Median	21.61		9.00		0.42		10.90		32.51		15.34	
Clearbridge LCG	26.42	(70)	N/A		N/A		N/A		N/A		N/A	
Russell 1000 Growth Index	30.21	(38)	7.08	(27)	5.67	(45)	13.05	(39)	33.48	(59)	15.26	(50)
IM U.S. Large Cap Growth Equity (SA+CF) Median	28.21		4.65		4.93		11.91		34.52		15.19	
Clarkston Capital	N/A		N/A		N/A		N/A		N/A		N/A	
Russell 2500 Index	16.81	(59)	17.59	(37)	-2.90	(67)	7.07	(50)	36.80	(56)	17.88	(42)
IM U.S. SMID Cap Equity (SA+CF) Median	17.71		16.43		-1.42		7.00		37.57		16.73	
Seizert SMID Cap Core	5.83	(98)	27.24	(8)	-8.71	(93)	4.28	(72)	N/A		N/A	
Russell 2500 Index	16.81	(59)	17.59	(37)	-2.90	(67)	7.07	(50)	36.80	(56)	17.88	(42)
IM U.S. SMID Cap Equity (SA+CF) Median	17.71		16.43		-1.42		7.00		37.57		16.73	
Riverbridge SMID Growth	20.63	(76)	8.39	(53)	0.28	(46)	N/A		N/A		N/A	
Russell 2500 Growth Index	24.46	(53)	9.73	(33)	-0.19	(52)	7.05	(33)	40.65	(48)	16.13	(46)
IM U.S. SMID Cap Growth Equity (SA+CF) Median	24.95		8.56		0.09		5.65		40.05		15.55	
Tortoise MLP & Pipeline (TORIX)	-1.03	(13)	N/A		N/A		N/A		N/A		N/A	
Alerian MLP Index	-6.52	(49)	18.31	(73)	-32.59	(34)	4.80	(69)	27.58	(27)	4.80	(33)
IM Energy MLP (MF) Median	-6.60		25.18		-35.23		7.21		22.52		3.37	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through November 30, 2017.



**Comparative Performance Calendar Year Returns  
Monroe County Employees Retirement System**

As of March 31, 2018

	2017		2016		2015		2014		2013		2012	
<b>Total International Equity</b>												
<b>Total Developed Markets Int'l Equity</b>												
Cambiar International	21.33	(92)	N/A		N/A		N/A		N/A		N/A	
MSCI EAFE (Net) Index	25.03	(80)	1.00	(69)	-0.81	(48)	-4.90	(74)	22.78	(41)	17.32	(70)
IM International Equity (SA+CF) Median	30.57		3.78		-1.64		-2.60		19.95		19.84	
Renaissance Int'l Equity	27.97	(64)	-0.93	(82)	0.18	(43)	-4.37	(68)	33.29	(9)	10.64	(94)
MSCI EAFE (Net) Index	25.03	(80)	1.00	(69)	-0.81	(48)	-4.90	(74)	22.78	(41)	17.32	(70)
IM International Equity (SA+CF) Median	30.57		3.78		-1.64		-2.60		19.95		19.84	
<b>Emerging Markets Int'l Equity</b>												
Lazard Emerging	32.39	(69)	23.25	(5)	-19.58	(98)	-5.87	(92)	4.53	(28)	19.39	(65)
MSCI Emerging Markets (Net) Index	37.28	(48)	11.19	(43)	-14.92	(69)	-2.19	(73)	-2.60	(75)	18.23	(69)
IM Emerging Markets Equity (SA+CF) Median	37.02		10.08		-12.66		-0.14		0.95		20.53	
<b>Total Domestic Fixed Income</b>												
<b>Total Fixed Income</b>												
<b>Total Domestic Fixed Income</b>												
Boyd Watterson Asset MGMT	3.59	(63)	2.05	(75)	1.25	(29)	3.92	(55)	-0.40	(54)	4.45	(72)
Bloomberg Barclays Intermediate US Govt/Credit Idx	2.14	(83)	2.08	(75)	1.07	(36)	3.13	(65)	-0.86	(63)	3.89	(77)
IM U.S. Fixed Income (SA+CF) Median	4.21		3.74		0.72		4.43		-0.18		6.91	
Boyd Watterson Limited Duration Fund (BWDTX)	4.08	(3)	5.77	(3)	1.72	(1)	1.25	(17)	N/A		N/A	
ICE BofAML 1-3 Year U.S. Corporate	1.91	(20)	2.39	(18)	1.01	(6)	1.19	(19)	1.78	(4)	4.49	(17)
IM U.S. Short Duration Fixed Income (MF) Median	1.31		1.42		0.27		0.62		0.23		2.35	
<b>Total Global Fixed Income</b>												
Brandywine Global Fixed	11.66	(11)	2.43	(80)	-7.62	(90)	5.41	(26)	-2.57	(68)	11.96	(39)
FTSE World Government Bond Index	7.49	(53)	1.60	(88)	-3.57	(68)	-0.48	(85)	-4.00	(80)	1.65	(94)
IM Global Fixed Income (SA+CF) Median	7.63		5.77		-2.37		2.46		-0.16		9.35	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through November 30, 2017.



**Comparative Performance Calendar Year Returns  
Monroe County Employees Retirement System**

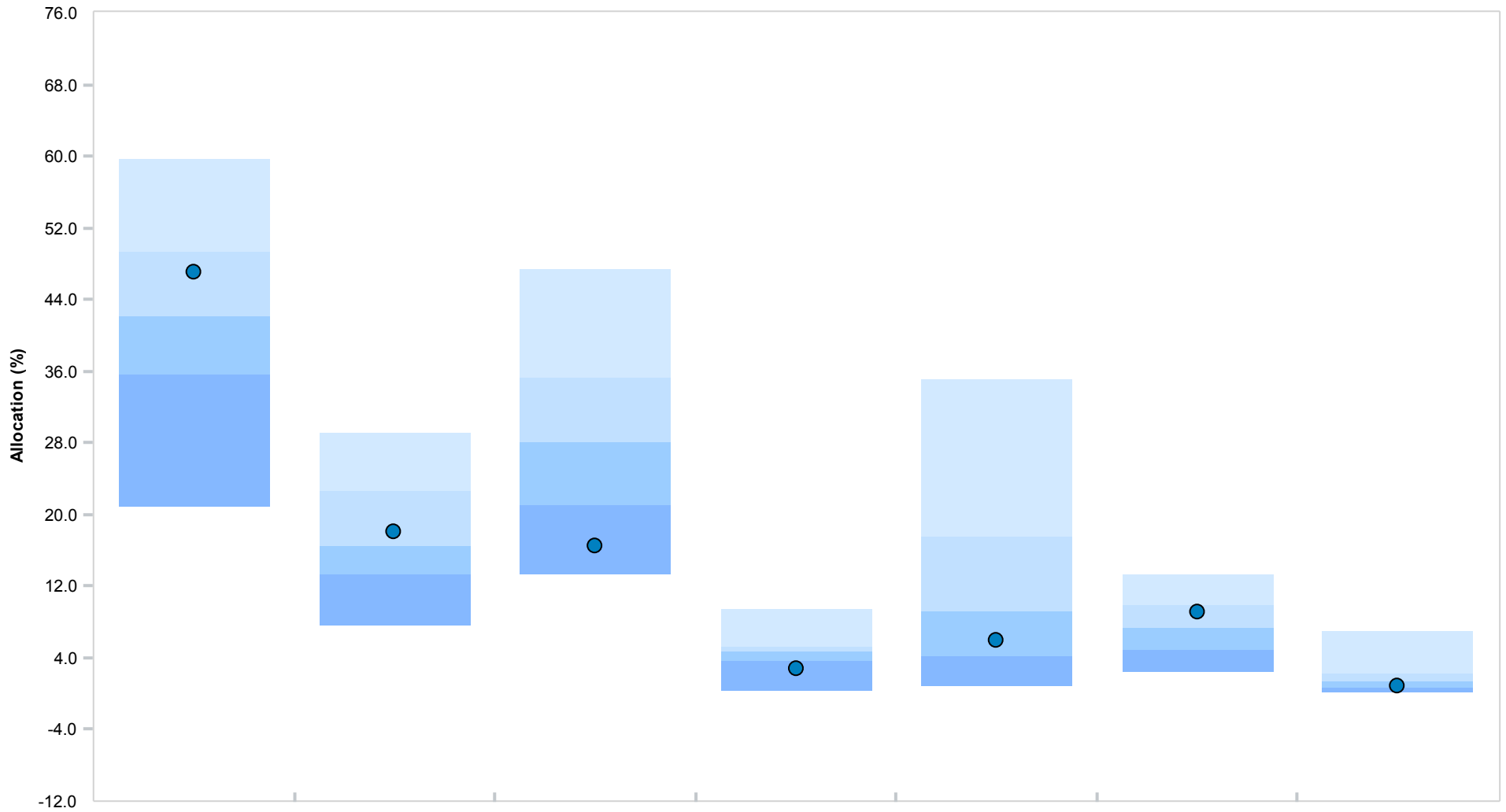
As of March 31, 2018

	2017		2016		2015		2014		2013		2012	
<b>Total Alternatives</b>												
<b>Total Real Estate</b>												
Intercontinental Real Estate	8.27	(48)	12.60	(24)	14.71	(56)	12.47	(77)	N/A		N/A	
NCREIF Property Index	6.96	(84)	7.97	(88)	13.33	(75)	11.82	(82)	10.98	(86)	10.54	(81)
IM U.S. Open End Private Real Estate (SA+CF) Median	8.08		9.52		15.23		13.59		14.47		12.45	
Titanium GSA Fund	9.16	(29)	10.40	(47)	10.98	(98)	6.25	(100)	N/A		N/A	
NCREIF Property Index	6.96	(83)	7.97	(89)	13.33	(78)	11.82	(85)	10.98	(88)	10.54	(76)
IM U.S. Private Real Estate (SA+CF) Median	8.23		9.92		15.35		13.76		14.83		12.48	
<b>Total Hedge Fund</b>												
Corbin- Pinehurst	7.74	(15)	2.83	(38)	0.26	(19)	6.64	(5)	N/A		N/A	
HFRI Fund of Funds Composite Index	7.77	(15)	0.51	(69)	-0.27	(28)	3.37	(37)	8.96	(23)	4.79	(43)
IM Alternative Multi-Strategy (MF) Median	4.43		2.07		-1.97		2.47		4.18		3.51	
Mesirow Financial	0.71		0.80		-2.13		5.29		N/A		N/A	
HFRI Fund of Funds Composite Index	7.77		0.51		-0.27		3.37		8.96		4.79	
<b>Total Cash</b>												
Cash Account	0.94	(92)	0.13	(100)	5.29	(1)	0.00	(100)	0.33	(72)	0.78	(64)
90 Day U.S. Treasury Bill	0.86	(94)	0.25	(100)	0.03	(100)	0.04	(100)	0.05	(98)	0.08	(100)
IM U.S. Cash Fixed Income (SA+CF) Median	1.34		1.25		0.49		0.58		0.52		1.23	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.  
Corbin-Pinehurst information is updated through November 30, 2017.



**Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund**

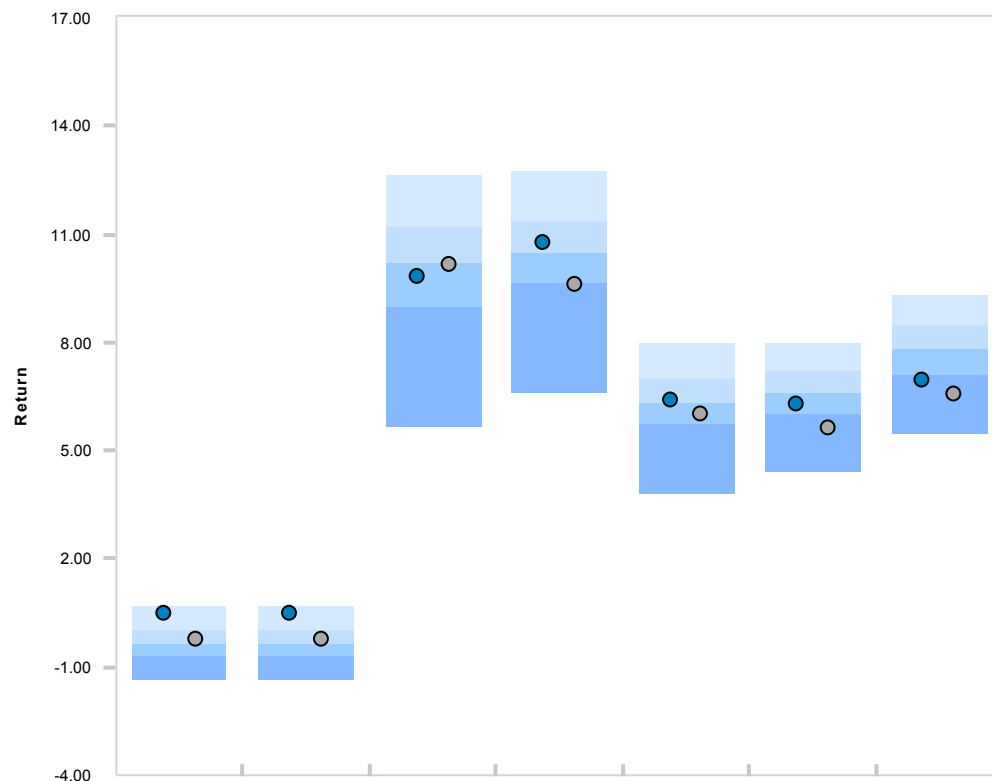


	<b>US Equity</b>	<b>Intl. Equity</b>	<b>US Fixed Income</b>	<b>Intl. Fixed Income</b>	<b>Alternative Inv.</b>	<b>Real Estate</b>	<b>Cash</b>
● Total Fund	46.94 (33)	18.03 (43)	16.50 (90)	2.72 (80)	5.90 (61)	9.12 (34)	0.79 (66)
5th Percentile	59.68	29.06	47.32	9.46	35.02	13.27	7.03
1st Quartile	49.25	22.62	35.19	5.23	17.55	9.93	2.23
Median	42.11	16.37	28.13	4.63	9.21	7.32	1.29
3rd Quartile	35.68	13.37	21.00	3.60	4.16	4.82	0.58
95th Percentile	20.82	7.68	13.21	0.23	0.91	2.38	0.07

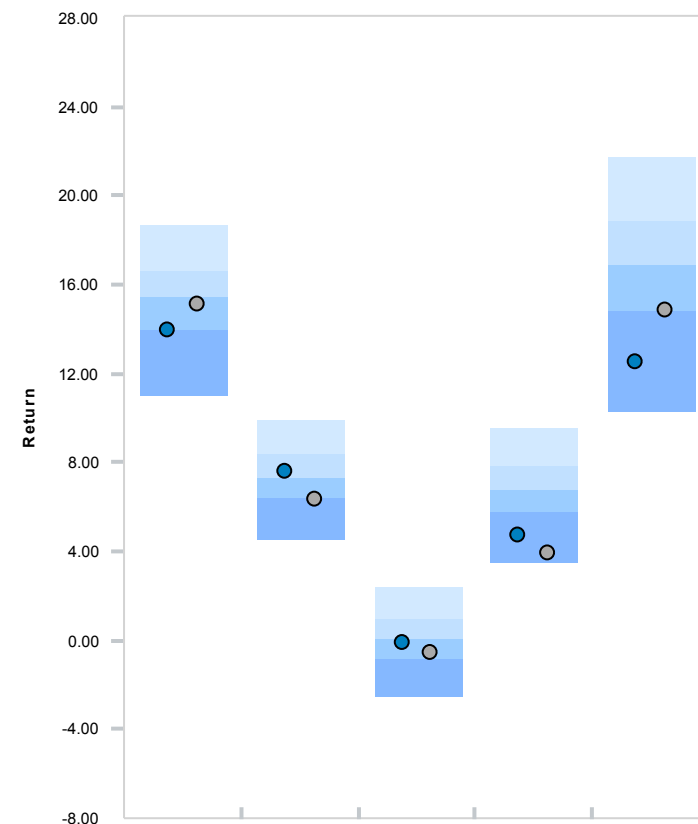
Parentheses contain percentile rankings.  
 Calculation based on quarterly periodicity.



