Investment Performance Review
Period Ending March 31, 2019

Miami Beach Fire & Police Pension Fund

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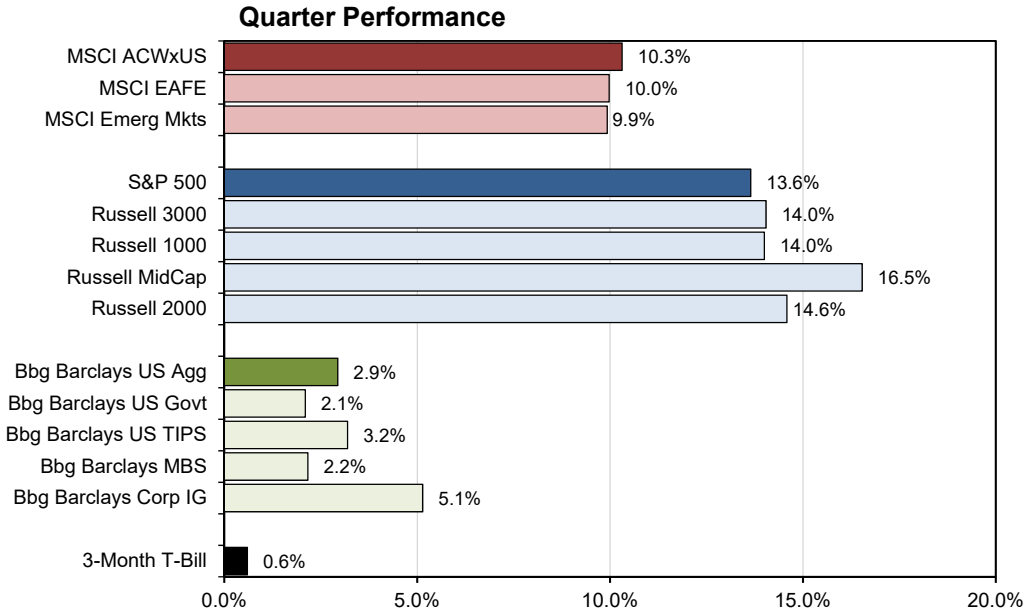
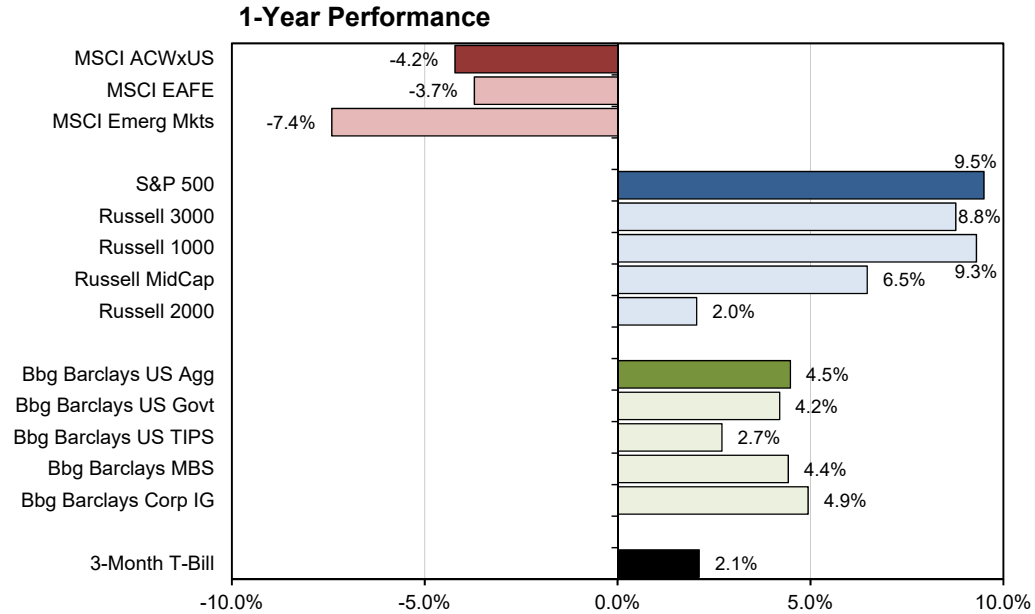
1st Quarter 2019 Market Environment

- After a difficult end to 2018, markets rebounded strongly during the 1st quarter of 2019 with higher risk assets posting the greatest returns. Broad international and domestic equity markets had double-digit gains during the period as investors overlooked signs of weakening global growth in favor of increased accommodation in global monetary policy and progress in global trade negotiations. While muted relative to equities, fixed income returns were also positive during the quarter. Within equities, domestic stocks outperformed international markets. US markets pushed higher as the US Federal Reserve (Fed) shifted their stance on monetary policy toward a more accommodative posture, the US and China moved closer to a resolution of their ongoing trade dispute and the partial government shutdown that began in December came to an end. The large cap S&P 500 Index returned 13.6% during the quarter while the small cap Russell 2000 Index gained 14.6% for the period. US equity returns over the 1-year period are positive with the S&P 500 appreciating 9.5% while the Russell 2000 posted a more modest gain of 2.0%.

- Similar to US markets, international equity investors were encouraged by a general easing in central bank monetary policy, including new stimulus measures in Europe and China, as well as the de-escalation of trade tensions with the US. Despite the continued softening in global macroeconomic data and the lack of certainty around Brexit, international equity index returns finished the quarter in positive territory with the MSCI ACWI ex US Index returning 10.3%. The developed market MSCI EAFE Index and the MSCI Emerging Markets Index had similar performance during the 1st quarter returning 10.0% and 9.9% respectively. Despite the strong quarter, returns over the 1-year period remain negative with developed markets falling -3.7%, outperforming emerging markets which fell -7.4%.

- Fixed income securities underperformed equities to start 2019 with the broad market Bloomberg Barclays Aggregate Index returning 2.9%. Interest rates fell for all maturities across the US Treasury Yield Curve as Fed guidance signaled a pause in monetary policy tightening through 2019. Interest rates in the middle of the curve saw the greatest declines causing the curve to invert with shorter-term maturities paying higher interest rates than those in the middle of the curve. This has historically preceded a recession by 6-24 months. Investment grade corporate issues were the best performing securities this quarter, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 5.1% for the period, as corporate credit had tailwinds due to its greater interest rate sensitivity, higher yields and tightening credit spreads. Corporate issues also outperformed the other major fixed income sectors over the 1-year period, returning 4.9% versus a 4.5% return for the Bloomberg Barclays Aggregate Index.