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fund	0.46 (10)	0.46 (10)	9.84 (60)	10.76 (40)	6.38 (48)	6.28 (67)	6.94 (81)
● Composite Hybrid	-0.22 (42)	-0.22 (42)	10.17 (51)	9.62 (76)	6.02 (64)	5.60 (87)	6.58 (89)
Median	-0.34	-0.34	10.20	10.49	6.33	6.63	7.84



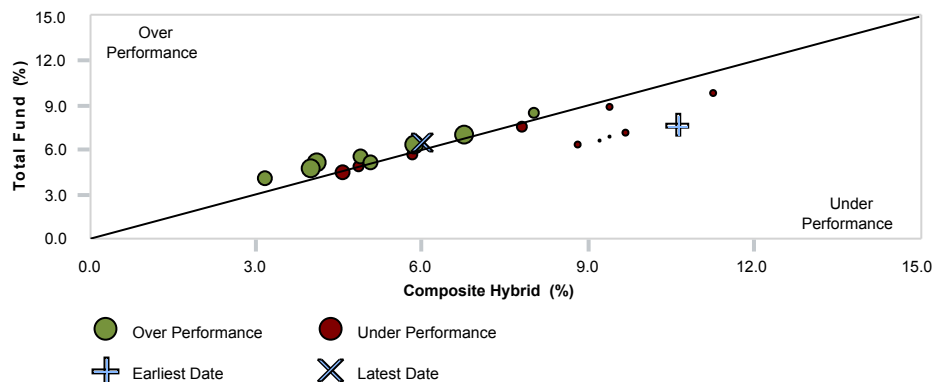
	2017	2016	2015	2014	2013
● Total Fund	13.95 (76)	7.59 (43)	-0.11 (56)	4.70 (89)	12.52 (90)
● Composite Hybrid	15.13 (58)	6.34 (77)	-0.60 (68)	3.93 (93)	14.79 (76)
Median	15.43	7.32	0.07	6.78	16.90

**Comparative Performance**

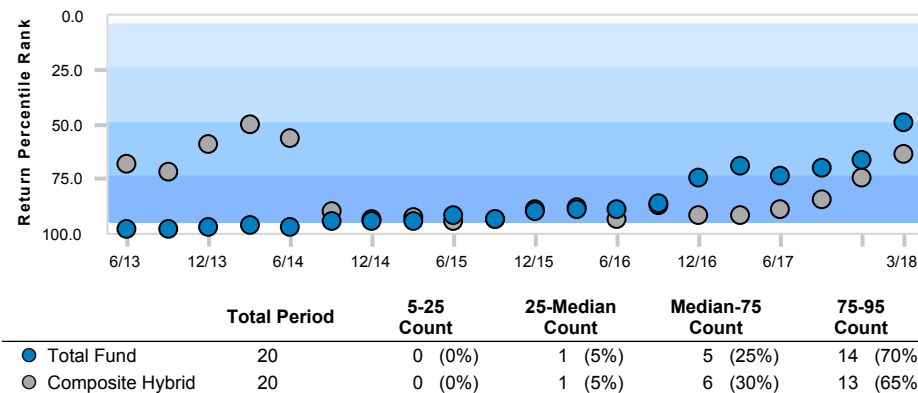
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Total Fund	3.50 (67)	3.24 (69)	2.32 (87)	4.23 (63)	1.19 (33)	3.92 (21)
Composite Hybrid	3.49 (68)	3.46 (48)	3.11 (38)	4.28 (60)	-0.43 (94)	3.39 (49)
All Public Plans-Total Fund Median	3.75	3.45	2.97	4.40	0.83	3.37



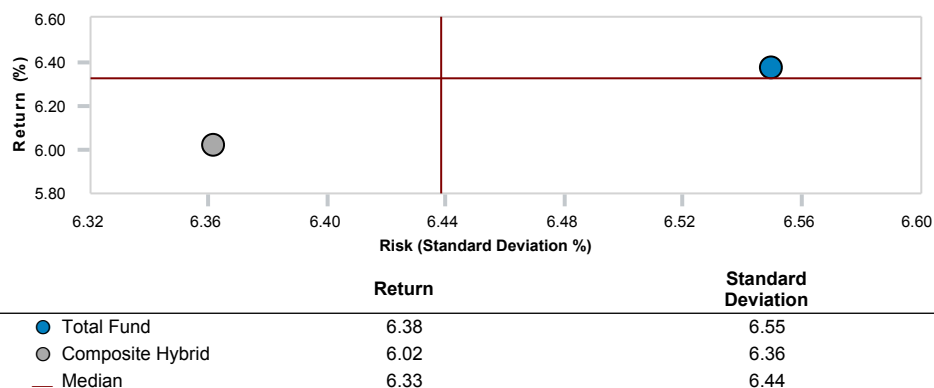
3 Yr Rolling Under/Over Performance - 5 Years



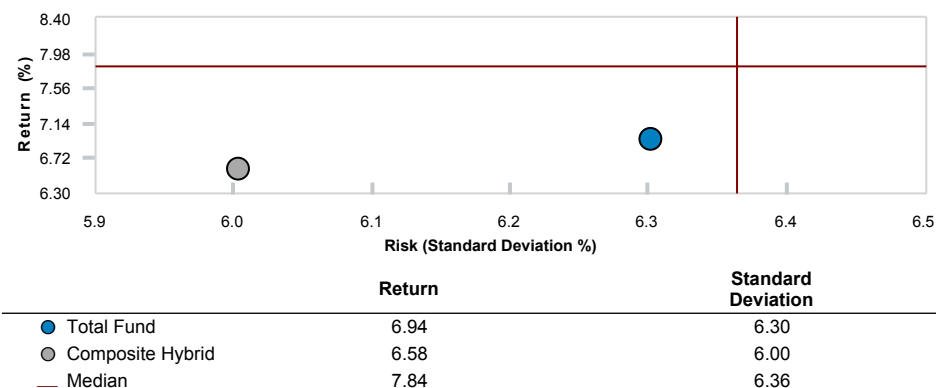
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

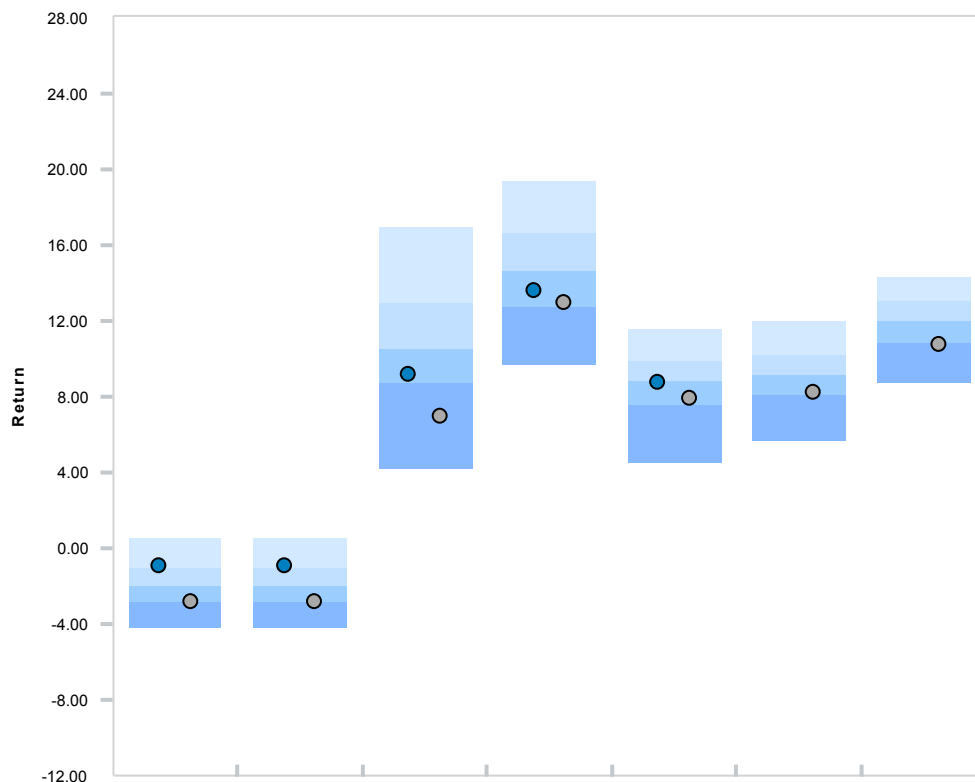
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.52	100.89	95.69	0.34	0.23	0.91	1.00	3.96
Composite Hybrid	0.00	100.00	100.00	0.00	N/A	0.88	1.00	3.80

Historical Statistics - 5 Years

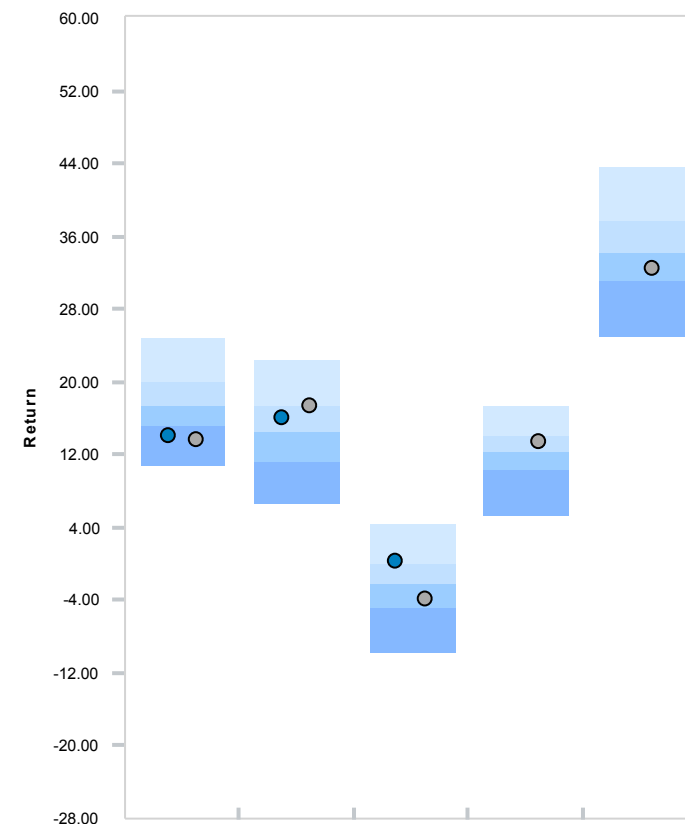
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.69	101.72	97.18	0.29	0.21	1.05	1.01	3.59
Composite Hybrid	0.00	100.00	100.00	0.00	N/A	1.04	1.00	3.45



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Delaware L Value	-0.92 (20)	-0.92 (20)	9.21 (67)	13.63 (64)	8.70 (54)	N/A	N/A
● Russell 1000 Value	-2.83 (77)	-2.83 (77)	6.95 (89)	12.92 (74)	7.88 (70)	8.24 (73)	10.78 (76)
Median	-1.95	-1.95	10.53	14.61	8.88	9.18	11.99



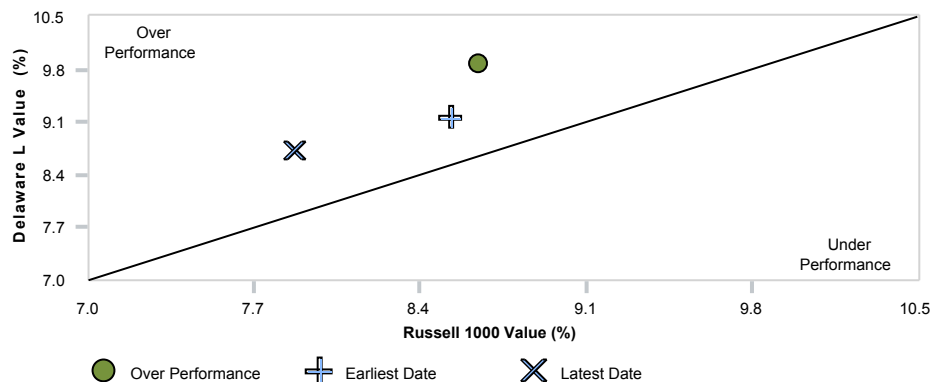
	2017	2016	2015	2014	2013
● Delaware L Value	14.09 (86)	15.94 (37)	0.25 (24)	N/A	N/A
● Russell 1000 Value	13.66 (88)	17.34 (25)	-3.83 (69)	13.45 (35)	32.53 (62)
Median	17.22	14.58	-2.25	12.24	34.27

Comparative Performance

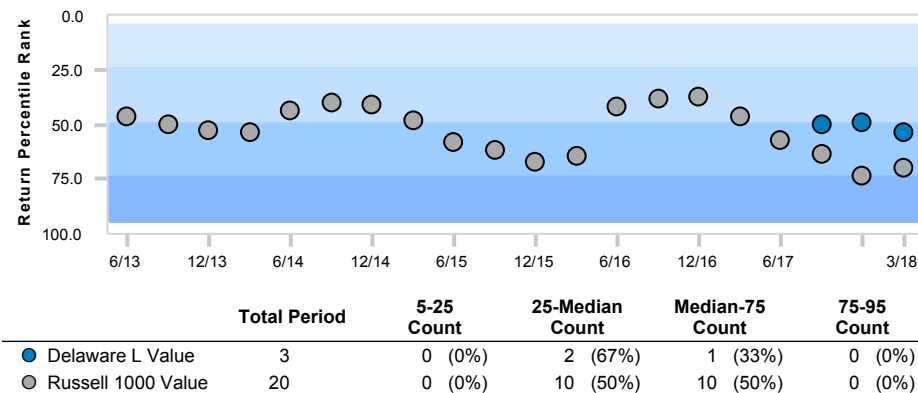
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Delaware L Value	5.59 (72)	4.45 (38)	-0.07 (94)	3.51 (64)	3.97 (78)	0.13 (99)
Russell 1000 Value	5.33 (74)	3.11 (80)	1.34 (72)	3.27 (70)	6.68 (46)	3.48 (61)
IM U.S. Large Cap Value Equity (SA+CF) Median	6.28	4.10	2.05	3.97	6.48	4.06



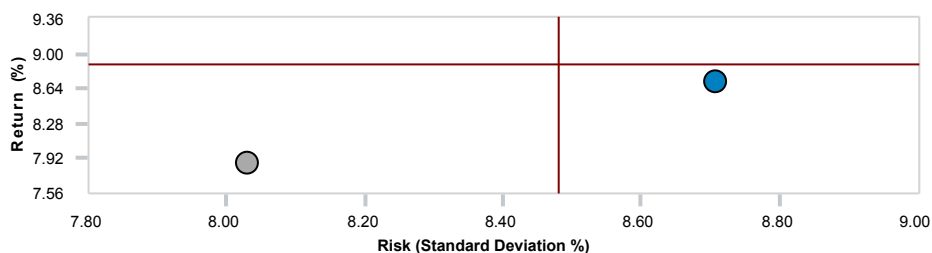
### 3 Yr Rolling Under/Over Performance - 5 Years



### 3 Yr Rolling Percentile Ranking - 5 Years

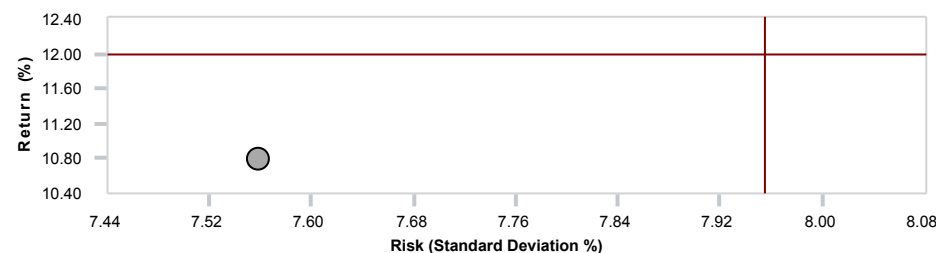


### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Delaware L Value	8.70	8.71
● Russell 1000 Value	7.88	8.03
— Median	8.88	8.48

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Delaware L Value	N/A	N/A
● Russell 1000 Value	10.78	7.56
— Median	11.99	7.95

### Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Delaware L Value	3.26	104.04	99.11	0.88	0.25	0.79	0.99	6.05
Russell 1000 Value	0.00	100.00	100.00	0.00	N/A	0.75	1.00	6.07

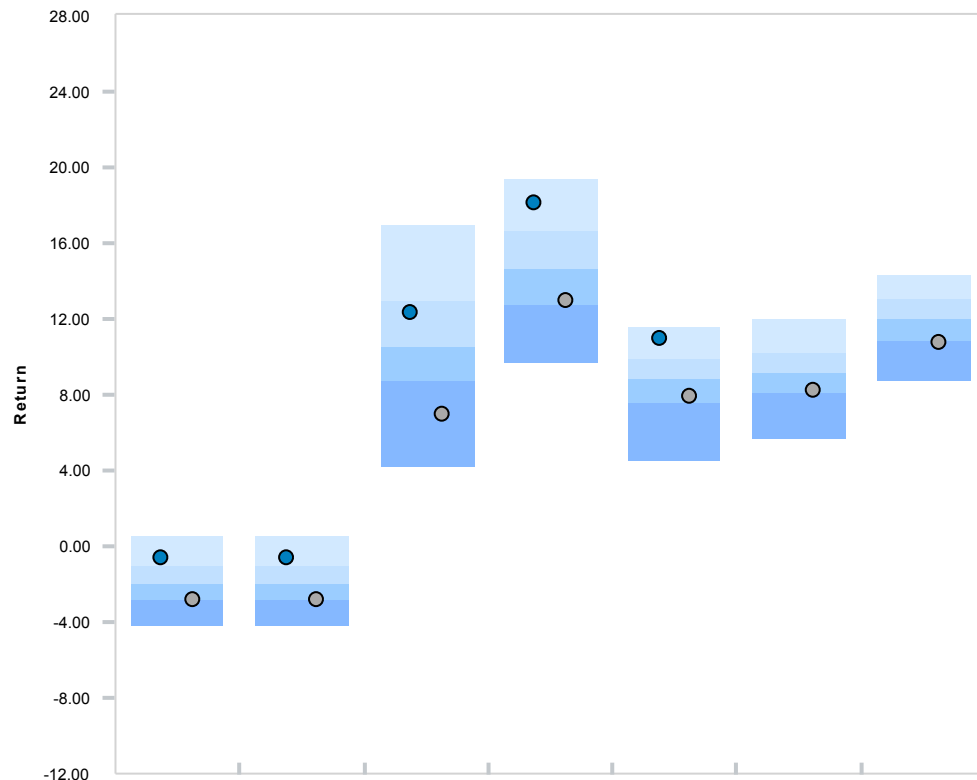
### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Delaware L Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value	0.00	100.00	100.00	0.00	N/A	1.05	1.00	5.72

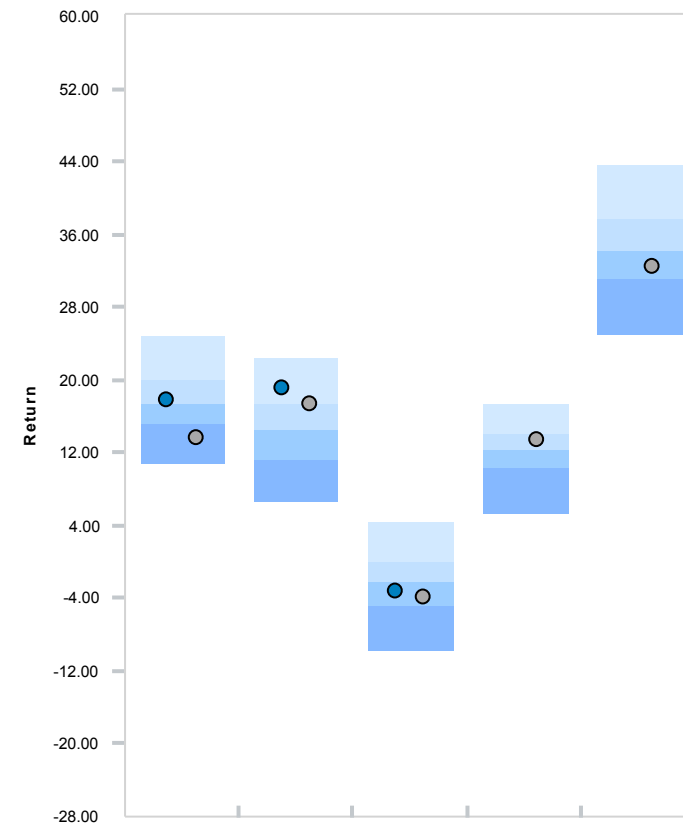




**Peer Group Analysis - IM U.S. Large Cap Value Equity (SA+CF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Seizert Large Value	-0.68 (16)	-0.68 (16)	12.27 (33)	18.15 (11)	10.93 (13)	N/A	N/A
● Russell 1000 Value	-2.83 (77)	-2.83 (77)	6.95 (89)	12.92 (74)	7.88 (70)	8.24 (73)	10.78 (76)
Median	-1.95	-1.95	10.53	14.61	8.88	9.18	11.99



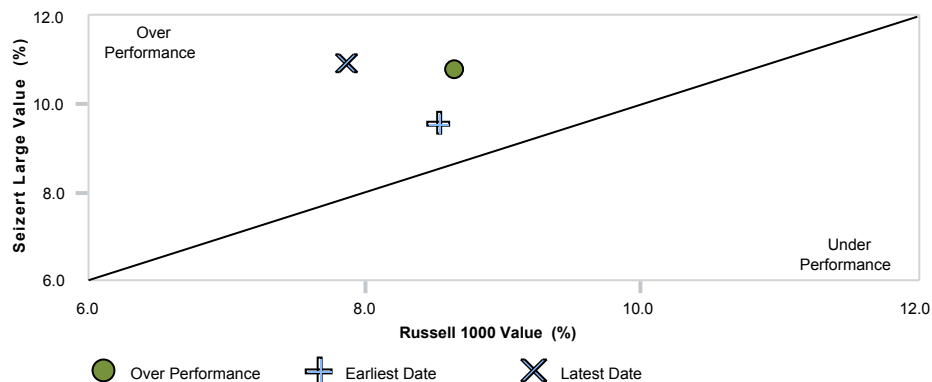
	2017	2016	2015	2014	2013
● Seizert Large Value	17.83 (43)	19.12 (16)	-3.17 (62)	N/A	N/A
● Russell 1000 Value	13.66 (88)	17.34 (25)	-3.83 (69)	13.45 (35)	32.53 (62)
Median	17.22	14.58	-2.25	12.24	34.27

**Comparative Performance**

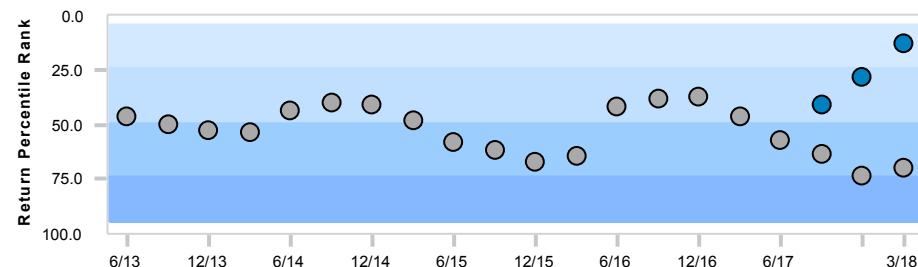
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Seizert Large Value	6.21 (51)	4.18 (49)	2.16 (48)	4.24 (44)	7.59 (31)	8.27 (6)
Russell 1000 Value	5.33 (74)	3.11 (80)	1.34 (72)	3.27 (70)	6.68 (46)	3.48 (61)
IM U.S. Large Cap Value Equity (SA+CF) Median	6.28	4.10	2.05	3.97	6.48	4.06



### 3 Yr Rolling Under/Over Performance - 5 Years

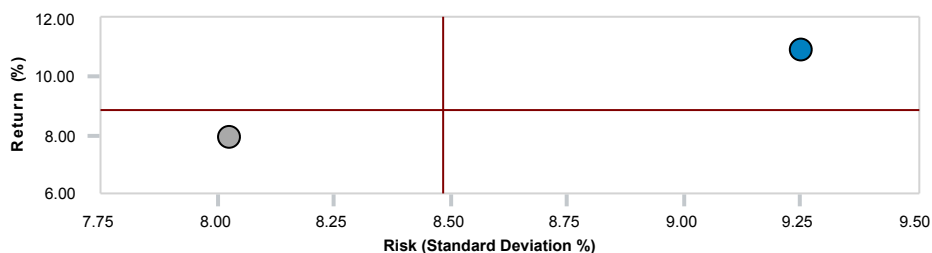


### 3 Yr Rolling Percentile Ranking - 5 Years



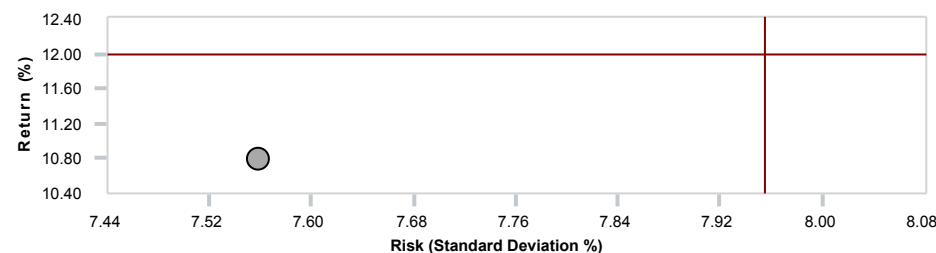
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Seizert Large Value	3	1 (33%)	2 (67%)	0 (0%)	0 (0%)
● Russell 1000 Value	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)

### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Seizert Large Value	10.93	9.25
● Russell 1000 Value	7.88	8.03
— Median	8.88	8.48

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Seizert Large Value	N/A	N/A
● Russell 1000 Value	10.78	7.56
— Median	11.99	7.95

### Historical Statistics - 3 Years

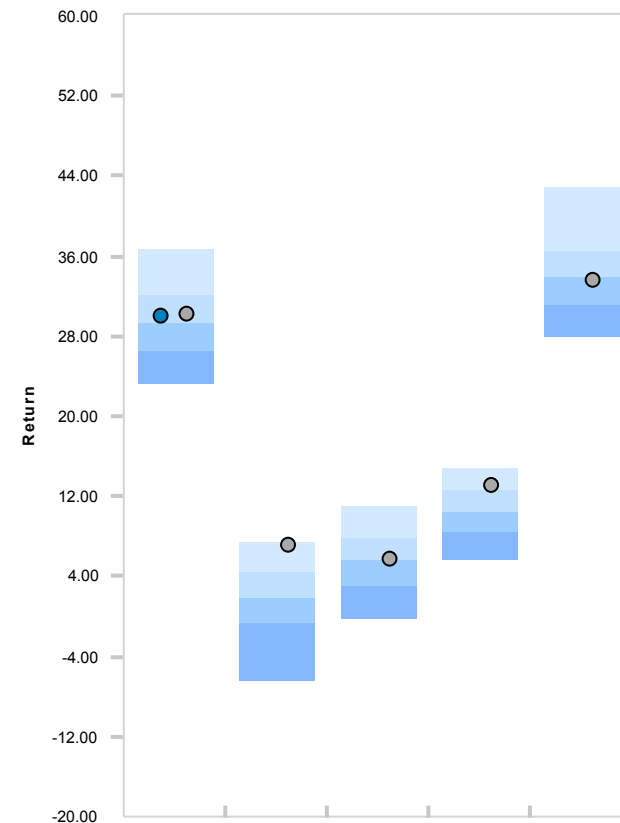
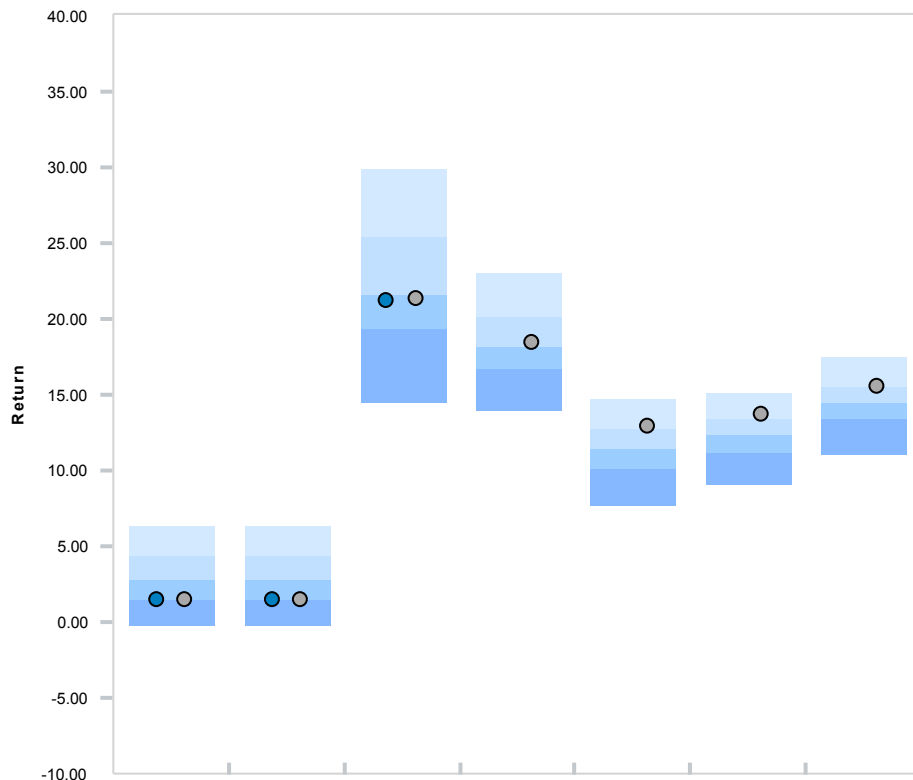
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Seizert Large Value	3.95	119.12	103.82	1.89	0.77	0.87	1.14	6.85
Russell 1000 Value	0.00	100.00	100.00	0.00	N/A	0.75	1.00	6.07

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Seizert Large Value	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value	0.00	100.00	100.00	0.00	N/A	1.05	1.00	5.72



**Peer Group Analysis - IM U.S. Large Cap Growth Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● V. Russell 1000 Gr (VONG)	1.48 (75)	1.48 (75)	21.22 (54)	N/A	N/A	N/A	N/A
● Russell 1000 Growth Index	1.42 (76)	1.42 (76)	21.25 (54)	18.47 (46)	12.90 (23)	13.69 (22)	15.53 (26)
Median	2.82	2.82	21.55	18.21	11.44	12.36	14.51

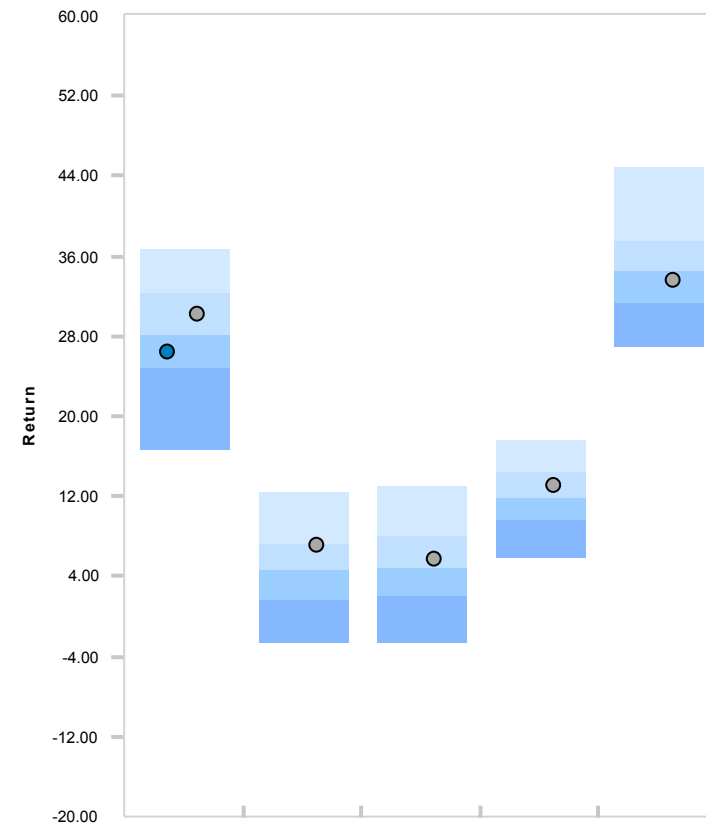
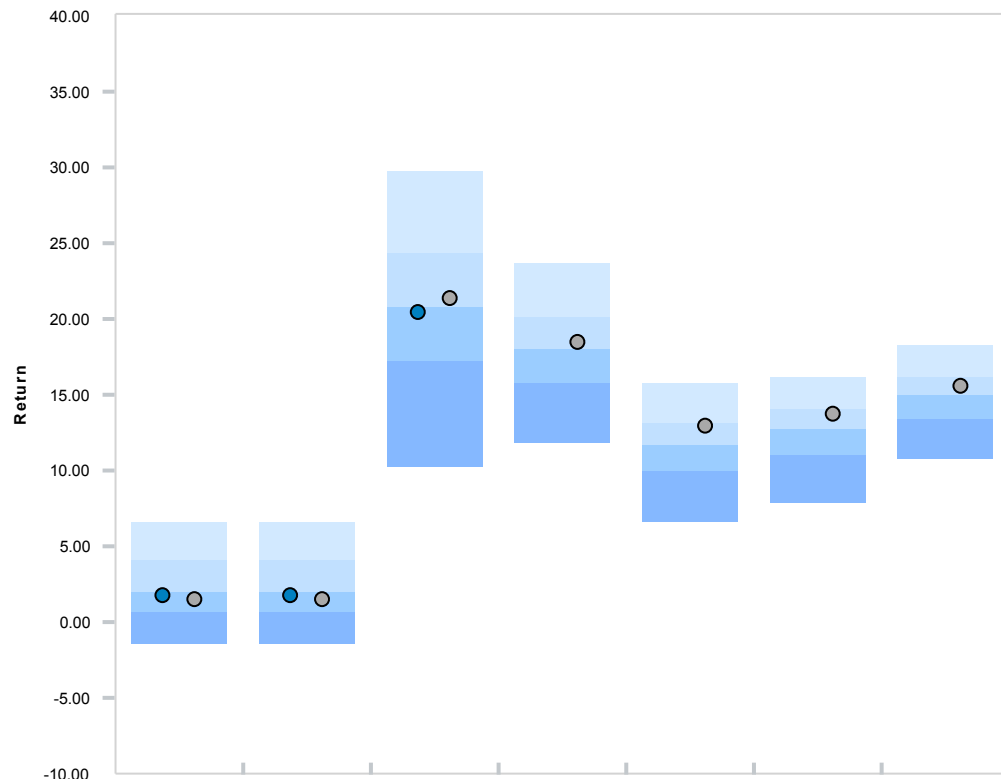
	2017	2016	2015	2014	2013
● V. Russell 1000 Gr (VONG)	30.05 (44)	N/A	N/A	N/A	N/A
● Russell 1000 Growth Index	30.21 (41)	7.08 (7)	5.67 (50)	13.05 (22)	33.48 (55)
Median	29.36	1.89	5.63	10.46	33.95

**Comparative Performance**

	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
V. Russell 1000 Gr (VONG)	7.94 (9)	5.82 (40)	4.59 (71)	8.86 (61)	N/A	N/A
Russell 1000 Growth Index	7.86 (10)	5.90 (35)	4.67 (68)	8.91 (59)	1.01 (15)	4.58 (73)
IM U.S. Large Cap Growth Equity (MF) Median	6.66	5.48	5.31	9.38	-1.20	5.72



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Clearbridge LCG	1.70 (56)	1.70 (56)	20.34 (56)	N/A	N/A	N/A	N/A
● Russell 1000 Gr	1.42 (61)	1.42 (61)	21.25 (46)	18.47 (45)	12.90 (30)	13.69 (32)	15.53 (39)
Median	1.99	1.99	20.83	18.08	11.66	12.82	15.03

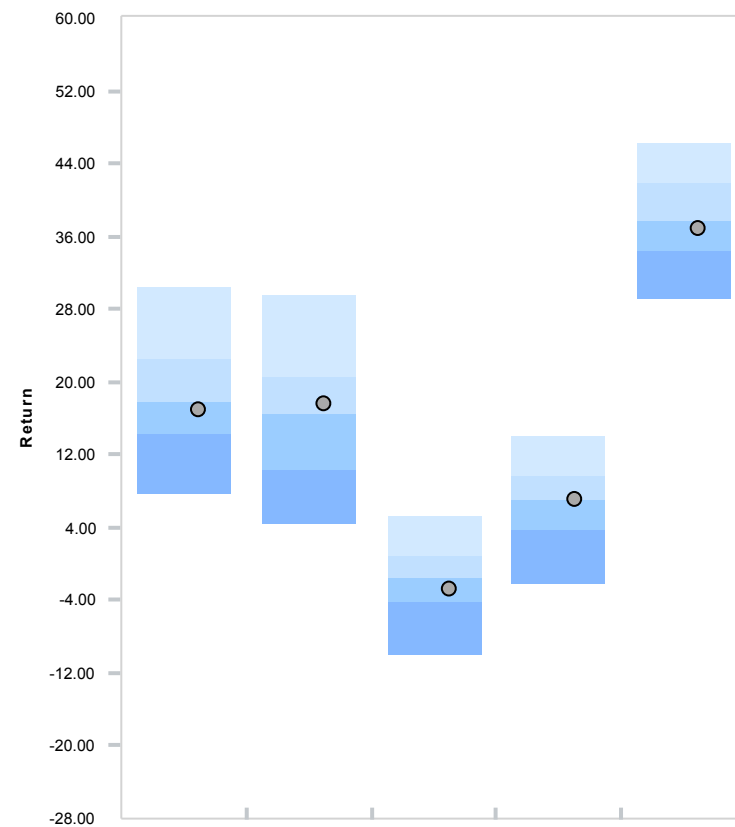
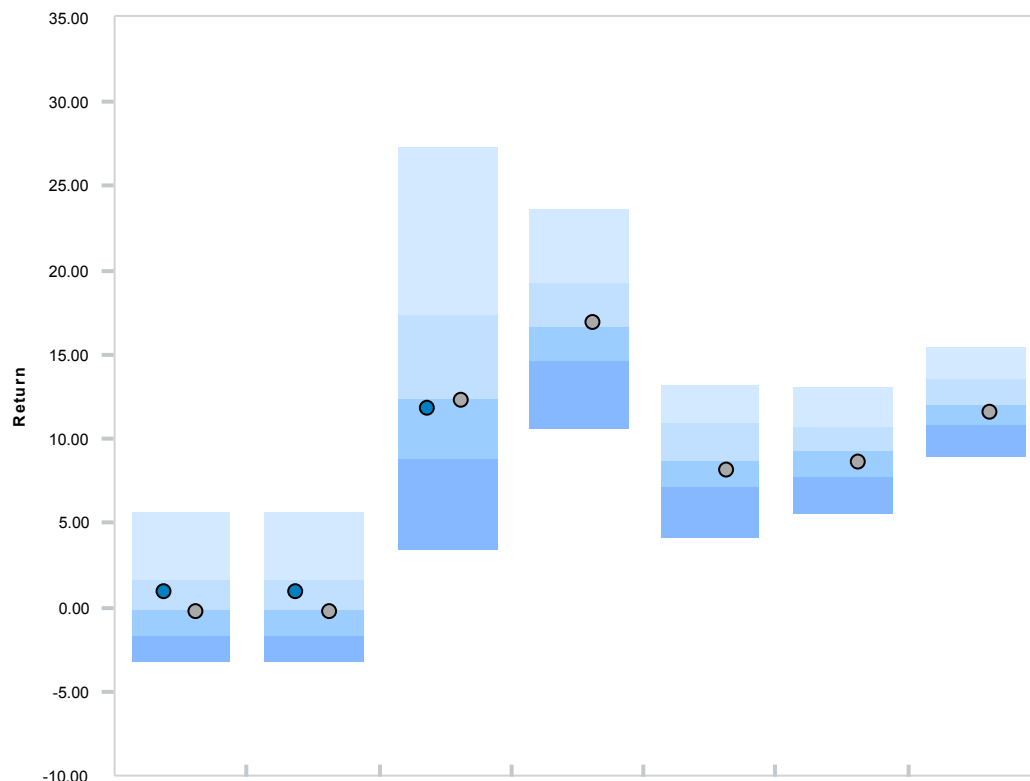
	2017	2016	2015	2014	2013
● Clearbridge LCG	26.42 (70)	N/A	N/A	N/A	N/A
● Russell 1000 Gr	30.21 (38)	7.08 (27)	5.67 (45)	13.05 (39)	33.48 (59)
Median	28.21	4.65	4.93	11.91	34.52