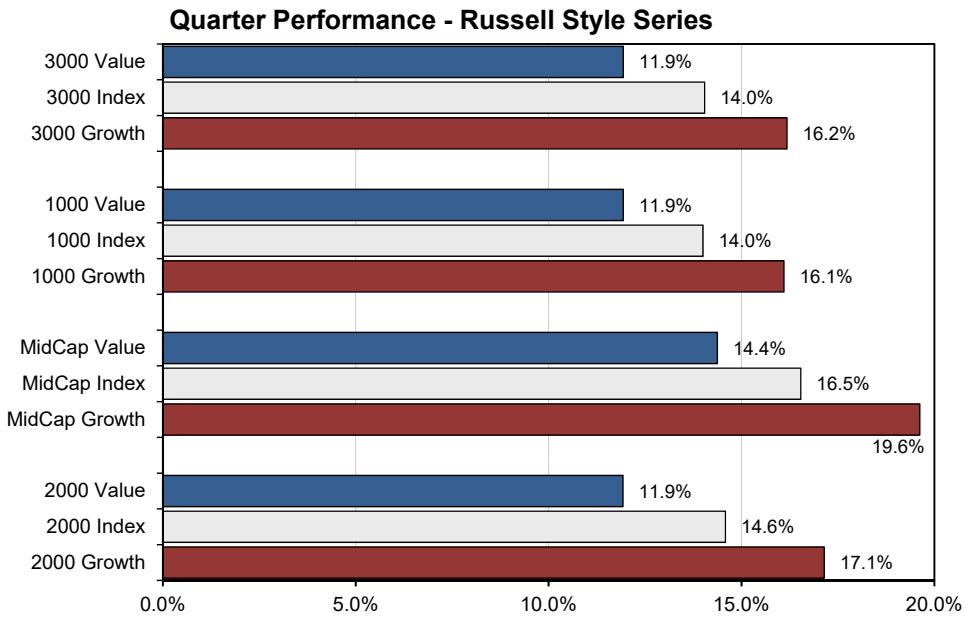


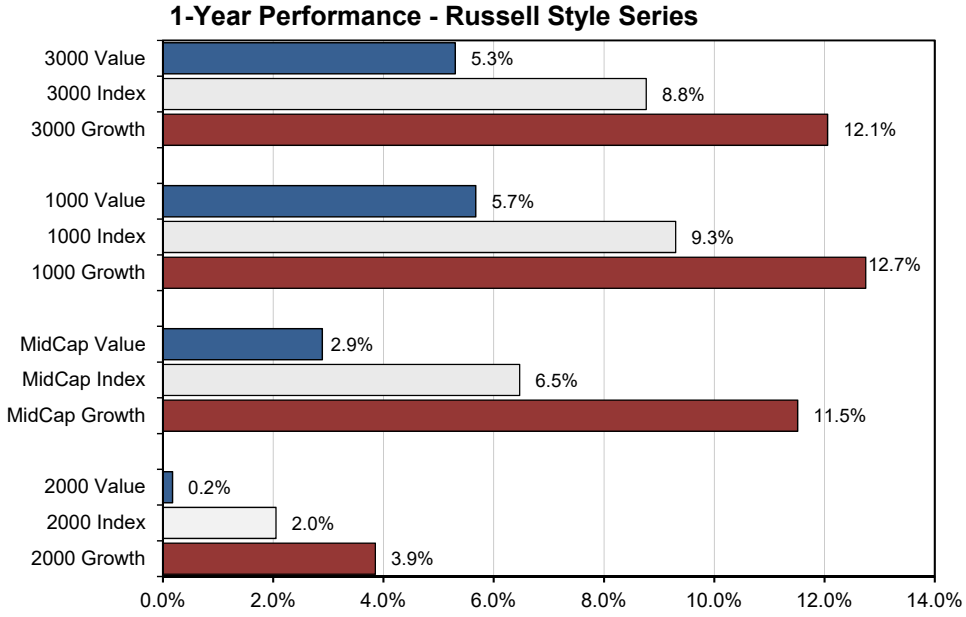
Source: Investment Metrics

- US equity index returns were strongly positive across the style and capitalization spectrum to start the year with all indices posting double digit returns. Macroeconomic data released during the quarter was mixed with disappointing data released late in the quarter for GDP and employment being particularly notable. Even though earnings reported during the period were viewed favorably, many companies provided negative forward earnings guidance due to slowing global growth, trade concerns and the fading effects of US tax reform. However, investor concerns over the economy were overshadowed by positive developments in trade negotiations with China and an accommodative shift in Fed monetary policy. With regards to trade, President Trump delayed the implementation of new Chinese tariffs scheduled for March 1st citing substantial progress in ongoing discussions. Stocks also rallied on Fed guidance to put further monetary policy tightening on hold as they lowered projections for growth and inflation. Lastly, we saw the end of the partial government shutdown that began in December due to a partisan disagreement over funds for the construction of a border wall with Mexico. While the spending bill that passed did not budget for the wall, President Trump declared a national state of emergency later in the quarter in order to secure the needed funding.

- During the quarter, mid cap stocks were the best performers while small cap stocks outperformed large cap equities across growth, value and core indices. The Russell MidCap Index gained 16.5% during the period versus a 14.6% return for the small cap Russell 2000 Index and a 14.0% gain on the large cap Russell 1000 Index. Part of the reason for strength in small cap names is the projected hold on interest rate increases that occurred over 2018 as small and mid-cap companies typically maintain higher percentages of debt than their large cap peers. Small and mid-cap companies are usually more domestically focused which will serve as a tailwind in periods where the US economy is on stronger footing than international markets. It is also not unusual for smaller market cap stocks to outperform in risk-on market environments. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 9.3% for the year while the Russell 2000 gained only 2.0%.

- Growth indices outperformed value indices across the market cap spectrum during the 1st quarter. Growth stocks have outperformed value in all but one quarter over the last two years. The Russell MidCap Growth Index was the best performing style index for the period, returning 19.6% for the quarter. The large cap and small cap value indices had the lowest relative returns, both gaining 11.9%. The trend of growth outperformance is also visible over the 1-year period as growth indices have benefitted from larger exposures to technology which has been a large driver of index performance over the last year, as well as a meaningful underweight to financials which has been a relative detractor.

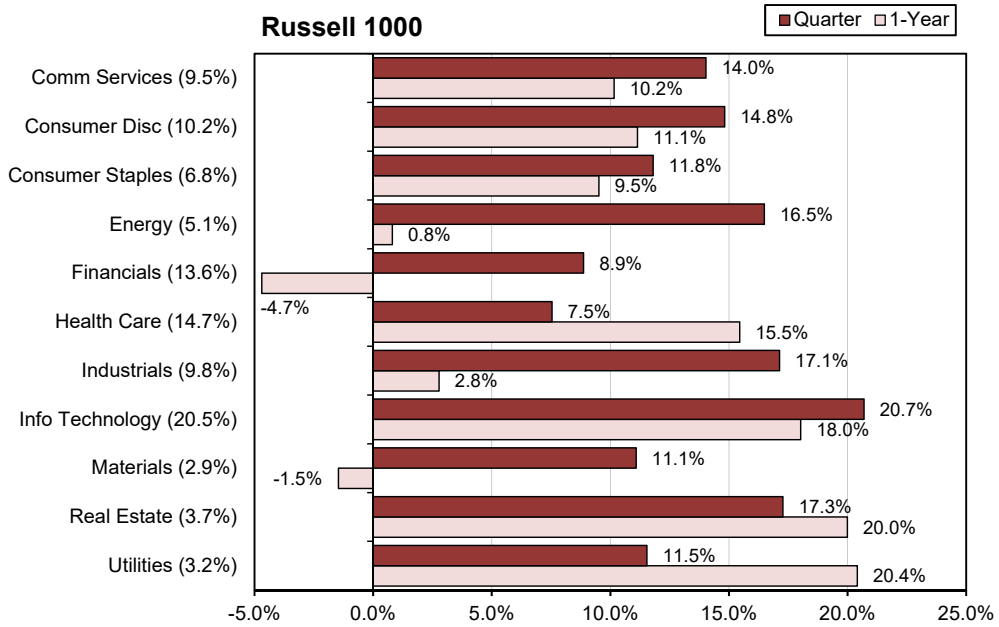


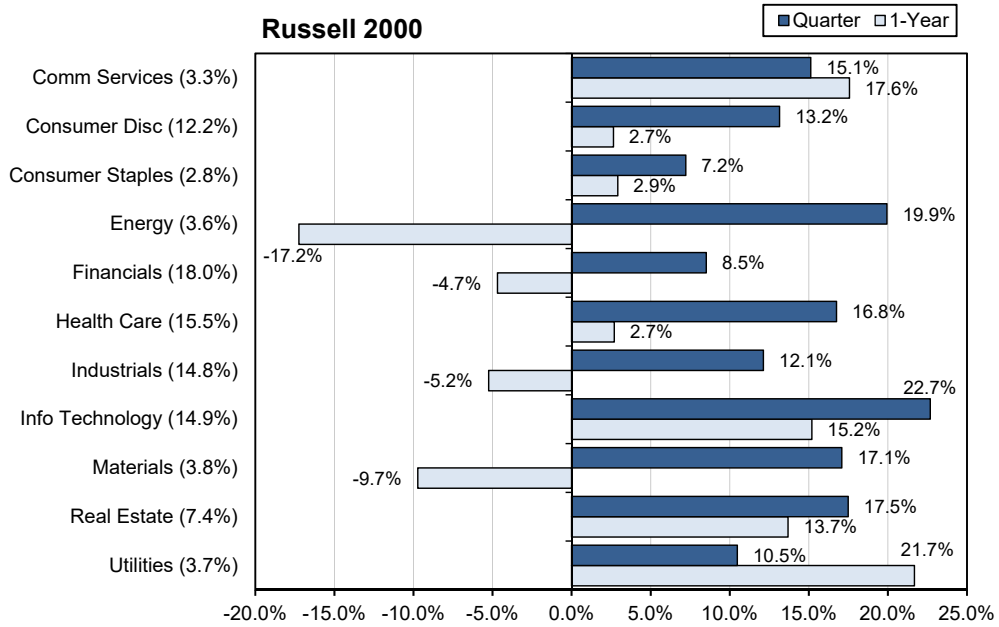


Source: Investment Metrics

- Sector performance was broadly positive across large cap sectors for the 1st quarter. There were strong gains for all sectors within the Russell 1000 Index during for the period with five sectors outpacing the return of the index. While the rally was broad with nine of eleven sectors posting double digit returns, cyclical sectors such as technology, industrials and energy were some of the best performers through the quarter returning 20.7%, 17.1% and 16.5% respectively. Technology stocks rose on strong earnings and attractive valuations following their 4th quarter 2018 sell off. Energy companies benefitted from a large rebound in oil prices which increased by over 30% during the quarter following an OPEC led supply cut and US sanctions against Iran and Venezuela. Industrial stocks, among others, gained on hopes that trade tensions between the US and China would continue to abate. REITs also had a particularly strong quarter, returning 17.3% as the prospect of lower interest rates acted as a tailwind. Financials and health care stocks were the worst performers during the period returning 8.9% and 7.5% respectively. Health care stocks faced uncertainty around the potential for future regulation following congressional hearings on drug pricing while the prospect of lower earnings due to a muted interest rate environment weighed on financial stocks. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Utilities, REITs and information technology were the best performers returning 20.4%, 20.0% and 18.0% respectively. Financials and materials posted negative results at -4.7% and -1.5% while energy was only slightly positive at 0.8%.

- Quarterly results for small cap sectors were mixed relative to their large capitalization counterparts with six of eleven sectors outperforming their corresponding large cap equivalents. Like large caps, all eleven sectors produced gains during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter and nine returning over 10.0%. Similar to large caps, cyclical sectors performed well with technology, energy and materials returning 22.7%, 19.9% and 17.1% respectively. Real estate also did well returning 17.5%. The largest detractors over the period were consumer staples, financials and utilities which still produced gains of 7.2%, 8.5% and 10.5%. Over the trailing 1-year period, returns varied significantly with four sectors posting double digit gains and four losing value. Despite a very strong quarter, energy stocks were the worst performers over the 1-year period, falling a considerable -17.2%, while the defensive utilities sector produced the greatest gains, appreciating 21.7%.





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

Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000

As of March 31, 2019

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

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

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

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

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

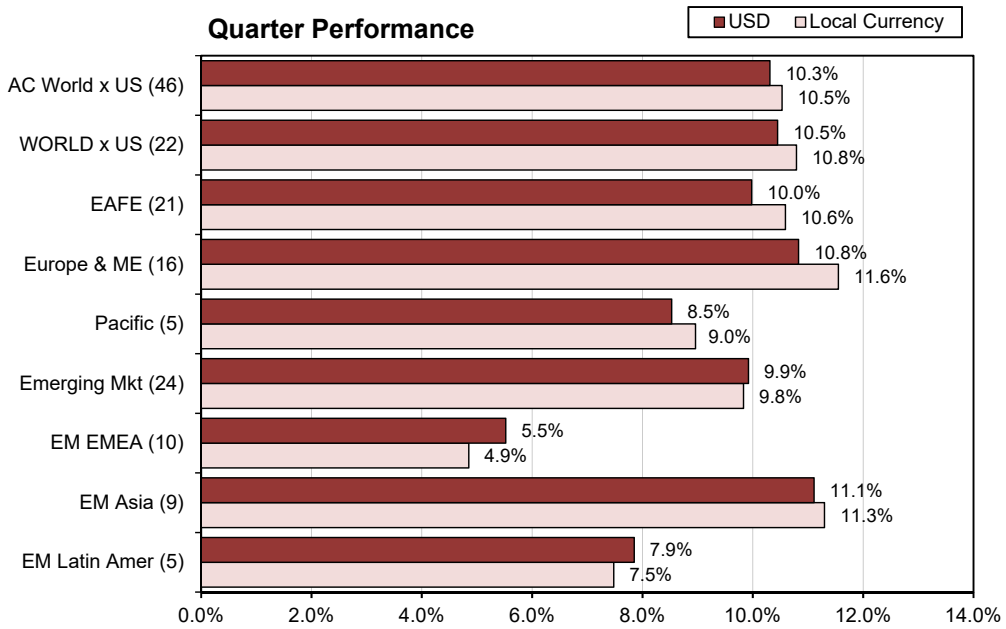
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Zomedica Pharmaceuticals Corp	0.00%	-77.0%	-84.2%	Health Care
Aptinyx Inc	0.00%	-75.5%	N/A	Health Care
Alta Mesa Resources Inc Class A	0.00%	-73.5%	-96.7%	Energy
Novavax Inc	0.01%	-70.1%	-73.8%	Health Care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

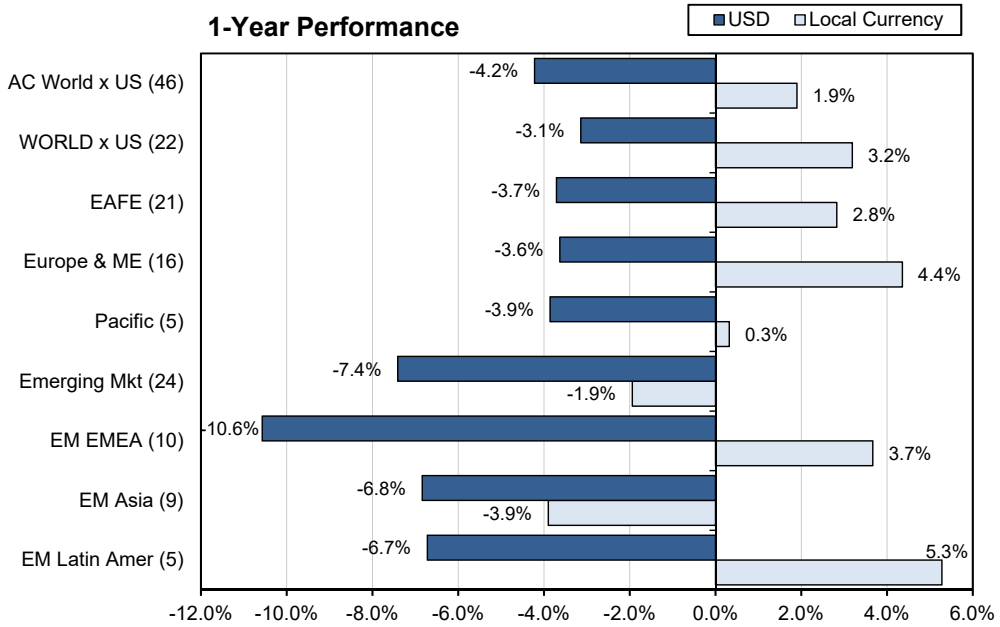
Source: Morningstar Direct

- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 10.5% in local currency terms and 10.3% in USD terms during the 1st quarter. Similar to US markets, international equity investors were encouraged by central bank responses to slowing global growth as they shifted towards more accommodative policies and the improvement in dialogue around global trade. Returns in local currency typically outperformed USD returns in the developed markets, as the USD continued to strengthen against most major developed currencies. While the currency effect was detrimental in developed markets, it acted as a slight tailwind in emerging markets. The USD strength is particularly noticeable over the 1-year period where local currency returns on the MSCI ACWI ex US Index were 1.9%, but after accounting for foreign exchange, translated to a loss of -4.2% for a USD investor.

- Fourth quarter results for developed market international indices were positive in both local currency and USD terms with the MSCI EAFE Index returning 10.6% and 10.0% respectively. Ongoing weakness in global economic reporting pushed major central banks to move toward less restrictive postures around monetary policy. In Europe, the European Central Bank (ECB) announced plans for additional stimulus while putting any future interest rate increases on hold until 2020. The Bank of England (BoE) left policy unchanged as uncertainties around Brexit coincided with a slowing economy. Prime Minister Theresa May held two votes on her withdrawal plan, both of which failed, forcing her to request an extension to the March 29th withdrawal deadline. Data from Japan drew concerns that the country's economy is contracting as corporate earnings, exports, manufacturing, retail sales and inflation all hinted at an economic slowdown. The MSCI EAFE Index returned 2.8% and -3.7% for the last twelve months in local currency and USD terms respectively.

- Emerging markets slightly underperformed relative to developed markets for the 1st quarter, but still appreciated in both local currency and USD terms with the MSCI Emerging Markets Index returning 9.8% and 9.9% respectively. A major tailwind for equity markets was the improvement in trade relations between the US and China. As Chinese economic data appeared to be slowing, the Chinese government also announced continued stimulus in the form of tax cuts, infrastructure investment and lowered the reserve requirement for banks in order to encourage lending. We also saw commodity prices rise over the quarter which is generally beneficial to emerging market countries with rising oil prices helping Russian and Colombian equity returns. In Brazil, President Jair Bolsonaro officially took office. Bolsonaro announced his plan to reform the country's debt laden pension system and promised market friendly economic reforms. One year returns for the MSCI Emerging Market Index were -1.9% in local currency terms and -7.4% in USD terms.





Source: MSCI Global Index Monitor (Returns are Net)

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

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

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

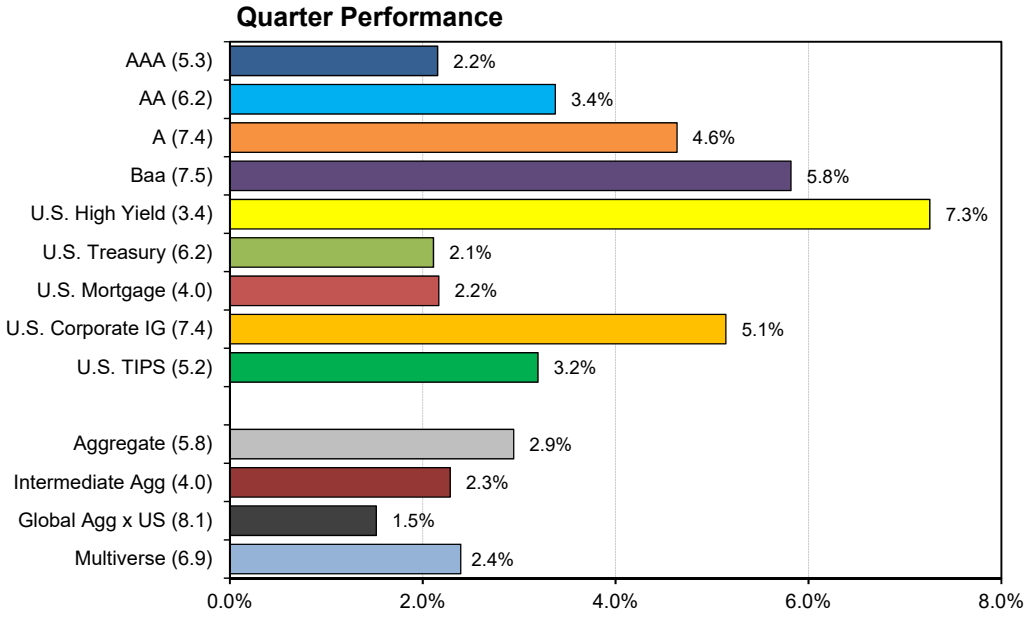
Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	24.0%	16.1%	6.7%	-7.8%
United Kingdom	17.1%	11.5%	11.9%	-0.1%
France	11.3%	7.6%	10.7%	-3.7%
Switzerland	8.9%	6.0%	13.1%	7.5%
Germany	8.6%	5.8%	6.9%	-13.7%
Australia	6.9%	4.7%	11.4%	4.5%
Hong Kong	4.1%	2.8%	15.6%	8.0%
Netherlands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

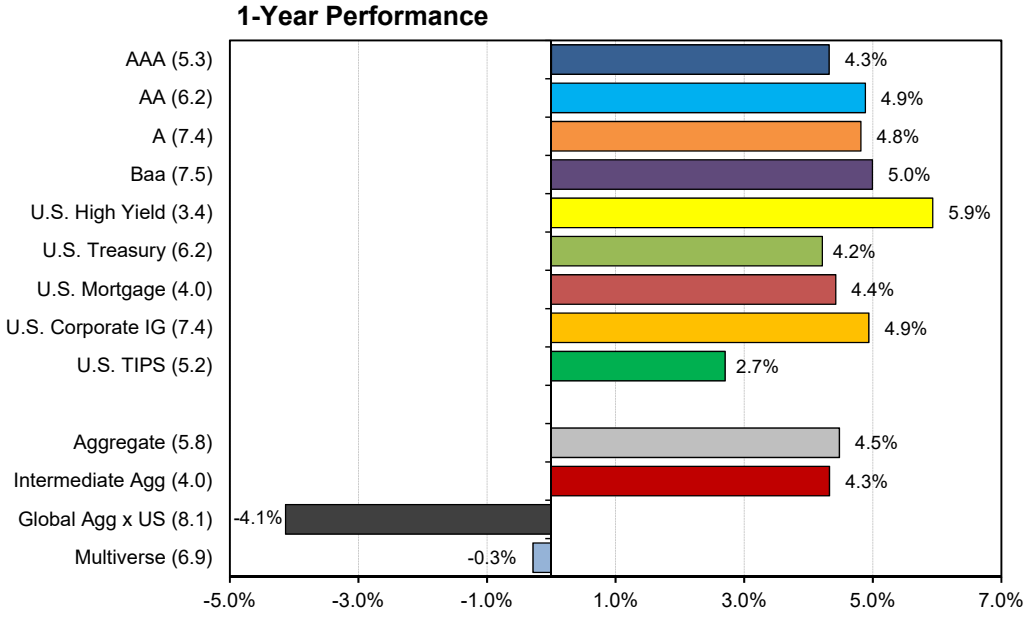
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