Comparative Performance

	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Clearbridge LCG	7.17 (41)	5.37 (52)	4.78 (54)	6.84 (80)	N/A	N/A
Russell 1000 Gr	7.86 (22)	5.90 (34)	4.67 (56)	8.91 (47)	1.01 (39)	4.58 (61)
IM U.S. Large Cap Growth Equity (SA+CF) Median	6.92	5.42	4.99	8.73	0.24	5.16



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Clarkston	0.94 (33)	0.94 (33)	11.84 (57)	N/A	N/A	N/A	N/A
● Russell 2500	-0.24 (53)	-0.24 (53)	12.31 (54)	16.83 (49)	8.15 (59)	8.63 (62)	11.55 (66)
Median	-0.15	-0.15	12.41	16.69	8.69	9.28	12.07

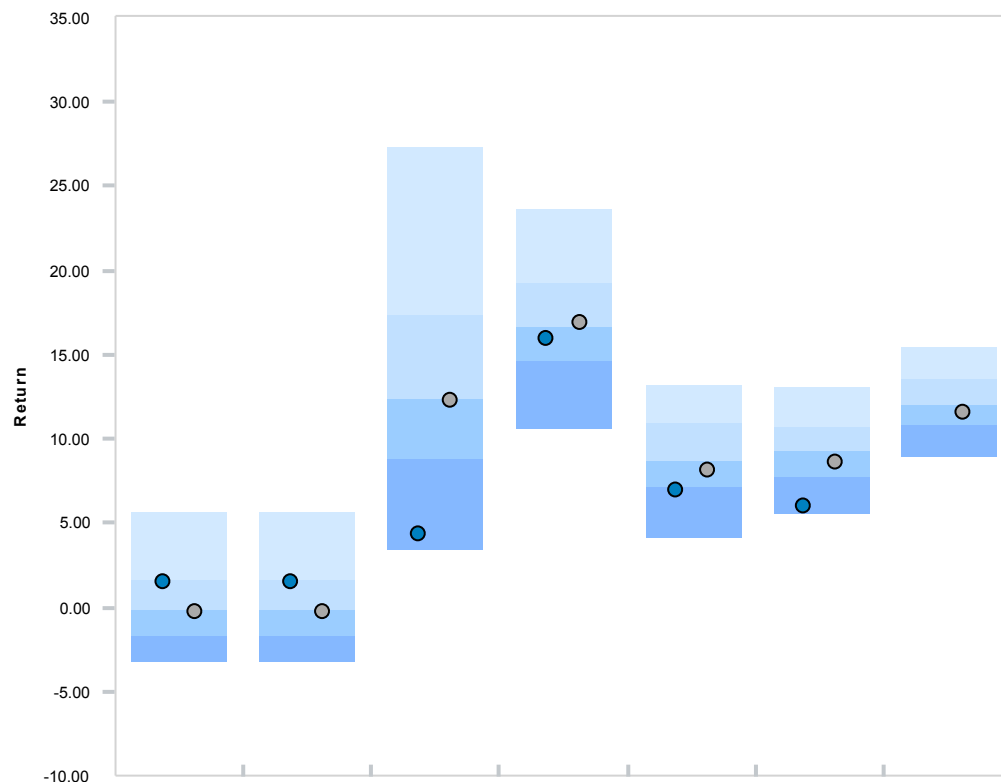
	2017	2016	2015	2014	2013
● Clarkston	N/A	N/A	N/A	N/A	N/A
● Russell 2500	16.81 (59)	17.59 (37)	-2.90 (67)	7.07 (50)	36.80 (56)
Median	17.71	16.43	-1.42	7.00	37.57

Comparative Performance

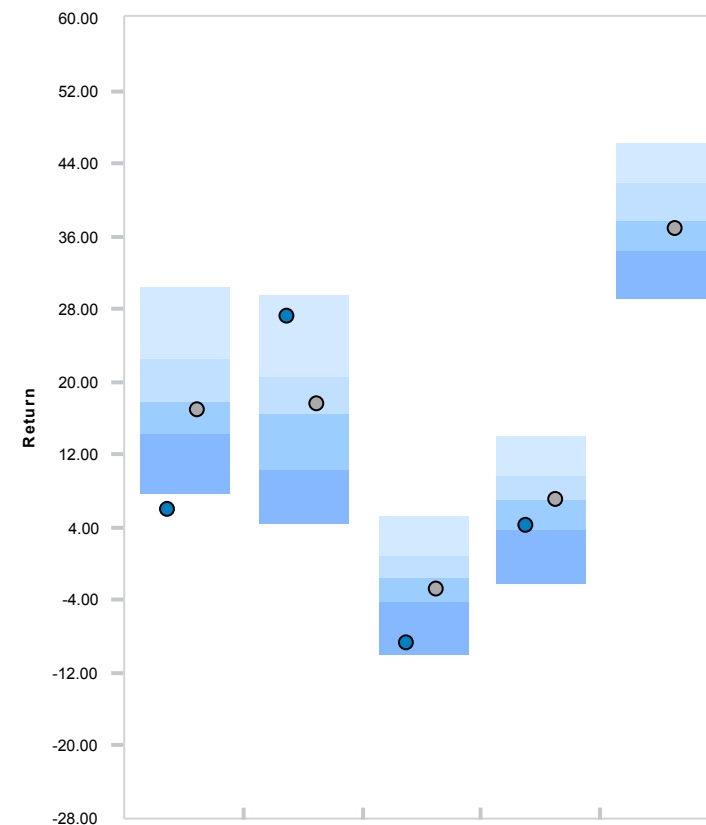
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Clarkston	4.03 (81)	4.57 (44)	1.86 (63)	N/A	N/A	N/A
Russell 2500	5.24 (61)	4.74 (38)	2.13 (58)	3.76 (66)	6.12 (48)	6.56 (40)
IM U.S. SMID Cap Equity (SA+CF) Median	5.56	4.32	2.40	4.39	5.97	5.87



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Seizert SMID CC	1.53 (26)	1.53 (26)	4.35 (95)	15.93 (59)	6.89 (78)	6.00 (93)	N/A
○ Russell 2500	-0.24 (53)	-0.24 (53)	12.31 (54)	16.83 (49)	8.15 (59)	8.63 (62)	11.55 (66)
Median	-0.15	-0.15	12.41	16.69	8.69	9.28	12.07



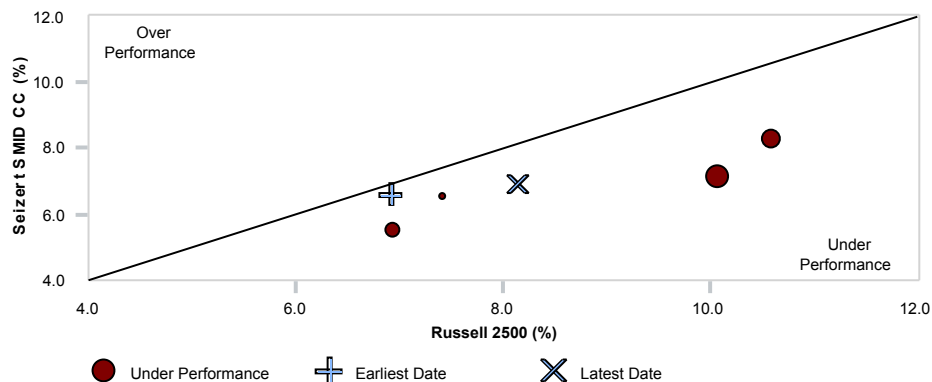
	2017	2016	2015	2014	2013
● Seizert SMID CC	5.83 (98)	27.24 (8)	-8.71 (93)	4.28 (72)	N/A
○ Russell 2500	16.81 (59)	17.59 (37)	-2.90 (67)	7.07 (50)	36.80 (56)
Median	17.71	16.43	-1.42	7.00	37.57

Comparative Performance

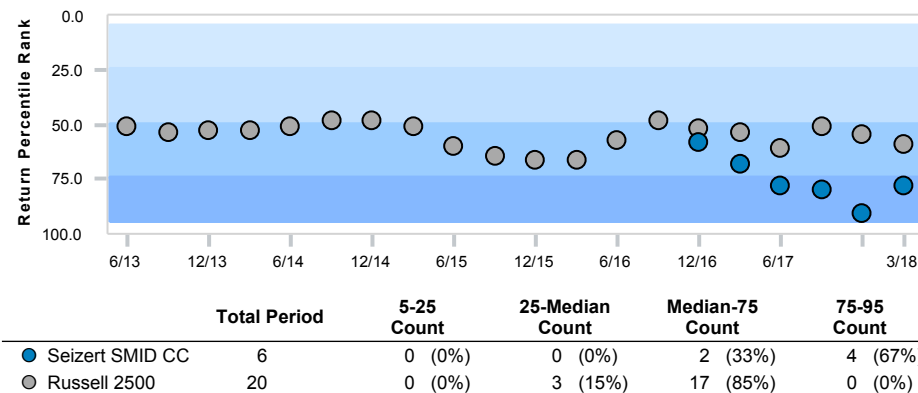
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Seizert SMID CC	0.84 (99)	1.61 (94)	0.31 (85)	2.97 (75)	13.49 (2)	10.95 (4)
Russell 2500	5.24 (61)	4.74 (38)	2.13 (58)	3.76 (66)	6.12 (48)	6.56 (40)
IM U.S. SMID Cap Equity (SA+CF) Median	5.56	4.32	2.40	4.39	5.97	5.87



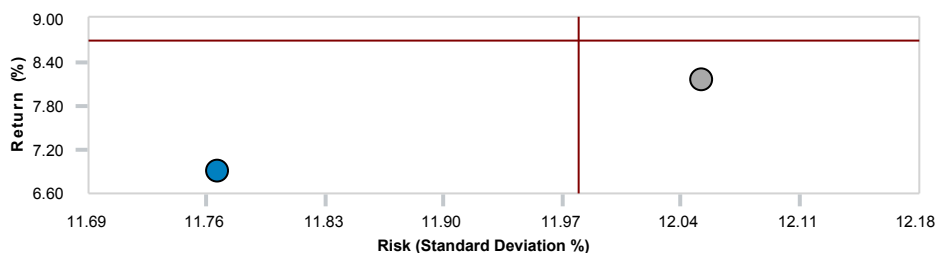
### 3 Yr Rolling Under/Over Performance - 5 Years



### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Seizert SMID CC	6.89	11.77
○ Russell 2500	8.15	12.05
— Median	8.69	11.98

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Seizert SMID CC	N/A	N/A
○ Russell 2500	11.55	11.97
— Median	12.07	11.95

### Historical Statistics - 3 Years

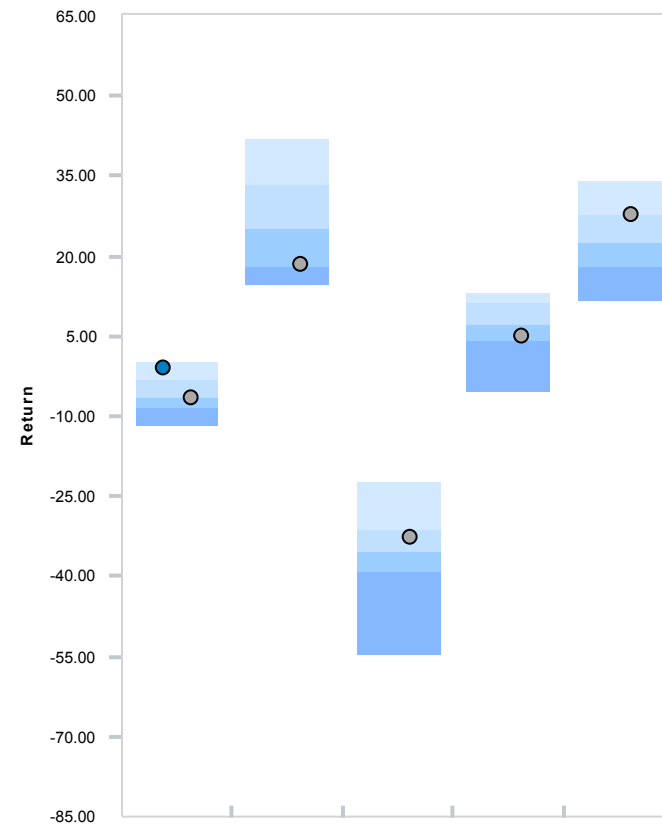
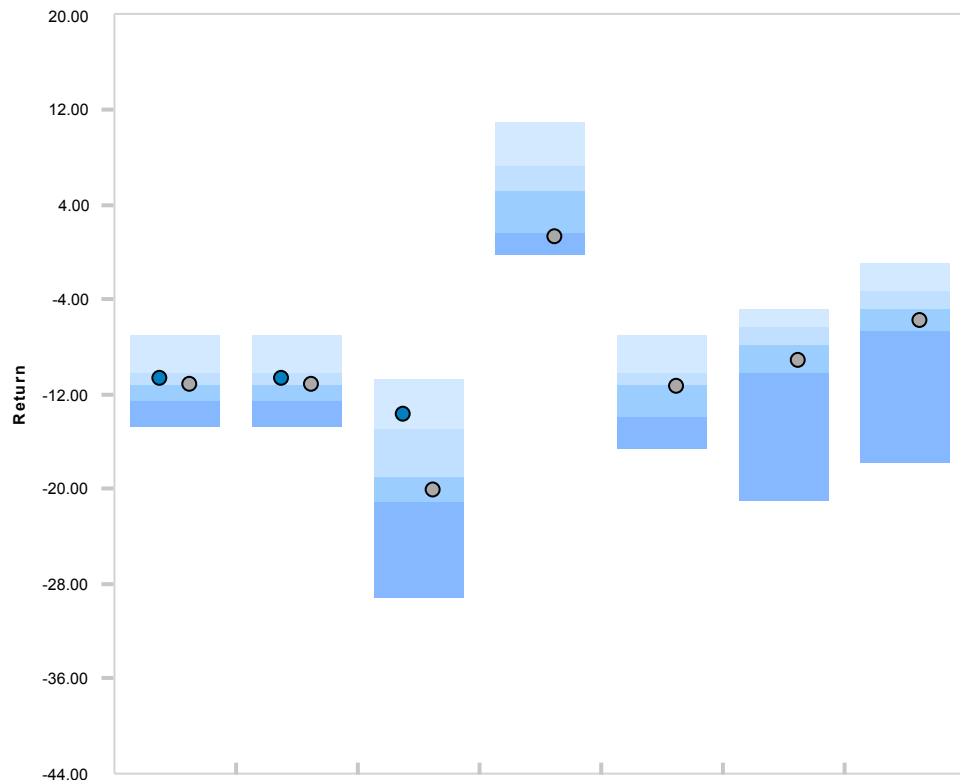
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Seizert SMID CC	5.12	94.37	100.67	-0.25	-0.24	0.58	0.89	6.87
Russell 2500	0.00	100.00	100.00	0.00	N/A	0.67	1.00	7.62

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Seizert SMID CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2500	0.00	100.00	100.00	0.00	N/A	0.95	1.00	7.08



Peer Group Analysis - IM Energy MLP (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Tortoise MLP (TORIX)	-10.62 (31)	-10.62 (31)	-13.63 (17)	N/A	N/A	N/A	N/A
● Alerian MLP Index	-11.12 (48)	-11.12 (48)	-20.07 (64)	1.28 (79)	-11.24 (55)	-9.13 (63)	-5.85 (66)
Median	-11.24	-11.24	-18.87	5.26	-11.11	-7.74	-4.70

	2017	2016	2015	2014	2013
● Tortoise MLP (TORIX)	-1.03 (13)	N/A	N/A	N/A	N/A
● Alerian MLP Index	-6.52 (49)	18.31 (73)	-32.59 (34)	4.80 (69)	27.58 (27)
Median	-6.60	25.18	-35.23	7.21	22.52

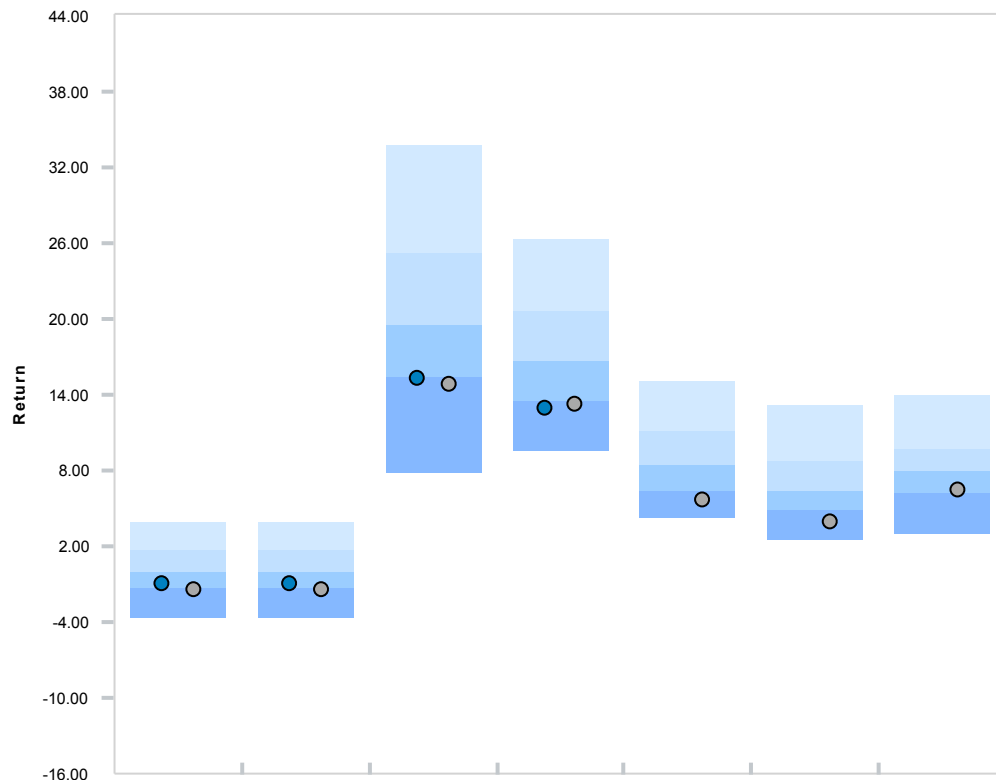
Comparative Performance

	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Tortoise MLP (TORIX)	1.00 (18)	0.59 (34)	-4.89 (22)	2.43 (59)	1.37 (89)	10.72 (11)
Alerian MLP Index	-0.95 (63)	-3.05 (93)	-6.35 (44)	3.95 (10)	2.04 (69)	1.07 (96)
IM Energy MLP (MF) Median	-0.46	-0.90	-6.56	2.63	2.82	5.10