- Broad fixed income benchmarks were positive to start 2019. Following the late 2018 market volatility, the Federal Open Market Committee (FOMC) issued dovish guidance after their January meeting stating that they would be patient in determining future interest rate adjustments. The FOMC also commented on the ongoing balance sheet reduction program, stating that they would be open to changes to the program if market conditions warranted them. Later in March, Fed Chair Jerome Powell communicated that the FOMC is no longer projecting any further interest rate increases through 2019. He also stated that they would begin tapering the roll off from the balance sheet reduction program in May with a plan to halt the program entirely in September. The stoppage of the balance sheet reduction program represents an easing of monetary policy. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. This caused continued inversion in the yield curve with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.14% with the 30-day T-Bill yielding more than the 10-year bond by 0.02%. Historically, an inverted yield curve has been a leading indicator of a recession in the next 6-24 months. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 2.9% and 4.5% respectively.

- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 5.8% for the quarter, while AAA was the worst performing, returning 2.2%. Despite their relatively low durations, high yield securities posted very strong returns for the quarter, gaining 7.3%, as spreads tightened by 135 basis points on these issues. When viewed over the 1-year period, returns for the various quality segments generally show lower quality securities outperforming higher quality issues by a small margin.

- During the 1st quarter, investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors. Investment grade corporate credit returned 5.1%, as the drop in interest rates benefitted these securities to a greater degree and credit spreads tightened considerably since the end of 2018. This quarter's performance carried through to the 1-year period as corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 4.9% versus a 4.4% return for mortgages and 4.2% gain on Treasury securities.





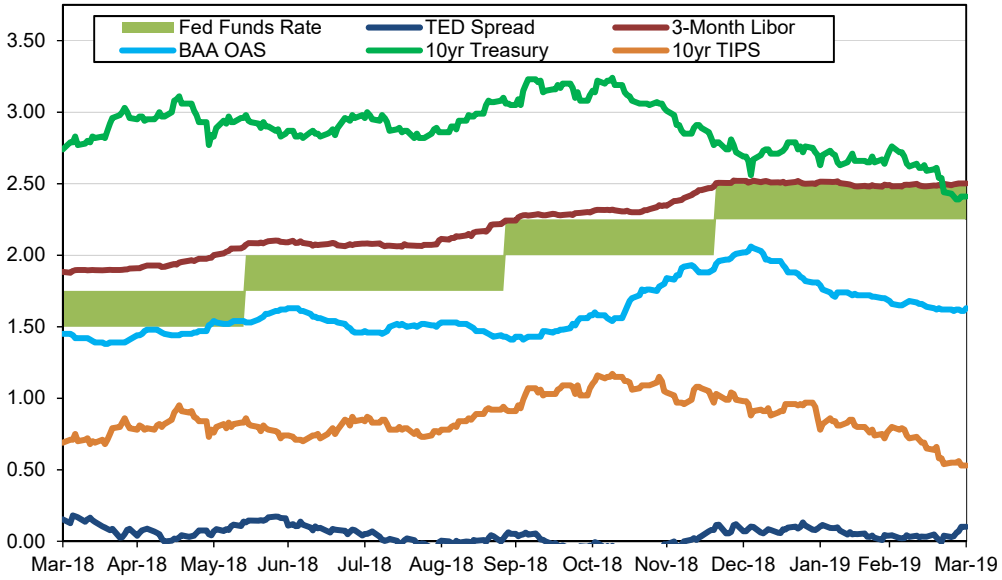
Source: Bloomberg

- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 1st quarter. These indices have lower, or in some cases (Germany, Japan), negative yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD has appreciated against most other developed currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 1.5% and -4.1% for the quarter and 1-year period respectively. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. Notably, the ECB announced a program to extend loans to European banks in an effort to increase lending and pledged to keep interest rates steady through the end of 2019. China also announced new stimulus to help spur its economy. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.

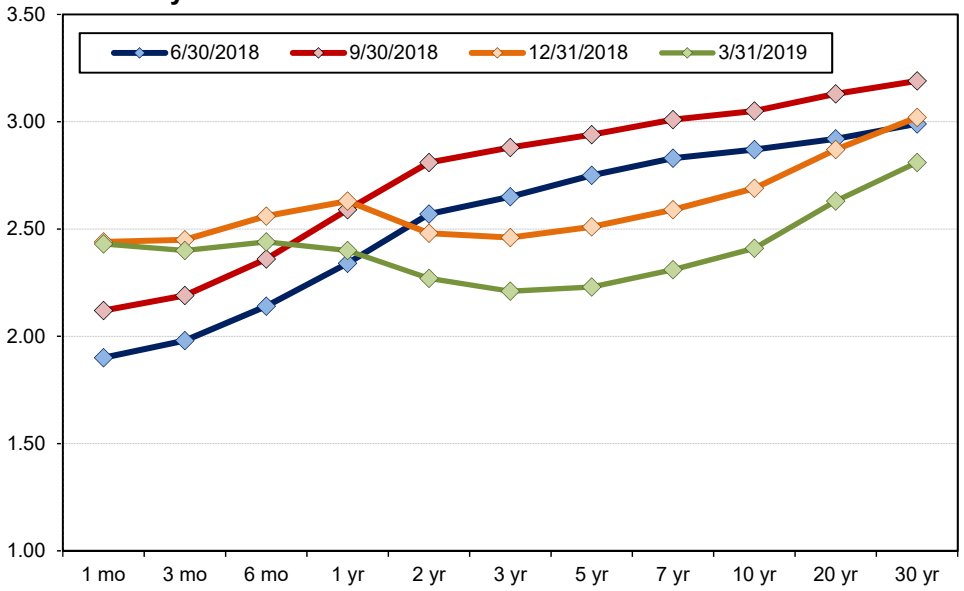
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) fell from recent high's greater than 3.0%, to yields below 2.5% to end the first quarter. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads dropped steadily over the 1st quarter of 2019. This spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. These credit spreads have tightened by about 34 basis points over the last three months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate due to the tightening of US monetary policy during 2018. As mentioned, the Fed's current guidance is for zero rate increases in 2019.

- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift of interest rates as well as a general flattening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorter-term maturities fell less than interest rates in the middle- to long-end of the curve.

1-Year Trailing Market Rates



Treasury Yield Curve



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

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Total Fund Compliance:	Yes	No
The total plan return equaled or exceeded the total plan benchmark over the trailing three year period.	●	
The total plan return equaled or exceeded the total plan benchmark over the trailing five year period.		●
The total return of the fund over the trailing three year period equal or exceed the actuarial assumption rate of return which is currently 7.85%.	●	
The total return of the fund over the trailing five year period equal or exceed the actuarial assumption rate of return which is currently 7.85%.		●

Equity Compliance:	Yes	No
The Total Equity portfolio beat its index through the trailing three year period.	●	
The Total Equity portfolio beat its index through the trailing five year period.	●	
The amount invested in any one issuing company is less than 5% of the Fund's total assets.	●	
The aggregate investment in any one company is less than 5% of the outstanding stock of the company.	●	

Inverness Equity	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period.		●
The equity return equaled or exceeded its benchmark during the trailing five year period.		●
The three year return ranks in the top 40% of its peers.		●
The five year return ranks in the top 40% of its peers.		●
Inverness' quarterly equity returns outperformed its benchmark for at least one of the last four quarters.	●	
Inverness' annualized alpha has been positive for the last three years.		●

Rhumbline Large Cap Value	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period. (One Year)		●
The equity return equaled or exceeded its benchmark during the trailing five year period. (Inception)		●
The five year return ranks in the top 40% of its peers. (One Year)	●	
The five year return ranks in the top 40% of its peers. (Inception)		●

Logan Capital	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period.	●	
The equity return equaled or exceeded its benchmark during the trailing five year period.		●
The three year return ranks in the top 40% of its peers.	●	
The five year return ranks in the top 40% of its peers.	●	
Logan's quarterly equity returns outperformed its benchmark for at least one of the last four quarters.	●	
Logan's annualized alpha has been positive for the last three years.		●

Rhumbline S&P Mid Cap	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period.		●
The equity return equaled or exceeded its benchmark during the trailing five year period.		●
The three year return ranks in the top 40% of its peers.	●	
The five year return ranks in the top 40% of its peers.	●	

Wellington	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period.	●	
The equity return equaled or exceeded its benchmark during the trailing five year period.	●	
The three year return ranks in the top 40% of its peers.	●	
The five year return ranks in the top 40% of its peers.	●	
Wellington's quarterly equity returns outperformed its benchmark for at least one of the last four quarters.	●	
Wellington's annualized alpha has been positive for the last three years.	●	

RhumbLine International	Yes	No
The equity return equaled or exceeded its benchmark during the trailing three year period.		●
The equity return equaled or exceeded its benchmark during the trailing five year period. (Inception)		●
The three year return ranks in the top 40% of its peers.		●
The five year return ranks in the top 40% of its peers. (Inception)		●

Fixed Income Compliance:

Inverness Fixed Income	Yes	No
The total fixed income return equaled or exceed the benchmark over the trailing three year period.	●	
The total fixed income return equaled or exceed the benchmark over the trailing five year period.	●	
The three year fixed income return ranks in the top 40% of its peers.		●
The five year fixed income return ranks in the top 40% of its peers.	●	
Inverness' quarterly fixed income returns outperformed its benchmark for at least one of the last four quarters.	●	
The annualized alpha has been positive over the rolling three year period.		●
All fixed income investments ranked in the top four categories by Standard and Poors, Moody's, or Value Line.	●	

Wells Capital	Yes	No
The total fixed income return equaled or exceed the benchmark over the trailing three year period.		●
The total fixed income return equaled or exceed the benchmark over the trailing five year period.		●
The three year fixed income return ranks in the top 40% of its peers.		●
The five year fixed income return ranks in the top 40% of its peers.		●
Wells Capital's quarterly returns outperformed its benchmark for at least one of the last four quarters.	●	
The annualized alpha has been positive over the rolling three year period.		●

JP Morgan RE	Yes	No
The return equaled or exceed the benchmark over the trailing three year period.		●
The return equaled or exceed the benchmark over the trailing five year period.		●
The three year return ranks in the top 40% of its peers.		●
The five year return ranks in the top 40% of its peers.		●
The quarterly returns outperformed its benchmark for at least one of the last four quarters.	●	
The annualized alpha has been positive over the rolling three year period.		●

Intercontinental	Yes	No
The return equaled or exceed the benchmark over the trailing three year period. (Quarter)	●	
The return equaled or exceed the benchmark over the trailing five year period. (Inception)	●	
The three year return ranks in the top 40% of its peers. (Quarter)		●
The five year return ranks in the top 40% of its peers. (Inception)		●
The quarterly returns outperformed its benchmark for at least one of the last four quarters.	●	

"Net returns" used when available.

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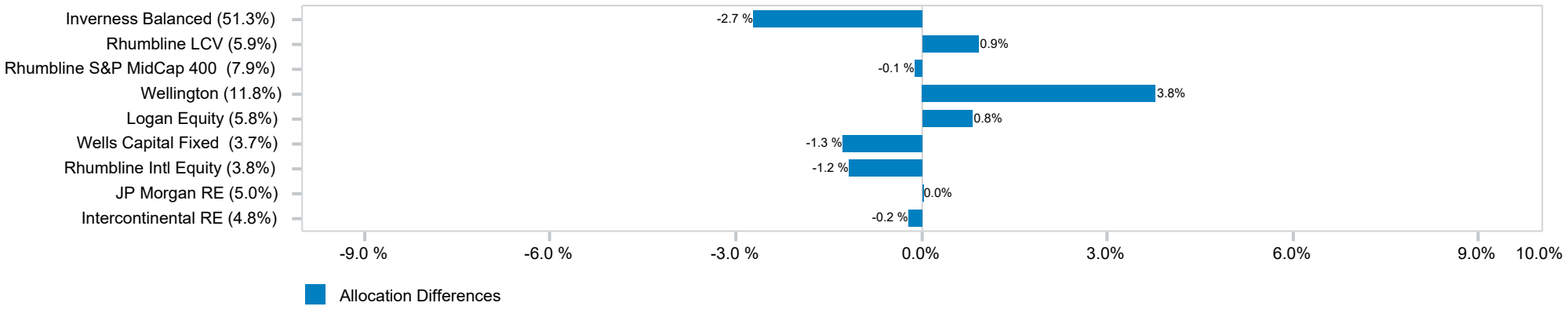
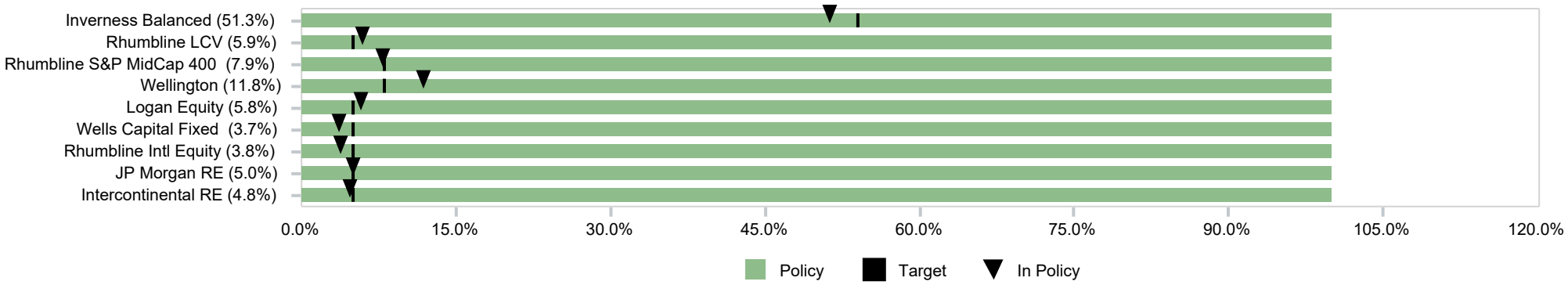
Asset Allocation Compliance

	Asset Allocation $	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. ($000)
Total Fund Composite	907,439,926	100.0	100.0	0.0	-
Inverness Balanced	465,362,860	51.3	54.0	-2.7	24,654,700
Rhumbline LCV	53,690,833	5.9	5.0	0.9	-8,318,836
Rhumbline S&P MidCap 400	71,569,006	7.9	8.0	-0.1	1,026,188
Wellington	106,787,921	11.8	8.0	3.8	-34,192,727
Logan Equity	52,756,995	5.8	5.0	0.8	-7,384,999
Wells Capital Fixed	33,689,649	3.7	5.0	-1.3	11,682,347
Rhumbline Intl Equity	34,787,764	3.8	5.0	-1.2	10,584,232
JP Morgan RE	45,453,652	5.0	5.0	0.0	-81,656
Intercontinental RE	43,341,246	4.8	5.0	-0.2	2,030,750

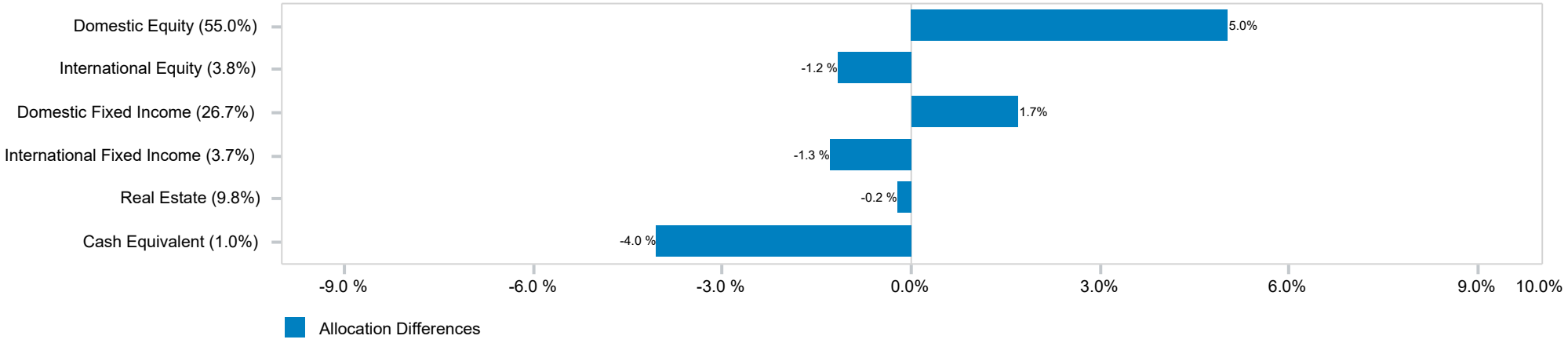


Executive Summary

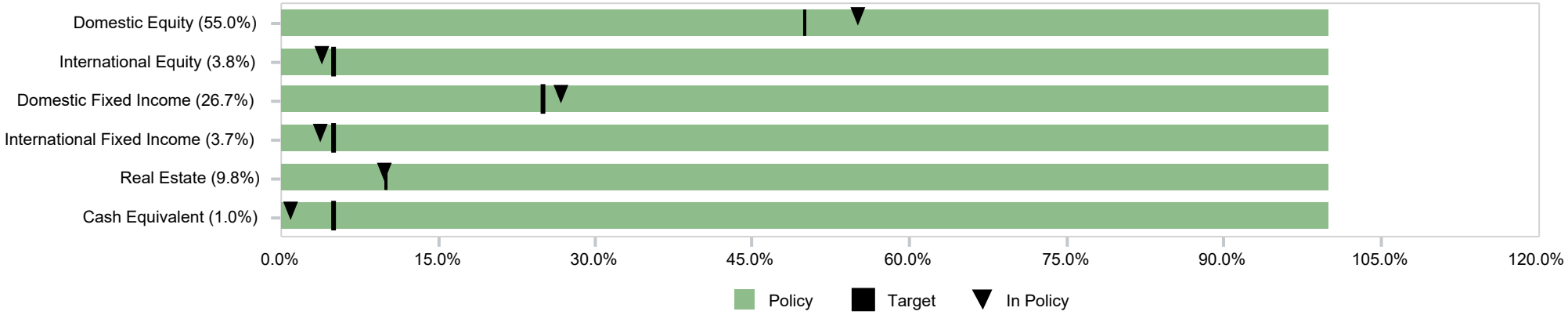


Asset Allocation Compliance

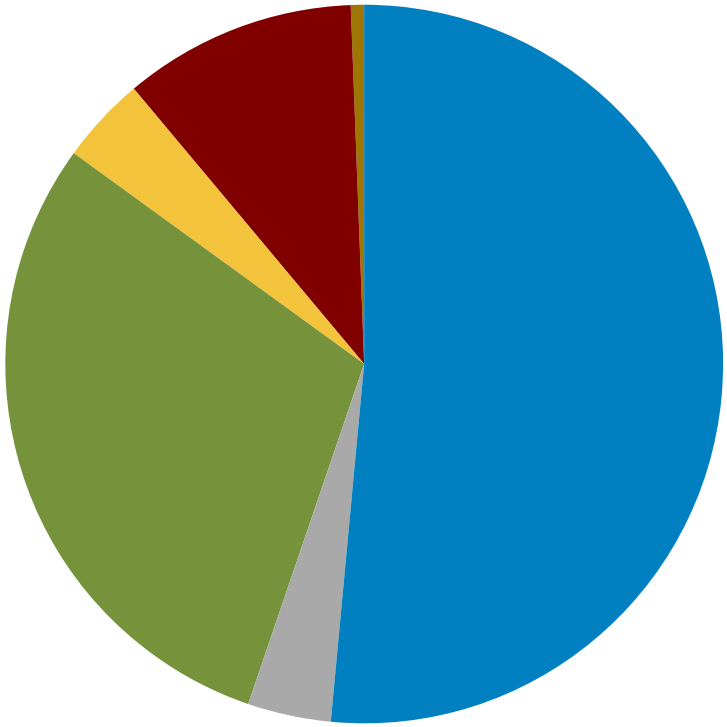
	Asset Allocation $	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. ($000)
Domestic Equity	499,297,769	55.0	50.0	5.0	-45,577,806
International Equity	34,787,764	3.8	5.0	-1.2	10,584,232
Domestic Fixed Income	242,217,719	26.7	25.0	1.7	-15,357,737
International Fixed Income	33,689,602	3.7	5.0	-1.3	11,682,394
Real Estate	88,794,898	9.8	10.0	-0.2	1,949,095
Cash Equivalent	8,652,174	1.0	5.0	-4.0	36,719,822
Total Fund	907,439,926	100.0	100.0	0.0	-



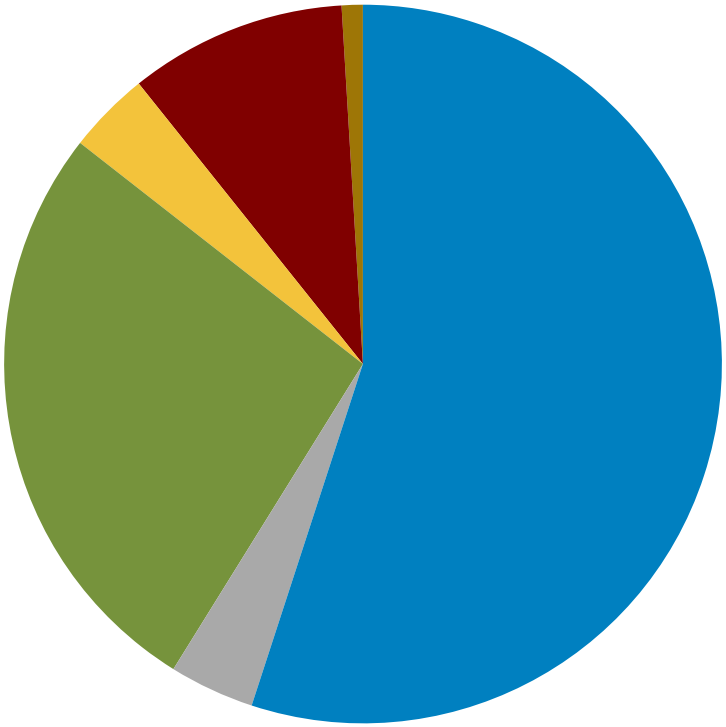
Executive Summary



Asset Allocation By Segment as of December 31, 2018 : $840,988,462



Asset Allocation By Segment as of March 31, 2019 : $907,439,926



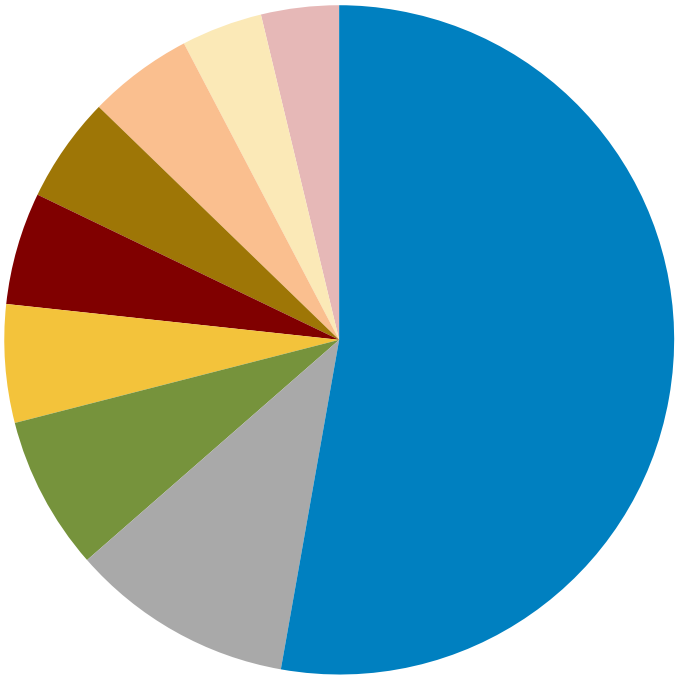
Allocation

Segments	Market Value	Allocation
Domestic Equity	432,966,694	51.5
International Equity	31,599,477	3.8
Domestic Fixed Income	250,118,813	29.7
International Fixed Income	32,957,614	3.9
Real Estate	88,291,073	10.5
Cash Equivalent	5,054,790	0.6

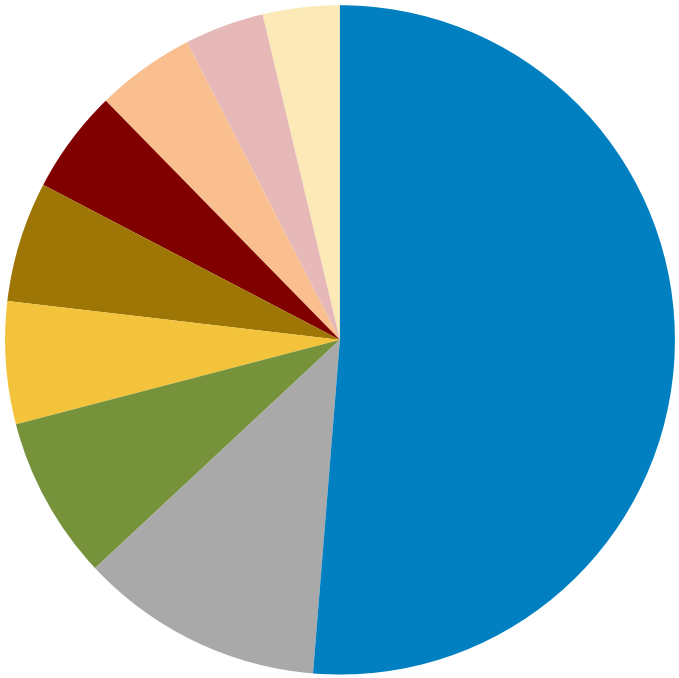
Allocation

Segments	Market Value	Allocation
Domestic Equity	499,297,769	55.0
International Equity	34,787,764	3.8
Domestic Fixed Income	242,217,719	26.7
International Fixed Income	33,689,602	3.7
Real Estate	88,794,898	9.8
Cash Equivalent	8,652,174	1.0

Asset Allocation By Manager as of December 31, 2018 : $840,988,462



Asset Allocation By Manager as of March 31, 2019 : $907,439,926



Allocation

	Market Value	Allocation
Inverness Balanced	443,918,874	52.8
Wellington	90,679,920	10.8
Rhumbline S&P MidCap 400	62,546,956	7.4
Rhumbline LCV	47,990,540	5.7
JP Morgan RE	45,690,091	5.4
Logan Equity	43,003,961	5.1
Intercontinental RE	42,600,982	5.1
Wells Capital Fixed	32,957,661	3.9
Rhumbline Intl Equity	31,599,477	3.8

Allocation

	Market Value	Allocation
Inverness Balanced	465,362,860	51.3
Wellington	106,787,921	11.8
Rhumbline S&P MidCap 400	71,569,006	7.9
Rhumbline LCV	53,690,833	5.9
Logan Equity	52,756,995	5.8
JP Morgan RE	45,453,652	5.0
Intercontinental RE	43,341,246	4.8
Rhumbline Intl Equity	34,787,764	3.8
Wells Capital Fixed	33,689,649	3.7