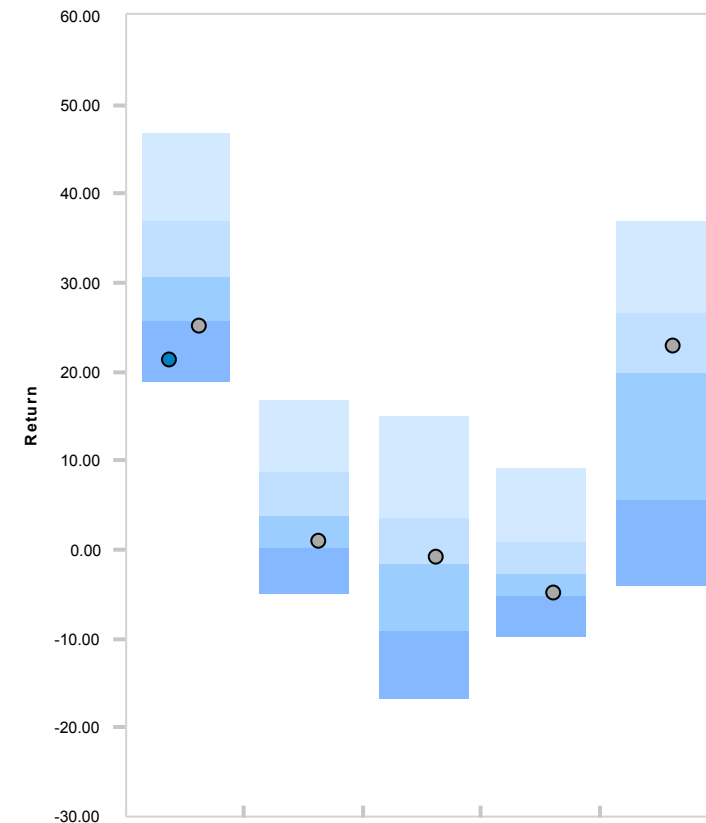




Peer Group Analysis - IM International Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Cambiar Int'l	-1.04 (69)	-1.04 (69)	15.33 (76)	12.87 (82)	N/A	N/A	N/A
● MSCI EAFE (Net)	-1.53 (80)	-1.53 (80)	14.80 (80)	13.23 (78)	5.55 (87)	3.90 (87)	6.50 (73)
Median	-0.09	-0.09	19.48	16.68	8.42	6.49	7.97



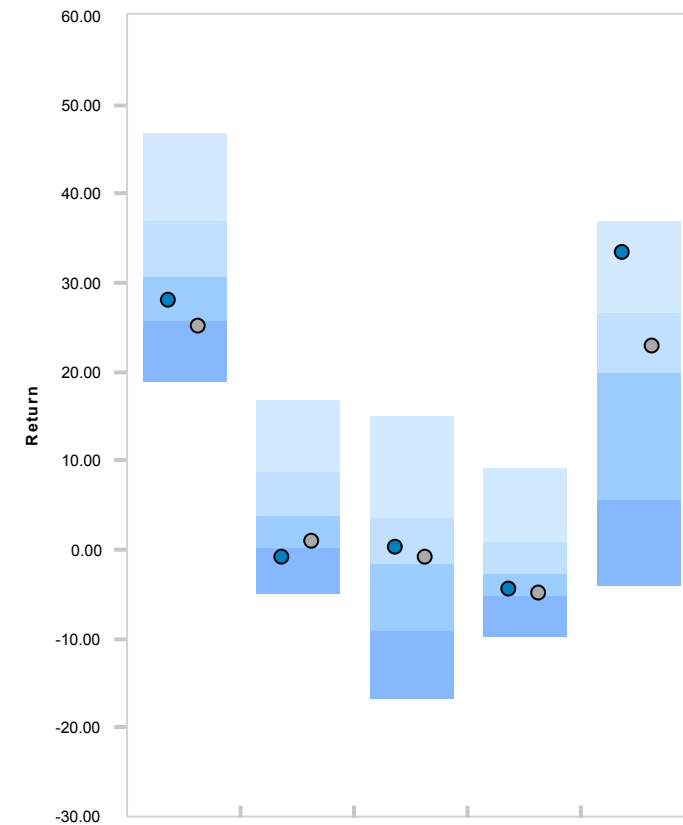
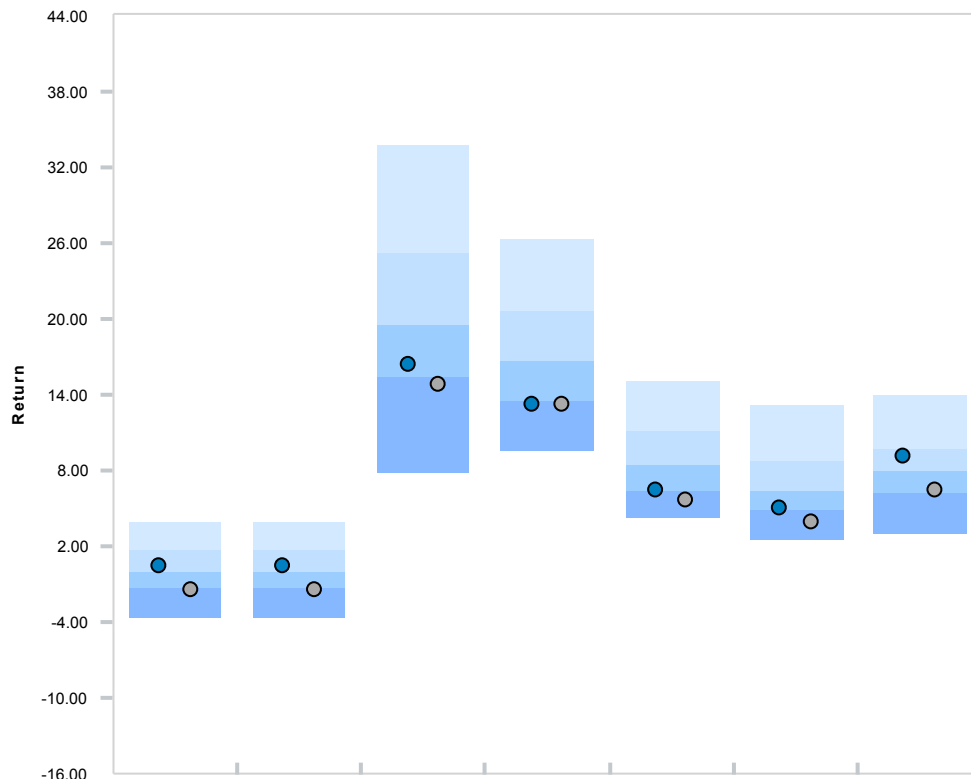
	2017	2016	2015	2014	2013
● Cambiar Int'l	21.33 (92)	N/A	N/A	N/A	N/A
● MSCI EAFE (Net)	25.03 (80)	1.00 (69)	-0.81 (48)	-4.90 (74)	22.78 (41)
Median	30.57	3.78	-1.64	-2.60	19.95

Comparative Performance

	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Cambiar Int'l	4.16 (73)	6.55 (49)	5.01 (79)	4.11 (98)	0.84 (16)	4.97 (86)
MSCI EAFE (Net)	4.23 (72)	5.40 (68)	6.12 (64)	7.25 (79)	-0.71 (29)	6.43 (67)
IM International Equity (SA+CF) Median	5.48	6.39	6.72	8.85	-2.88	7.37



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Renaissance Int'l Eq	0.40 (40)	0.40 (40)	16.38 (70)	13.18 (79)	6.48 (74)	5.06 (72)	9.12 (33)
● MSCI EAFE (Net)	-1.53 (80)	-1.53 (80)	14.80 (80)	13.23 (78)	5.55 (87)	3.90 (87)	6.50 (73)
Median	-0.09	-0.09	19.48	16.68	8.42	6.49	7.97

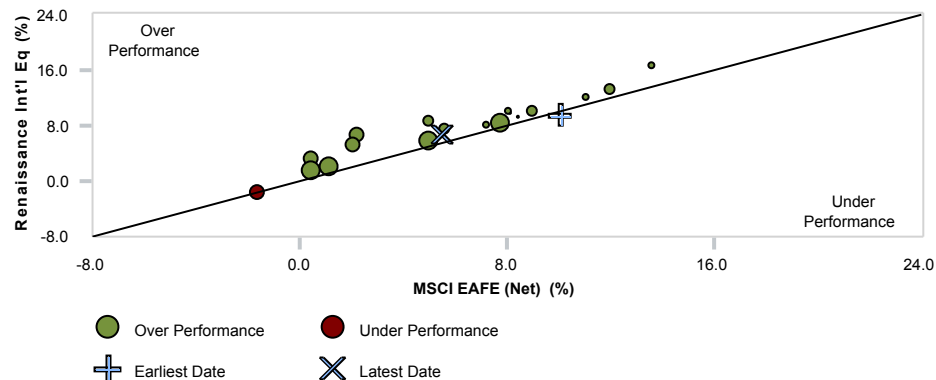
	2017	2016	2015	2014	2013
● Renaissance Int'l Eq	27.97 (64)	-0.93 (82)	0.18 (43)	-4.37 (68)	33.29 (9)
● MSCI EAFE (Net)	25.03 (80)	1.00 (69)	-0.81 (48)	-4.90 (74)	22.78 (41)
Median	30.57	3.78	-1.64	-2.60	19.95

Comparative Performance

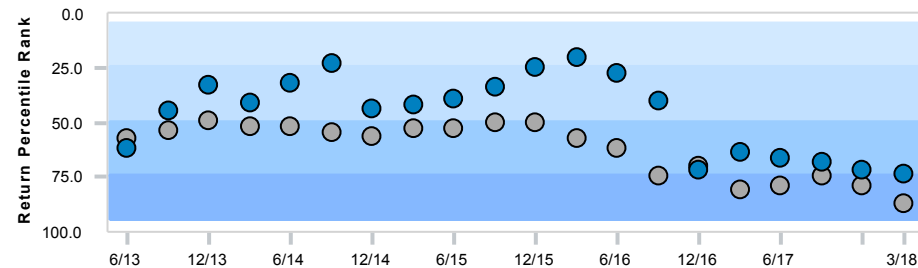
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Renaissance Int'l Eq	2.60 (90)	5.59 (65)	7.01 (45)	10.39 (34)	-4.09 (65)	6.80 (60)
MSCI EAFE (Net)	4.23 (72)	5.40 (68)	6.12 (64)	7.25 (79)	-0.71 (29)	6.43 (67)
IM International Equity (SA+CF) Median	5.48	6.39	6.72	8.85	-2.88	7.37



### 3 Yr Rolling Under/Over Performance - 5 Years

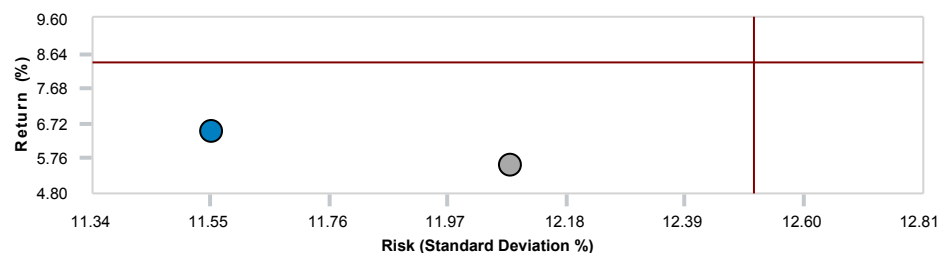


### 3 Yr Rolling Percentile Ranking - 5 Years



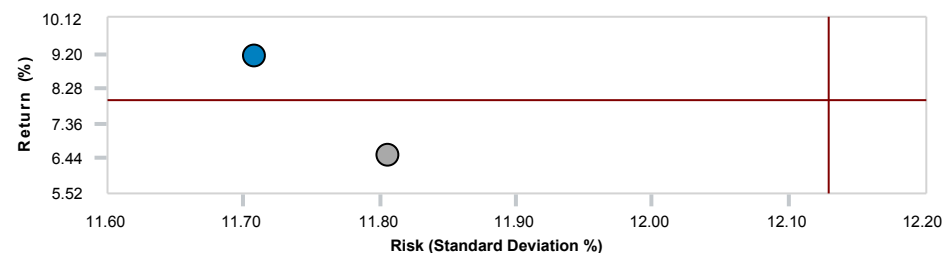
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Renaissance Int'l Eq	20	3 (15%)	10 (50%)	7 (35%)	0 (0%)
● MSCI EAFE (Net)	20	0 (0%)	3 (15%)	13 (65%)	4 (20%)

### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Renaissance Int'l Eq	6.48	11.55
● MSCI EAFE (Net)	5.55	12.08
— Median	8.42	12.51

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Renaissance Int'l Eq	9.12	11.71
● MSCI EAFE (Net)	6.50	11.81
— Median	7.97	12.13

### Historical Statistics - 3 Years

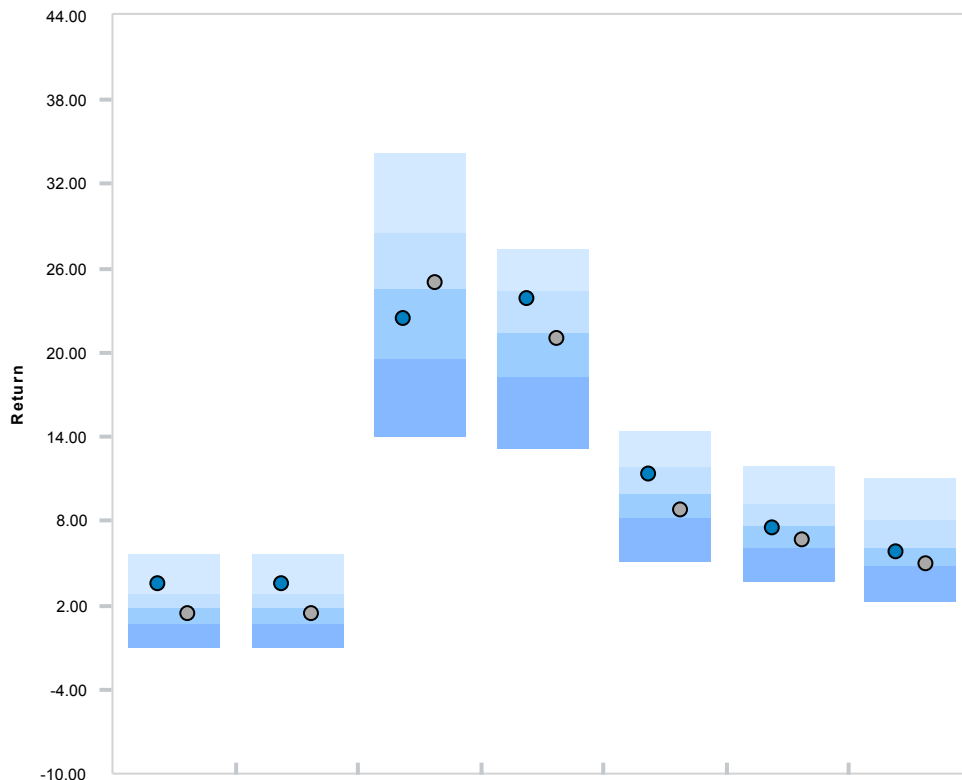
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Renaissance Int'l Eq	4.55	86.76	75.28	1.53	0.18	0.56	0.89	7.45
MSCI EAFE (Net)	0.00	100.00	100.00	0.00	N/A	0.47	1.00	8.00

### Historical Statistics - 5 Years

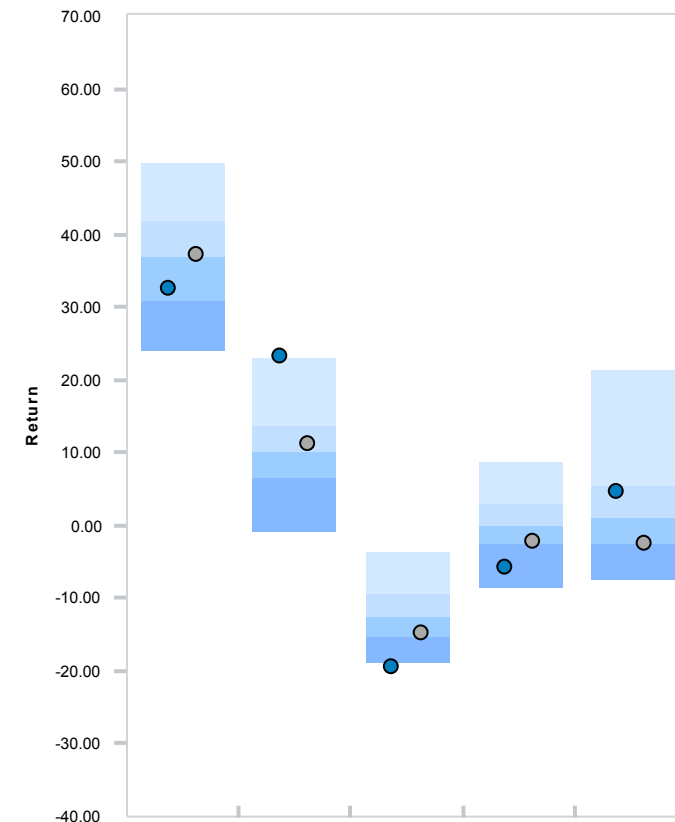
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Renaissance Int'l Eq	5.17	93.98	72.60	3.22	0.47	0.78	0.90	7.01
MSCI EAFE (Net)	0.00	100.00	100.00	0.00	N/A	0.57	1.00	7.26



Peer Group Analysis - IM Emerging Markets Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Lazard Emerging	3.51 (14)	3.51 (14)	22.35 (64)	23.86 (32)	11.31 (31)	7.50 (54)	5.83 (55)
● MSCI Emerging (Net)	1.42 (59)	1.42 (59)	24.93 (47)	21.01 (55)	8.81 (64)	6.65 (67)	4.99 (71)
Median	1.81	1.81	24.56	21.45	9.86	7.65	6.05