Financial Reconciliation Quarter to Date

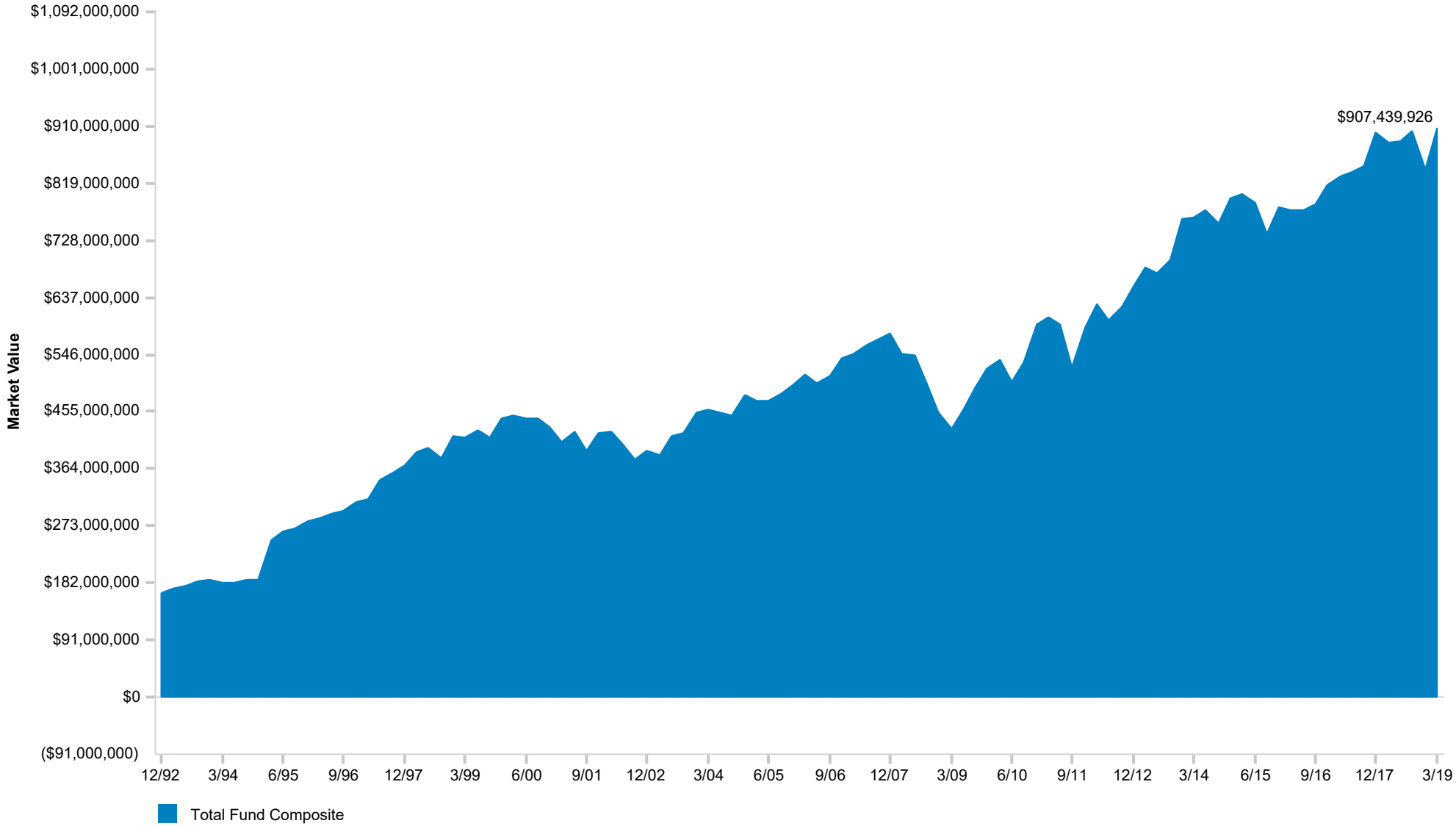
	Market Value 01/01/2019	Apprec./ Deprec.	Income	Net Flows	Management Fees	Market Value 03/31/2019
Inverness Balanced	443,918,874	35,112,502	3,083,753	-13,668,516	-386,309	465,362,860
Logan Equity	43,003,961	9,649,241	103,793	103,793	-64,505	52,756,995
Rhumbline LCV	47,990,540	5,700,293	-	-	-6,358	53,690,833
Wellington	90,679,920	16,108,001	-	-	-145,974	106,787,921
Rhumbline S&P MidCap 400	62,546,956	8,328,828	693,222	693,222	-8,391	71,569,006
Rhumbline Intl Equity	31,599,477	3,188,287	-	-	-4,085	34,787,764
Wells Capital Fixed	32,957,661	731,988	-	-	-28,861	33,689,649
JP Morgan RE	45,690,091	204,808	-	-441,247	-114,132	45,453,652
Intercontinental RE	42,600,982	608,913	232,070	131,351	-100,719	43,341,246
Total Fund Composite	**840,988,462**	**79,632,862**	**4,112,838**	**-13,181,397**	**-859,334**	**907,439,926**

AndCo Consulting Annual Fee $92,643, 1 Basis Point, 0.01%

Asset Allocation Attributes

	Domestic Equity		International Equity		Domestic Fixed Income		International Fixed Income		Real Estate		Cash Equivalent		Total Fund	
	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%
Inverness Balanced	215,360,375	46.28	-	-	242,217,719	52.05	-	-	-	-	7,784,766	1.67	465,362,860	51.28
Logan Equity	52,012,646	98.59	-	-	-	-	-	-	-	-	744,349	1.41	52,756,995	5.81
Rhumbline LCV	53,690,833	100.00	-	-	-	-	-	-	-	-	-	-	53,690,833	5.92
Wellington	106,787,921	100.00	-	-	-	-	-	-	-	-	-	-	106,787,921	11.77
Rhumbline S&P MidCap 400	71,445,994	99.83	-	-	-	-	-	-	-	-	123,012	0.17	71,569,006	7.89
Rhumbline Intl Equity	-	-	34,787,764	100.00	-	-	-	-	-	-	-	-	34,787,764	3.83
Wells Capital Fixed	-	-	-	-	-	-	33,689,602	100.00	-	-	47	0.00	33,689,649	3.71
JP Morgan RE	-	-	-	-	-	-	-	-	45,453,652	100.00	-	-	45,453,652	5.01
Intercontinental RE	-	-	-	-	-	-	-	-	43,341,246	100.00	-	-	43,341,246	4.78
Total Fund Composite	**499,297,769**	**55.02**	**34,787,764**	**3.83**	**242,217,719**	**26.69**	**33,689,602**	**3.71**	**88,794,898**	**9.79**	**8,652,174**	**0.95**	**907,439,926**	**100.00**

Schedule of Investable Assets



Schedule of Investable Assets

Periods Ending	Beginning Market Value $	Ending Market Value $	%Return
Inception	161,588,000	907,439,926	7.92

Asset Allocation & Performance

	Allocation		Performance(%)																
	Market Value $	%	QTD		FYTD		1 YR		3 YR		5 YR		Inception		Inception Date
Total Fund Composite (Gross)	**907,439,926**	**100.0**	**9.99**	**(7)**	**0.14**	**(54)**	**6.18**	**(5)**	**8.72**	**(33)**	**6.78**	**(13)**	**8.20**	**(22)**	**10/01/1992**
Total Policy Index			8.49	(51)	0.22	(50)	5.67	(10)	8.17	(60)	6.49	(26)	7.62	(58)	
Difference			1.50		-0.08		0.51		0.55		0.29		0.58		
All Public Plans-Total Fund Median			8.50		0.21		4.13		8.39		6.01		7.71		
Total Fund Composite (Net)	907,439,926	100.0	9.89		-0.09		5.73		8.30		6.36		7.92		10/01/1992
Total Policy Index			8.49		0.22		5.67		8.17		6.49		7.62		
Difference			1.40		-0.31		0.06		0.13		-0.13		0.30		
Balanced Fund															
Inverness Balanced (Gross)	465,362,860	51.3	8.68	(65)	1.53	(17)	7.35	(25)	6.53	(81)	5.86	(58)	5.74	(76)	01/01/2000
Inverness Balanced Policy			6.98	(96)	1.83	(14)	6.55	(34)	6.61	(80)	5.86	(58)	4.98	(97)	
Difference			1.70		-0.30		0.80		-0.08		0.00		0.76		
IM U.S. Balanced (SA+CF) Median			9.02		-0.87		4.80		8.66		6.34		7.10		
Inverness Balanced (Net)	465,362,860	51.3	8.59		1.36		6.99		6.17		5.51		5.40		01/01/2000
Inverness Balanced Policy			6.98		1.83		6.55		6.61		5.86		4.98		
Difference			1.61		-0.47		0.44		-0.44		-0.35		0.42		
Total Equity Composite (Gross)	**499,297,769**	**55.0**	**16.31**		**-3.06**		**7.42**		**13.70**		**9.60**		**11.00**		**10/01/1990**
Total Equity Policy			13.67		-3.38		6.24		12.67		9.26		10.28		
Difference			2.64		0.32		1.18		1.03		0.34		0.72		
Inverness Equity (Gross)	215,360,375	23.7	15.84	(18)	-2.99	(63)	9.03	(40)	13.30	(45)	10.53	(45)	6.49	(55)	01/01/2000
S&P 500 Index			13.65	(44)	-1.72	(39)	9.50	(35)	13.51	(39)	10.91	(38)	5.50	(88)	
Difference			2.19		-1.27		-0.47		-0.21		-0.38		0.99		
IM U.S. Large Cap Equity (SA+CF) Median			13.29		-2.25		7.99		12.91		10.32		6.69		
Rhumbline LCV (Net)	53,690,833	5.9	11.86	(42)	-1.22	(22)	5.61	(34)	N/A		N/A		7.06	(58)	01/01/2017
Russell 1000 Value Index			11.93	(40)	-1.19	(22)	5.67	(33)	10.45	(47)	7.72	(32)	7.11	(57)	
Difference			-0.07		-0.03		-0.06		N/A		N/A		-0.05		
IM U.S. Large Cap Value Equity (MF) Median			11.56		-2.83		4.23		10.28		7.12		7.41		
Logan Equity (Net)	52,756,995	5.8	22.52	(1)	-0.94	(31)	11.18	(64)	17.61	(27)	13.32	(28)	9.66	(48)	04/01/2007
Russell 1000 Growth Index			16.10	(55)	-2.34	(60)	12.75	(41)	16.53	(42)	13.50	(24)	10.39	(25)	
Difference			6.42		1.40		-1.57		1.08		-0.18		-0.73		
IM U.S. Large Cap Growth Equity (MF) Median			16.26		-1.85		12.03		16.08		12.46		9.59		