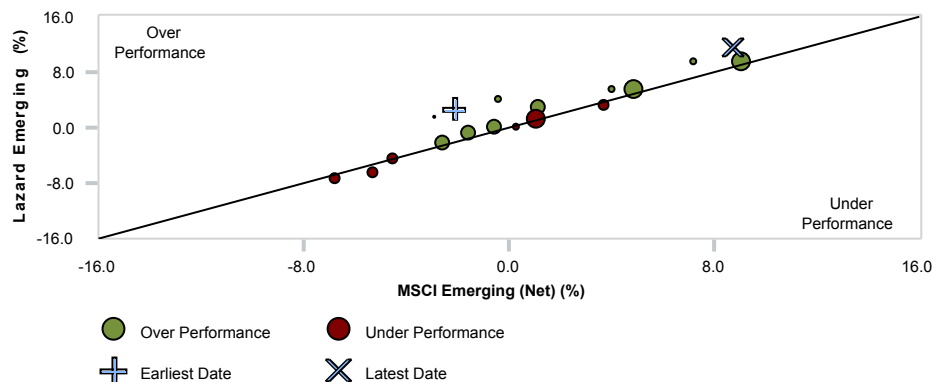
	2017	2016	2015	2014	2013
● Lazard Emerging	32.39 (69)	23.25 (5)	-19.58 (98)	-5.87 (92)	4.53 (28)
● MSCI Emerging (Net)	37.28 (48)	11.19 (43)	-14.92 (69)	-2.19 (73)	-2.60 (75)
Median	37.02	10.08	-12.66	-0.14	0.95

Comparative Performance

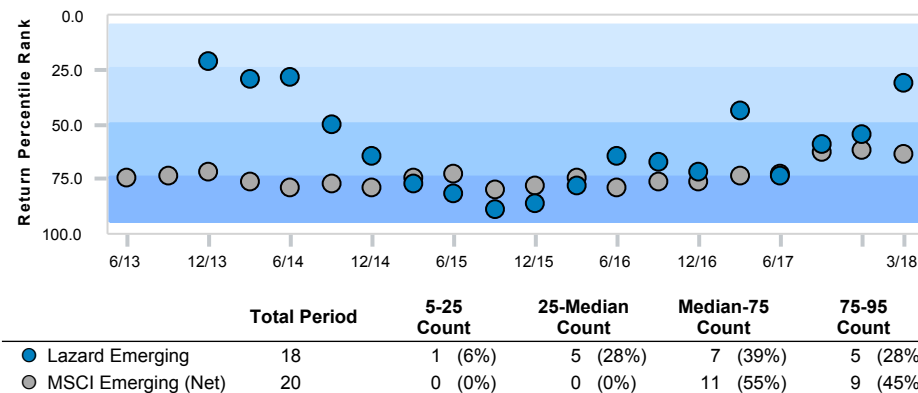
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Lazard Emerging	7.57 (32)	8.27 (39)	1.48 (99)	12.01 (55)	-3.22 (31)	9.88 (24)
MSCI Emerging (Net)	7.44 (37)	7.89 (44)	6.27 (54)	11.44 (67)	-4.16 (47)	9.03 (44)
IM Emerging Markets Equity (SA+CF) Median	6.95	7.59	6.46	12.22	-4.37	8.69



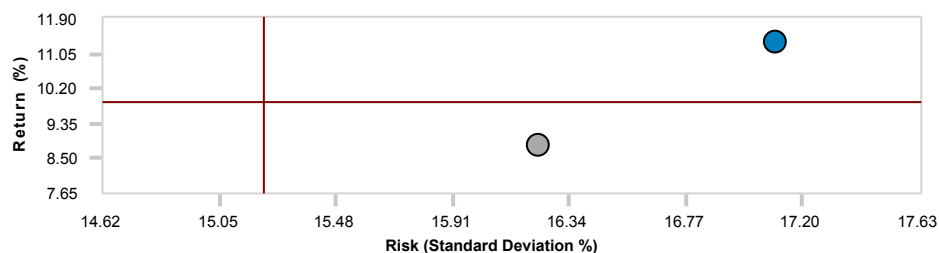
### 3 Yr Rolling Under/Over Performance - 5 Years



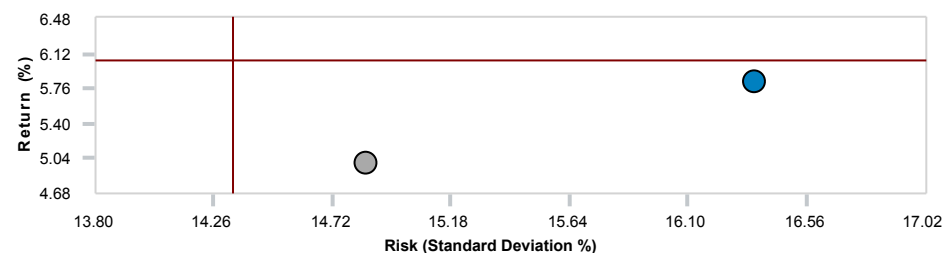
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

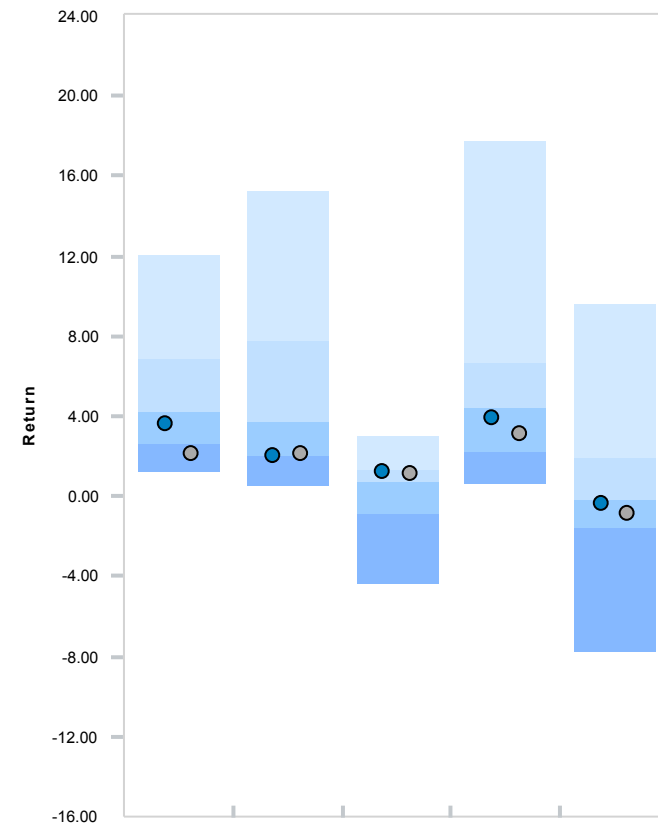
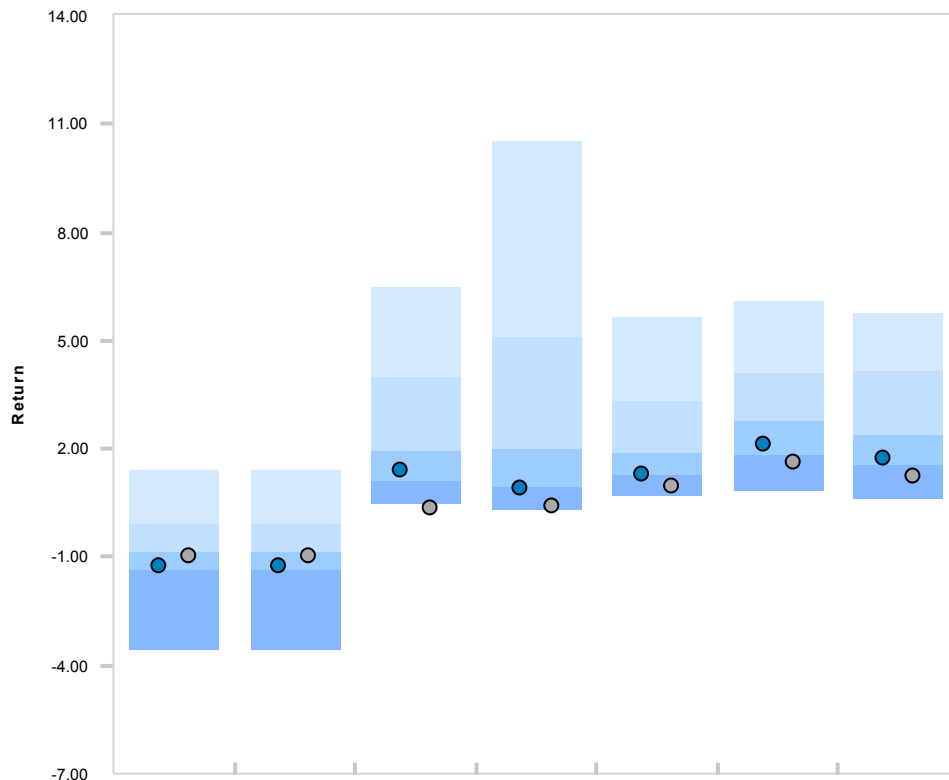
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Lazard Emerging	6.37	108.48	99.49	2.68	0.38	0.69	0.98	10.01
MSCI Emerging (Net)	0.00	100.00	100.00	0.00	N/A	0.57	1.00	9.73

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Lazard Emerging	5.86	109.92	107.32	0.88	0.18	0.41	1.03	10.79
MSCI Emerging (Net)	0.00	100.00	100.00	0.00	N/A	0.38	1.00	9.59



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Boyd Watterson Intern	-1.24 (70)	-1.24 (70)	1.42 (65)	0.90 (78)	1.31 (73)	2.11 (68)	1.74 (70)
BB Int US Govt/Credit	-0.98 (57)	-0.98 (57)	0.35 (97)	0.39 (94)	0.94 (88)	1.60 (82)	1.25 (84)
Median	-0.87	-0.87	1.98	1.99	1.92	2.76	2.39

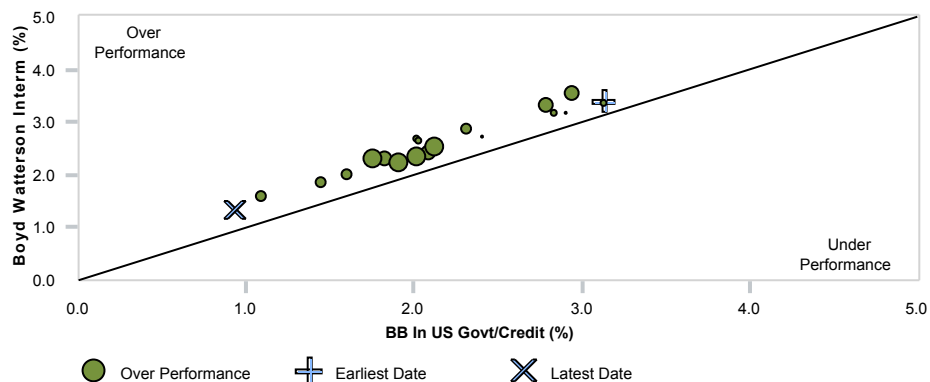
	2017	2016	2015	2014	2013
Boyd Watterson Intern	3.59 (63)	2.05 (75)	1.25 (29)	3.92 (55)	-0.40 (54)
BB Int US Govt/Credit	2.14 (83)	2.08 (75)	1.07 (36)	3.13 (65)	-0.86 (63)
Median	4.21	3.74	0.72	4.43	-0.18

Comparative Performance

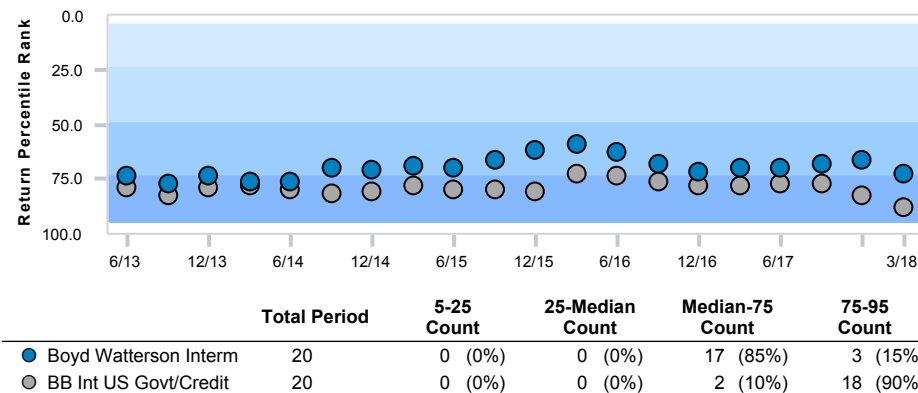
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Boyd Watterson Intern	0.42 (58)	1.00 (50)	1.25 (60)	0.87 (67)	-2.44 (69)	0.16 (83)
BB In US Govt/Credit	-0.20 (95)	0.60 (80)	0.94 (72)	0.78 (75)	-2.07 (59)	0.16 (83)
IM U.S. Fixed Income (SA+CF) Median	0.52	1.00	1.48	1.14	-1.68	0.90



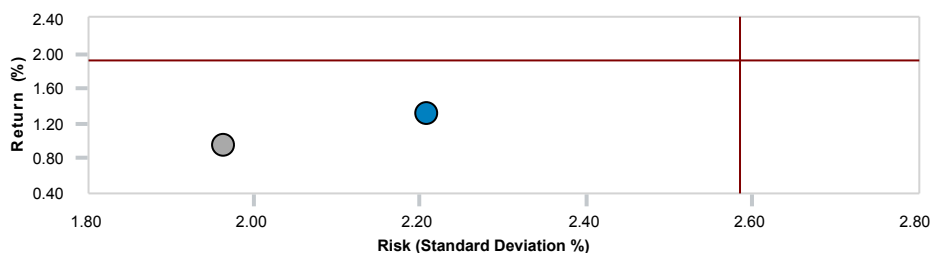
### 3 Yr Rolling Under/Over Performance - 5 Years



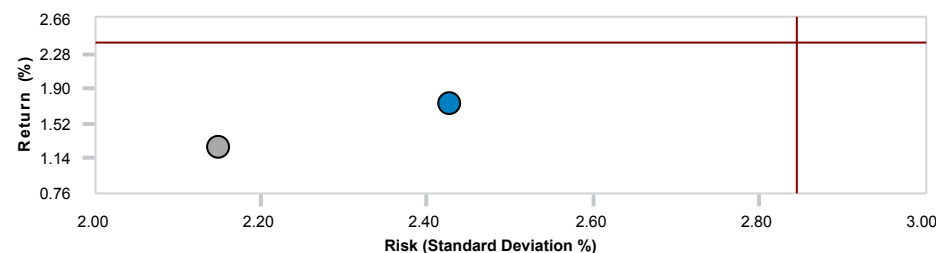
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

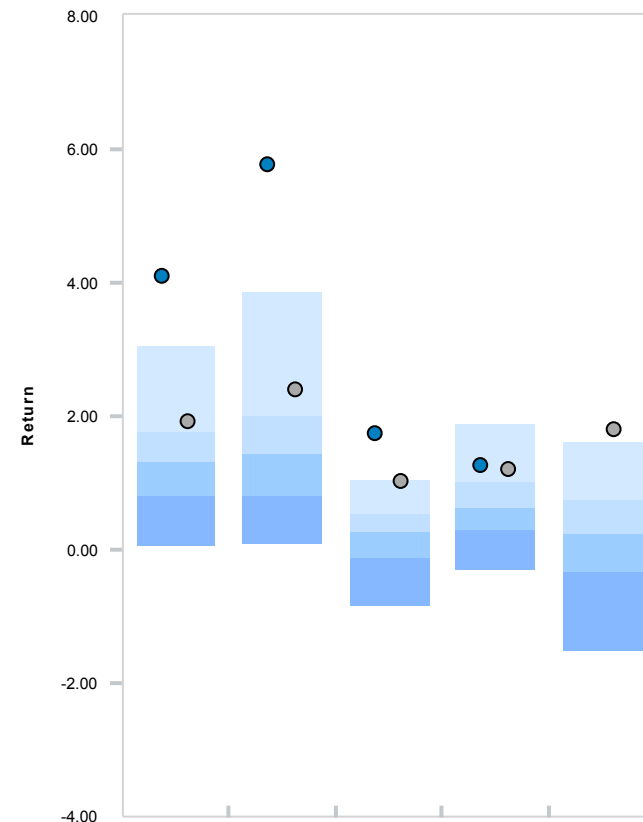
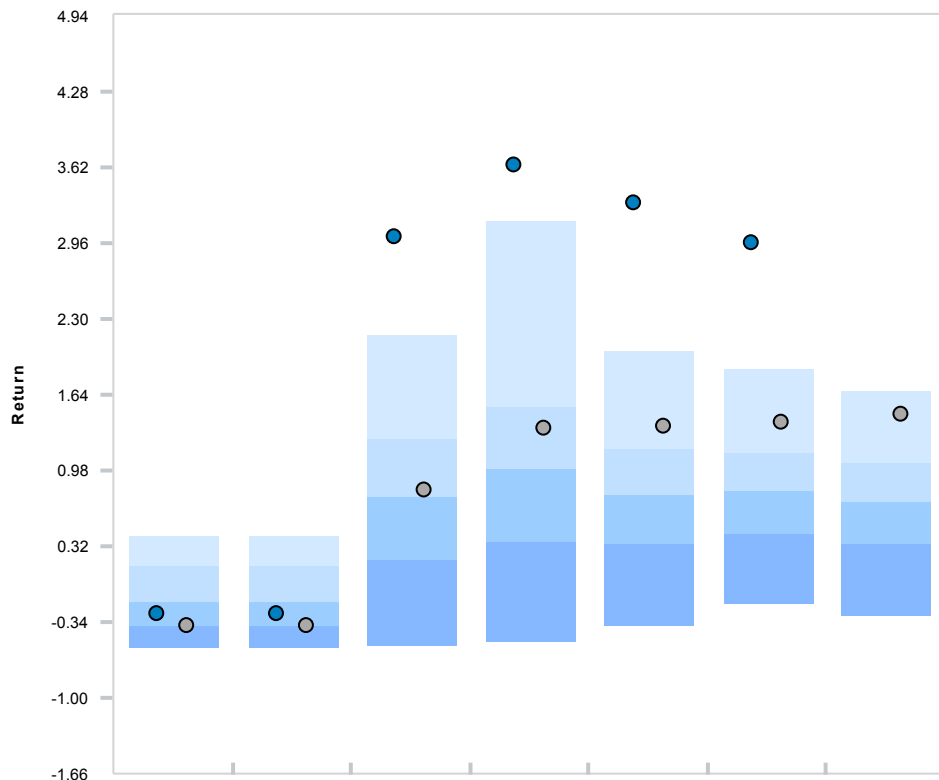
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Boyd Watterson Intern	0.47	113.23	101.48	0.27	0.79	0.38	1.10	1.48
BB In US Govt/Credit	0.00	100.00	100.00	0.00	N/A	0.24	1.00	1.31

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Boyd Watterson Intern	0.46	116.16	104.04	0.35	1.06	0.59	1.11	1.52
BB In US Govt/Credit	0.00	100.00	100.00	0.00	N/A	0.44	1.00	1.37



Peer Group Analysis - IM U.S. Short Duration Fixed Income (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Boyd Watterson LDF	-0.27 (64)	-0.27 (64)	3.01 (3)	3.64 (4)	3.30 (2)	2.96 (1)	N/A
● BofA ML 1-3 Yr U.S. Cor	-0.38 (76)	-0.38 (76)	0.81 (48)	1.34 (34)	1.36 (20)	1.39 (15)	1.46 (10)
Median	-0.17	-0.17	0.76	1.01	0.77	0.80	0.70

	2017	2016	2015	2014	2013
● Boyd Watterson LDF	4.08 (3)	5.77 (3)	1.72 (1)	1.25 (17)	N/A
● BofA ML 1-3 Yr U.S. Cor	1.91 (20)	2.39 (18)	1.01 (6)	1.19 (19)	1.78 (4)
Median	1.31	1.42	0.27	0.62	0.23

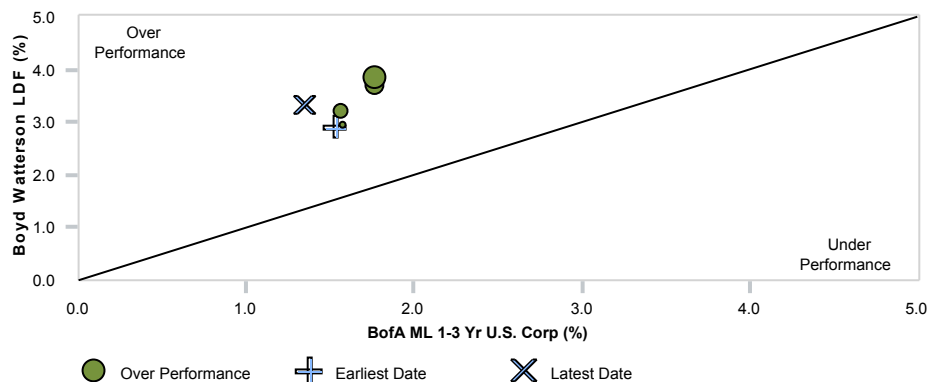
Comparative Performance

	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Boyd Watterson LDF	0.76 (2)	1.06 (2)	1.44 (2)	0.76 (15)	0.13 (26)	2.11 (3)
BofA ML 1-3 Yr U.S. Corp	-0.02 (55)	0.61 (15)	0.60 (23)	0.70 (18)	-0.21 (51)	0.34 (42)
IM U.S. Short Duration Fixed Income (MF) Median	0.01	0.39	0.40	0.43	-0.21	0.26

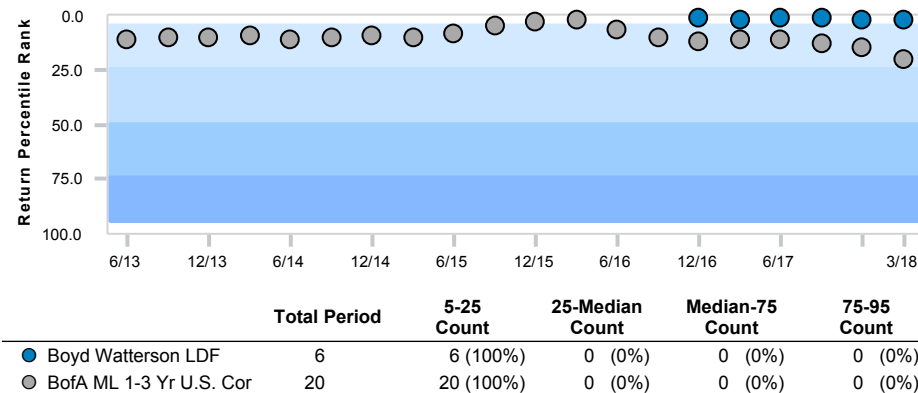




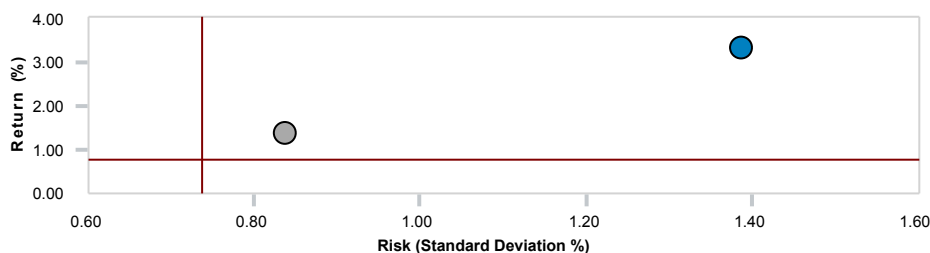
### 3 Yr Rolling Under/Over Performance - 5 Years



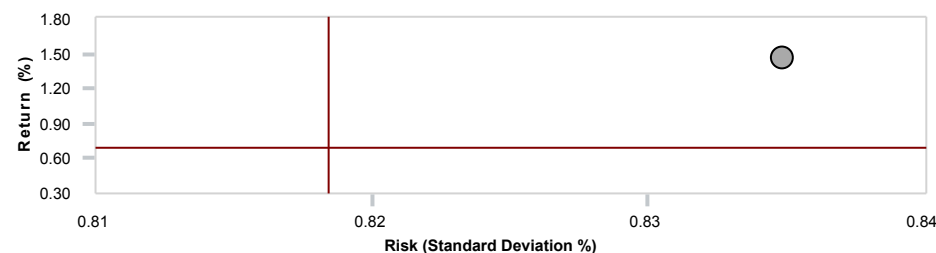
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

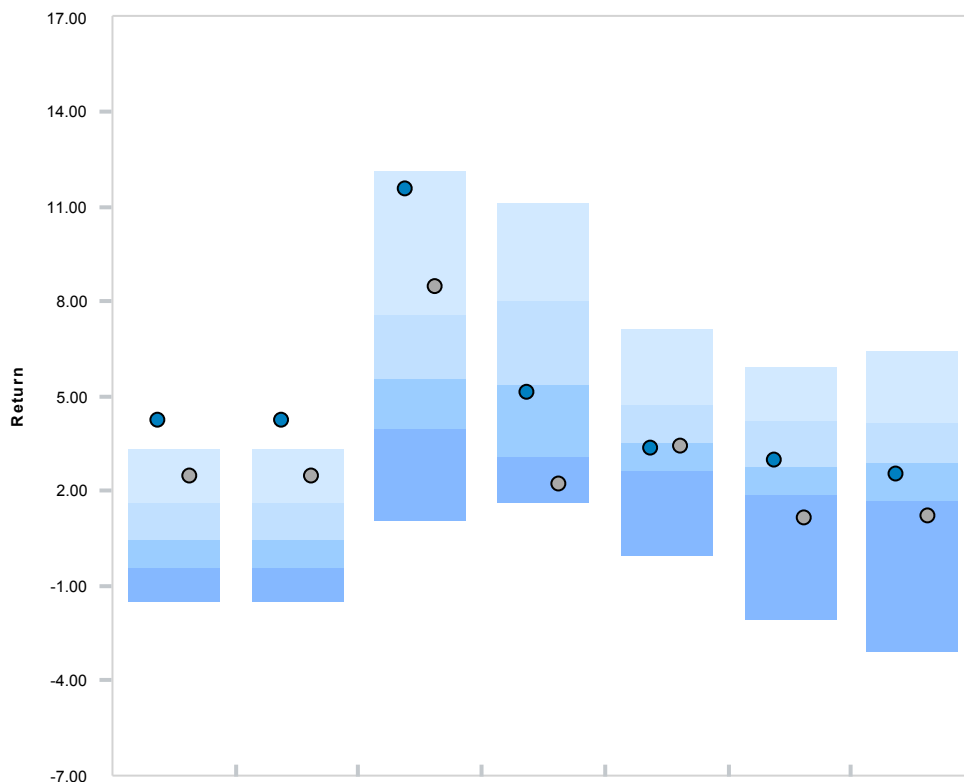
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Boyd Watterson LDF	1.10	194.95	83.09	1.90	1.74	1.97	1.02	0.48
Boyd Watterson LDF BofA ML 1-3 Yr U.S. Corp	0.00	100.00	100.00	0.00	N/A	1.01	1.00	0.38

### Historical Statistics - 5 Years

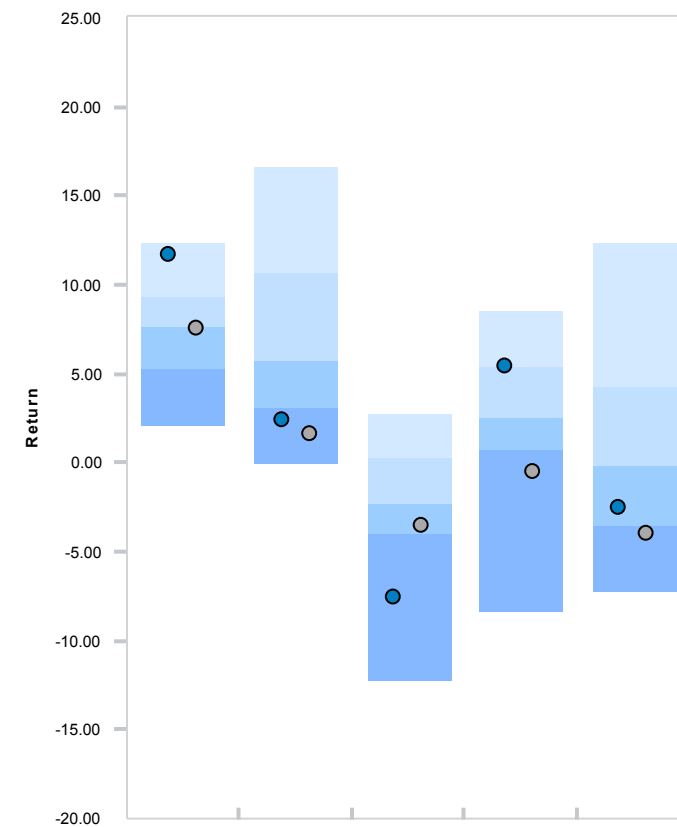
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Boyd Watterson LDF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boyd Watterson LDF BofA ML 1-3 Yr U.S. Corp	0.00	100.00	100.00	0.00	N/A	1.35	1.00	0.39



Peer Group Analysis - IM Global Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Brandywine Global	4.22 (2)	4.22 (2)	11.57 (7)	5.14 (53)	3.35 (58)	2.96 (49)	2.53 (57)
● CG World Gov Bond	2.50 (10)	2.50 (10)	8.49 (18)	2.24 (90)	3.45 (55)	1.14 (87)	1.19 (88)
Median	0.44	0.44	5.55	5.39	3.57	2.79	2.91



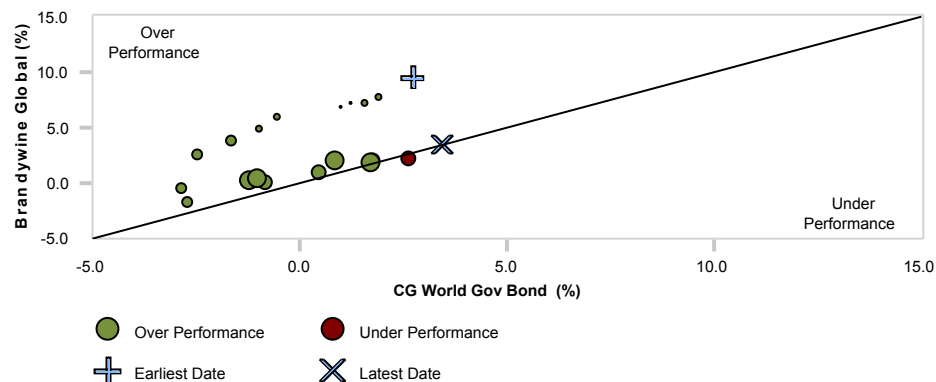
	2017	2016	2015	2014	2013
● Brandywine Global	11.66 (11)	2.43 (80)	-7.62 (90)	5.41 (26)	-2.57 (68)
● CG World Gov Bond	7.49 (53)	1.60 (88)	-3.57 (68)	-0.48 (85)	-4.00 (80)
Median	7.63	5.77	-2.37	2.46	-0.16

Comparative Performance

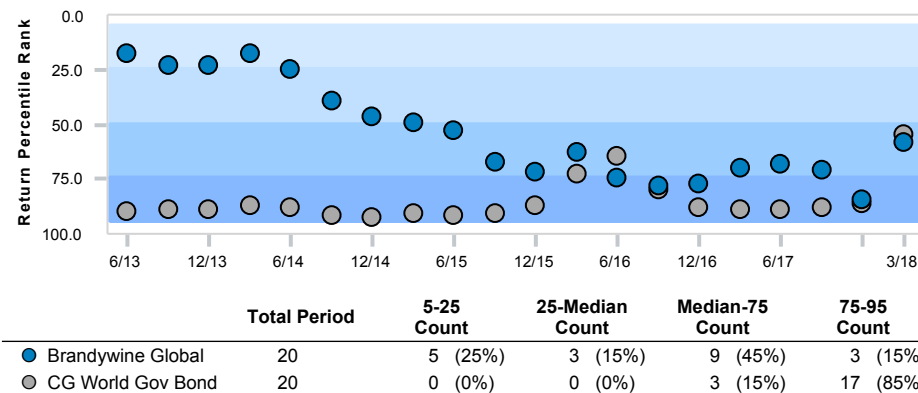
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Brandywine Global	-0.22 (92)	2.90 (15)	4.27 (7)	4.30 (10)	-6.55 (83)	1.20 (72)
CG World Gov Bond	1.04 (40)	1.81 (52)	2.89 (26)	1.55 (73)	-8.53 (99)	0.30 (91)
IM Global Fixed Income (SA+CF) Median	0.89	1.86	2.20	2.11	-1.36	2.21



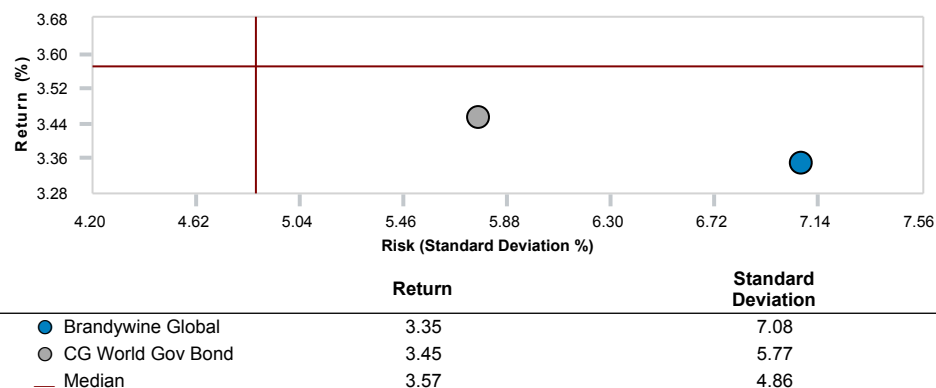
### 3 Yr Rolling Under/Over Performance - 5 Years



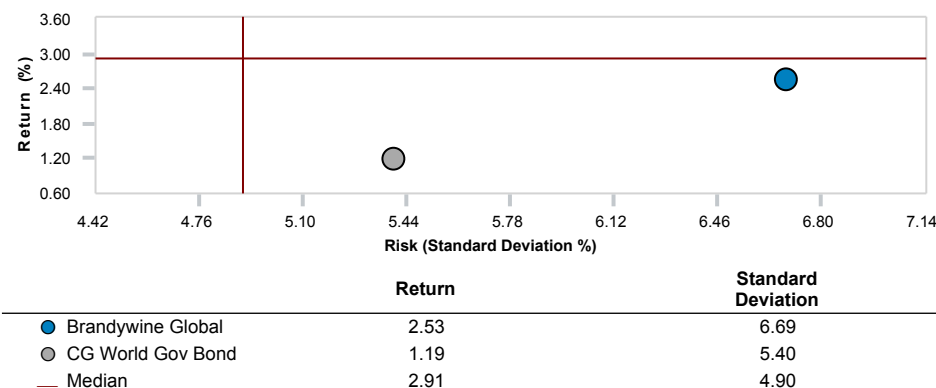
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

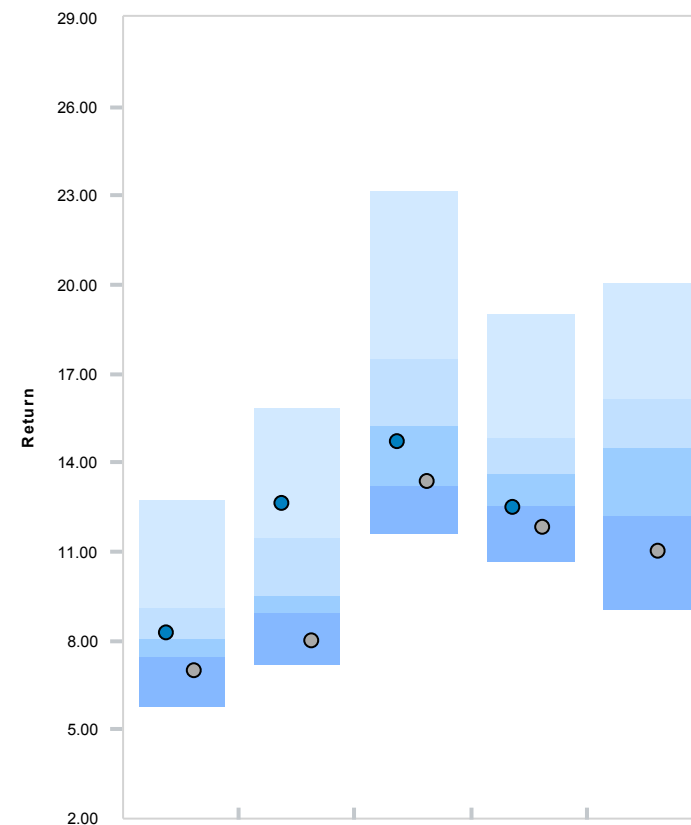
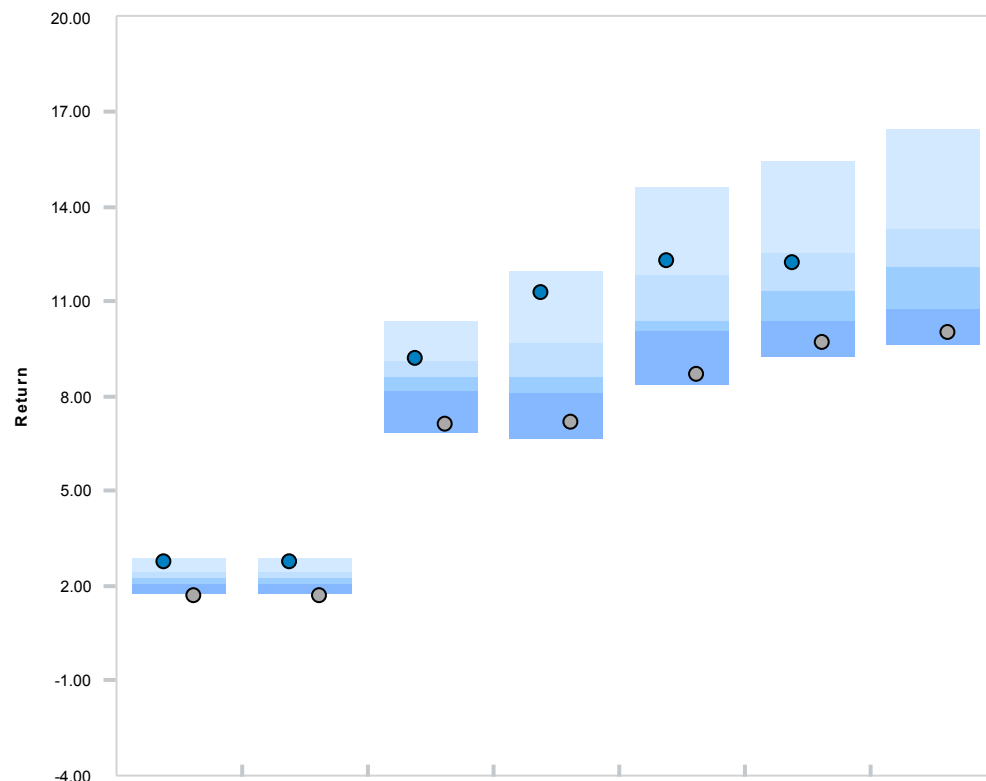
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Brandywine Global	4.29	95.00	92.41	0.07	0.00	0.43	0.98	4.56
CG World Gov Bond	0.00	100.00	100.00	0.00	N/A	0.54	1.00	4.04

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Brandywine Global	4.17	100.26	79.24	1.45	0.34	0.36	0.97	4.48
CG World Gov Bond	0.00	100.00	100.00	0.00	N/A	0.19	1.00	3.97



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
● Intercontinental RE	2.79 (7)	2.79 (7)	9.17 (25)	11.29 (14)	12.32 (22)	12.26 (28)	N/A
● NCREIF Property	1.70 (96)	1.70 (96)	7.12 (94)	7.19 (90)	8.72 (89)	9.71 (92)	10.00 (92)
Median	2.23	2.23	8.62	8.66	10.38	11.37	12.13

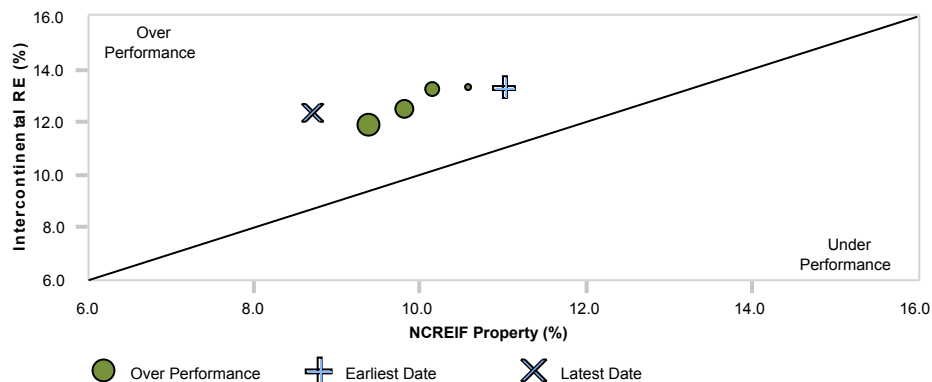
	2017	2016	2015	2014	2013
● Intercontinental RE	8.27 (48)	12.60 (24)	14.71 (56)	12.47 (77)	N/A
● NCREIF Property	6.96 (84)	7.97 (88)	13.33 (75)	11.82 (82)	10.98 (86)
Median	8.08	9.52	15.23	13.59	14.47

Comparative Performance

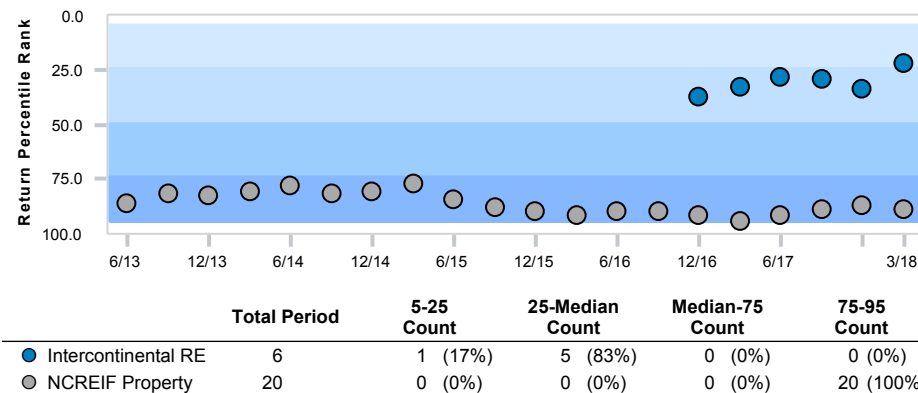
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Intercontinental RE	2.75 (15)	1.68 (61)	1.67 (72)	1.94 (46)	5.00 (2)	4.02 (2)
NCREIF Property	1.80 (83)	1.70 (61)	1.75 (68)	1.55 (60)	1.73 (68)	1.77 (75)
IM U.S. Open End Private Real Estate (SA+CF) Median	2.25	1.75	1.91	1.91	2.26	2.16



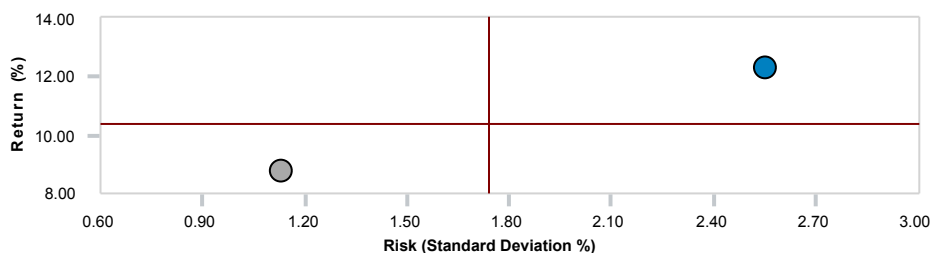
### 3 Yr Rolling Under/Over Performance - 5 Years



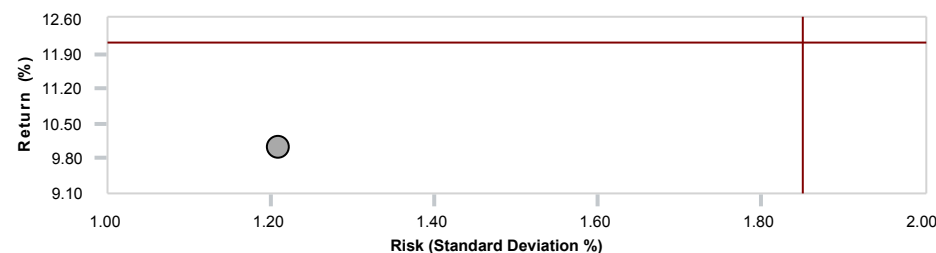
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

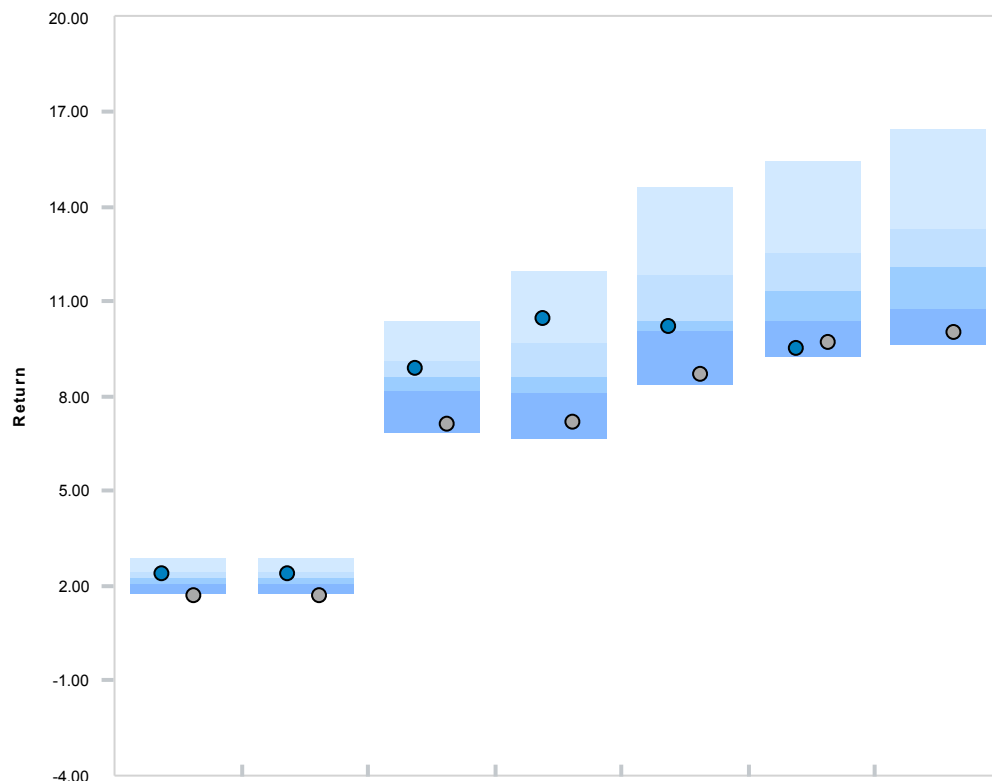
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Intercontinental RE	2.30	139.83	N/A	3.57	1.46	4.26	0.98	0.00
NCREIF Property	0.00	100.00	N/A	0.00	N/A	6.16	1.00	0.00

### Historical Statistics - 5 Years

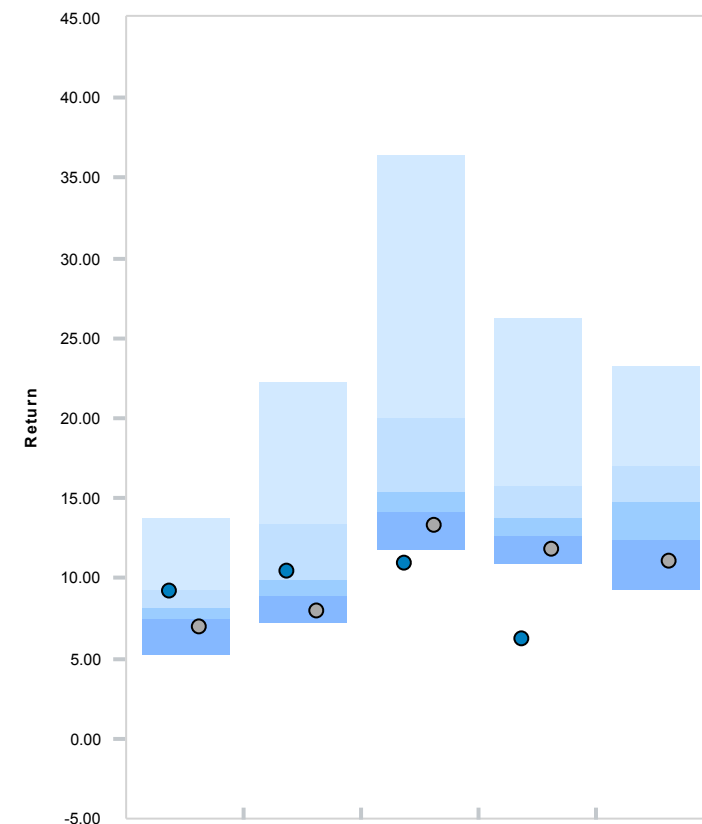
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Intercontinental RE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Property	0.00	100.00	N/A	0.00	N/A	6.83	1.00	0.00



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Titanium GSA	2.36 (40)	2.36 (40)	8.87 (45)	10.46 (17)	10.19 (64)	9.49 (93)	N/A
● NCREIF Property	1.70 (96)	1.70 (96)	7.12 (94)	7.19 (90)	8.72 (89)	9.71 (92)	10.00 (92)
Median	2.23	2.23	8.62	8.66	10.38	11.37	12.13



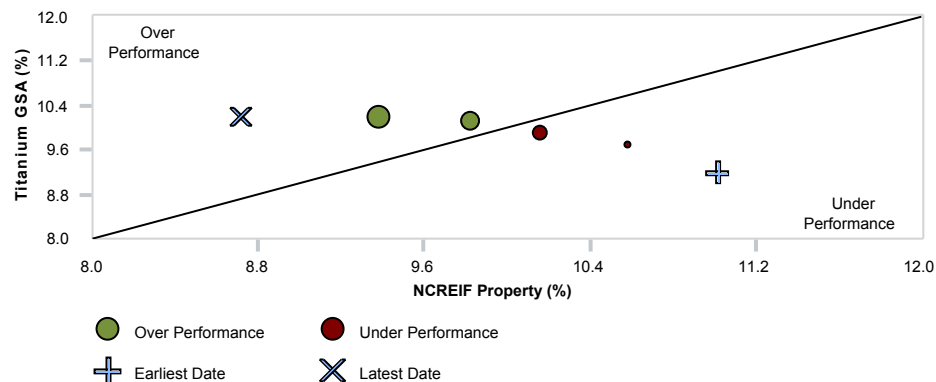
	2017	2016	2015	2014	2013
● Titanium GSA	9.16 (29)	10.40 (47)	10.98 (98)	6.25 (100)	N/A
● NCREIF Property	6.96 (83)	7.97 (89)	13.33 (78)	11.82 (85)	10.98 (88)
Median	8.23	9.92	15.35	13.76	14.83

Comparative Performance

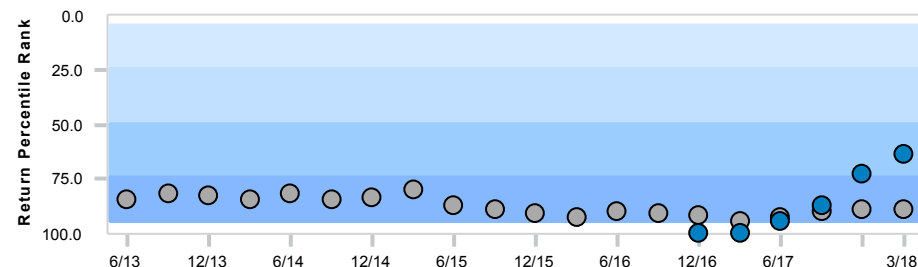
	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017	1 Qtr Ending Dec-2016	1 Qtr Ending Sep-2016
Titanium GSA	2.33 (42)	2.19 (38)	1.71 (70)	2.63 (23)	3.75 (20)	2.46 (34)
NCREIF Property	1.80 (78)	1.70 (61)	1.75 (69)	1.55 (64)	1.73 (72)	1.77 (73)
IM U.S. Private Real Estate (SA+CF) Median	2.23	1.76	1.91	1.91	2.33	2.19



### 3 Yr Rolling Under/Over Performance - 5 Years

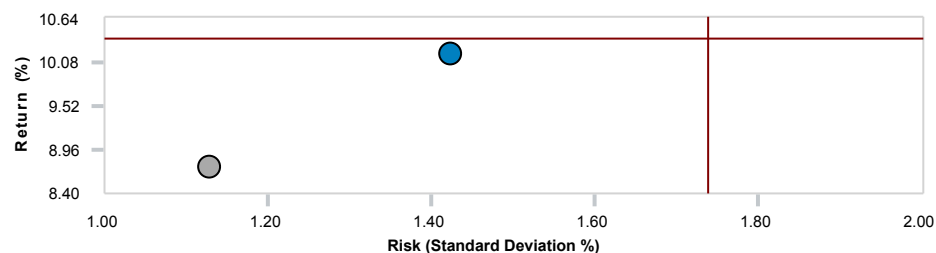


### 3 Yr Rolling Percentile Ranking - 5 Years



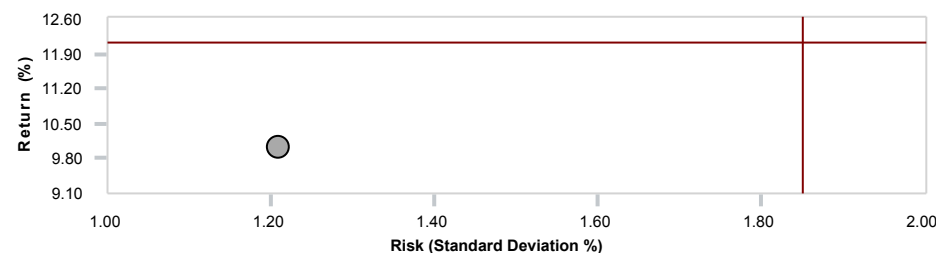
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Titanium GSA	6	0 (0%)	0 (0%)	2 (33%)	4 (67%)
● NCREIF Property	20	0 (0%)	0 (0%)	0 (0%)	20 (100%)

### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Titanium GSA	10.19	1.42
● NCREIF Property	8.72	1.13
— Median	10.38	1.74

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Titanium GSA	N/A	N/A
● NCREIF Property	10.00	1.21
— Median	12.13	1.85

### Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Titanium GSA	1.76	116.29	N/A	9.43	0.78	6.22	0.09	0.00
NCREIF Property	0.00	100.00	N/A	0.00	N/A	6.16	1.00	0.00

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Titanium GSA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Property	0.00	100.00	N/A	0.00	N/A	6.83	1.00	0.00



<b>Total Fund Policy</b>	
<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Jan-1973</b>	
S&P 500 Index	55.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	40.00
90 Day U.S. Treasury Bill	5.00
<b>Apr-1999</b>	
S&P 500 Index	50.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	45.00
90 Day U.S. Treasury Bill	5.00
<b>Jan-2014</b>	
S&P 500 Index	25.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	22.00
90 Day U.S. Treasury Bill	1.00
Russell 2500 Index	9.00
MSCI EAFE (Net) Index	19.00
MSCI Emerging Markets (Net) Index	5.00
NCREIF Property Index	2.00
HFRI Fund of Funds Composite Index	3.00
FTSE World Government Bond Index	14.00





Historical market value and performance data through September 2017 was provided by Morgan Stanley.

Market values, performance and cash flow information beginning October 2017 to date was prepared by AndCo from statements provided by Comerica Bank and the investment managers.

Mesirow Financial market value of \$256,553 represents a holdback amount expected to be paid out after the year end audit is completed in June 2018.

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- 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.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- 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.
<b>Distributed to Paid In (DPI)</b>	- 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.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- 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.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- 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.
<b>Public Market Equivalent (PME)</b>	- 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.
<b>R-Squared</b>	- 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.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- 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.
<b>Standard Deviation</b>	- 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.
<b>Total Value to Paid In (TVPI)</b>	- 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
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- 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.
<b>Up Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



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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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