	Allocation		Performance(%)														
	Market Value $	%	QTD		FYTD		1 YR		3 YR		5 YR		Inception		Inception Date
Rhumbline S&P MidCap 400 (Net)	71,569,006	7.9	14.41	(57)	-5.30	(77)	2.55	(54)	11.13	(28)	8.22	(19)	10.58	(3)	07/01/1997
S&P MidCap 400 Index			14.49	(54)	-5.29	(77)	2.59	(54)	11.24	(27)	8.29	(19)	10.58	(3)	
Difference			-0.08		-0.01		-0.04		-0.11		-0.07		0.00		
IM U.S. Mid Cap Core Equity (MF) Median			14.58		-3.59		2.76		9.32		6.19		8.30		
Wellington (Net)	106,787,921	11.8	17.60	(3)	-4.00	(3)	6.31	(6)	16.00	(4)	9.71	(2)	11.39	(1)	07/01/1999
Russell 2000 Index			14.58	(14)	-8.56	(22)	2.05	(15)	12.92	(13)	7.05	(39)	7.76	(87)	
Difference			3.02		4.56		4.26		3.08		2.66		3.63		
IM U.S. Small Cap Core Equity (MF) Median			11.60		-10.65		-0.66		10.15		5.98		9.00		
International Equity															
Rhumbline Intl Equity (Net)	34,787,764	3.8	10.08	(60)	-3.71	(60)	-3.32	(20)	7.42	(47)	N/A		5.87	(59)	01/01/2016
MSCI EAFE Index			10.13	(59)	-3.64	(59)	-3.22	(20)	7.80	(42)	2.81	(45)	6.22	(55)	
Difference			-0.05		-0.07		-0.10		-0.38		N/A		-0.35		
IM International Equity (MF) Median			10.53		-2.60		-7.09		7.21		2.55		6.48		
Total Fixed Income Composite (Gross)	**275,907,321**	**30.4**	**3.36**		**4.61**		**3.96**		**1.73**		**2.48**		**5.49**		**07/01/1994**
Total Fixed Income Index			2.58		4.13		2.81		1.68		2.07		5.07		
Difference			0.78		0.48		1.15		0.05		0.41		0.42		
Inverness Fixed Income (Gross)	242,217,719	26.7	3.52	(2)	4.67	(2)	5.23	(3)	1.91	(66)	2.84	(17)	6.08	(13)	10/01/1990
Inverness Fixed Income Index			2.79	(15)	4.39	(4)	4.36	(50)	1.89	(67)	2.45	(48)	5.66	(71)	
Difference			0.73		0.28		0.87		0.02		0.39		0.42		
IM U.S. Intermediate Duration (SA+CF) Median			2.45		3.90		4.36		2.04		2.43		5.74		
Wells Capital Fixed Income (Net)	33,689,649	3.7	2.13	(86)	4.06	(72)	-5.06	(76)	0.27	(95)	-0.65	(79)	0.15	(80)	10/01/2011
FTSE Non-U.S. World Government Bond			1.52	(97)	2.85	(87)	-4.55	(73)	0.87	(92)	-0.06	(72)	-0.10	(85)	
Difference			0.61		1.21		-0.51		-0.60		-0.59		0.25		
IM International Fixed Income All (MF) Median			4.76		4.78		-0.44		4.12		2.04		2.58		
Total Real Estate															
JP Morgan RE (Net)	45,453,652	5.0	0.20	(100)	1.77	(100)	5.12	(100)	6.29	(100)	8.77	(93)	5.55	(51)	10/01/2007
NCREIF Property Index			1.80	(60)	3.20	(80)	6.83	(90)	7.07	(92)	9.13	(91)	6.32	(18)	
Difference			-1.60		-1.43		-1.71		-0.78		-0.36		-0.77		
IM U.S. Open End Private Real Estate (SA+CF) Median			1.93		3.68		8.23		8.56		10.54		5.56		
Intercontinental RE (Net)	43,341,246	4.8	1.74	(65)	3.15	(81)	8.35	(43)	N/A		N/A		8.35	(43)	04/01/2018
NCREIF Fund Index-Open End Diversified Core (EW)			1.69	(66)	3.33	(75)	7.74	(69)	8.17	(63)	10.34	(62)	7.74	(69)	
Difference			0.05		-0.18		0.61		N/A		N/A		0.61		
IM U.S. Open End Private Real Estate (SA+CF) Median			1.93		3.68		8.23		8.56		10.54		8.23		

Asset Allocation & Performance

	Allocation	Performance(%)									
	%	4 Quarters Ending Sep-2018	4 Quarters Ending Sep-2017	4 Quarters Ending Sep-2016	4 Quarters Ending Sep-2015	4 Quarters Ending Sep-2014	4 Quarters Ending Sep-2013	4 Quarters Ending Sep-2012	4 Quarters Ending Sep-2011	4 Quarters Ending Sep-2010	4 Quarters Ending Sep-2009
Total Fund Composite (Gross)	**100.0**	**9.81 (11)**	**11.09 (67)**	**9.94 (42)**	**0.88 (16)**	**10.42 (41)**	**13.25 (36)**	**19.91 (10)**	**-0.64 (78)**	**11.10 (27)**	**2.32 (43)**
Total Policy Index		8.59 (29)	10.41 (78)	10.53 (21)	0.85 (17)	9.50 (59)	12.02 (57)	18.03 (41)	2.49 (18)	9.76 (62)	1.10 (54)
Difference		1.22	0.68	-0.59	0.03	0.92	1.23	1.88	-3.13	1.34	1.22
All Public Plans-Total Fund Median		7.59	12.01	9.72	-0.78	9.83	12.45	17.45	0.50	10.23	1.33
Total Fund Composite (Net)	100.0	9.40	10.68	9.51	0.46	9.98	12.79	19.44	-1.05	10.67	1.89
Total Policy Index		8.59	10.41	10.53	0.85	9.50	12.02	18.03	2.49	9.76	1.10
Difference		0.81	0.27	-1.02	-0.39	0.48	0.77	1.41	-3.54	0.91	0.79
Balanced Fund											
Inverness Balanced (Gross)	51.3	8.11 (45)	6.74 (90)	7.90 (83)	1.78 (12)	9.62 (69)	8.91 (75)	17.14 (74)	0.13 (60)	8.78 (63)	6.03 (15)
Inverness Balanced Policy		6.65 (67)	7.45 (87)	8.74 (71)	1.25 (15)	9.46 (70)	7.38 (83)	15.13 (85)	2.89 (17)	8.97 (60)	3.06 (37)
Difference		1.46	-0.71	-0.84	0.53	0.16	1.53	2.01	-2.76	-0.19	2.97
IM U.S. Balanced (SA+CF) Median		7.80	11.73	9.87	-1.92	11.25	12.57	19.56	0.67	9.66	1.13
Inverness Balanced (Net)	51.3	7.74	6.38	7.54	1.45	9.24	8.55	16.75	-0.21	8.39	5.67
Inverness Balanced Policy		6.65	7.45	8.74	1.25	9.46	7.38	15.13	2.89	8.97	3.06
Difference		1.09	-1.07	-1.20	0.20	-0.22	1.17	1.62	-3.10	-0.58	2.61
Total Equity Composite (Gross)	**55.0**	**18.01**	**19.97**	**12.80**	**-0.77**	**15.62**	**23.72**	**33.10**	**-5.01**	**13.19**	**-6.81**
Total Equity Policy		15.62	18.97	14.63	-0.70	14.72	21.70	27.57	0.61	10.86	-6.65
Difference		2.39	1.00	-1.83	-0.07	0.90	2.02	5.53	-5.62	2.33	-0.16
Inverness Equity (Gross)	23.7	21.05 (24)	18.70 (53)	11.47 (68)	0.06 (45)	19.67 (39)	21.68 (44)	34.89 (5)	-5.79 (94)	8.33 (73)	-8.87 (80)
S&P 500 Index		17.91 (40)	18.61 (55)	15.43 (24)	-0.61 (57)	19.73 (37)	19.34 (70)	30.20 (38)	1.14 (46)	10.16 (50)	-6.91 (65)
Difference		3.14	0.09	-3.96	0.67	-0.06	2.34	4.69	-6.93	-1.83	-1.96
IM U.S. Large Cap Equity (SA+CF) Median		17.02	18.83	13.22	-0.32	18.79	21.12	29.11	0.78	10.13	-5.49
Rhumbline LCV (Net)	5.9	9.38 (61)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index		9.45 (60)	15.12 (73)	16.19 (18)	-4.42 (40)	18.89 (20)	22.30 (52)	30.92 (16)	-1.89 (29)	8.90 (28)	-10.62 (81)
Difference		-0.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Value Equity (MF) Median		10.41	16.79	12.58	-4.96	17.27	22.42	28.46	-3.43	6.88	-7.09
RBC (Net)	0.0	N/A	N/A	9.07 (91)	-1.61 (8)	18.61 (24)	20.35 (76)	33.15 (8)	-1.48 (26)	5.67 (73)	-7.12 (51)
Russell 1000 Value Index		9.45 (60)	15.12 (73)	16.19 (18)	-4.42 (40)	18.89 (20)	22.30 (52)	30.92 (16)	-1.89 (29)	8.90 (28)	-10.62 (81)
Difference		N/A	N/A	-7.12	2.81	-0.28	-1.95	2.23	0.41	-3.23	3.50
IM U.S. Large Cap Value Equity (MF) Median		10.41	16.79	12.58	-4.96	17.27	22.42	28.46	-3.43	6.88	-7.09

	Allocation	Performance(%)									
	%	4 Quarters Ending Sep-2018	4 Quarters Ending Sep-2017	4 Quarters Ending Sep-2016	4 Quarters Ending Sep-2015	4 Quarters Ending Sep-2014	4 Quarters Ending Sep-2013	4 Quarters Ending Sep-2012	4 Quarters Ending Sep-2011	4 Quarters Ending Sep-2010	4 Quarters Ending Sep-2009
Logan Equity (Net)	5.8	26.84 (34)	21.34 (36)	9.59 (72)	6.79 (6)	16.18 (62)	23.47 (16)	24.55 (77)	-2.98 (79)	24.87 (1)	-2.89 (54)
Russell 1000 Growth Index		26.30 (39)	21.94 (28)	13.76 (18)	3.17 (45)	19.15 (23)	19.27 (52)	29.19 (35)	3.78 (17)	12.65 (25)	-1.85 (42)
Difference		0.54	-0.60	-4.17	3.62	-2.97	4.20	-4.64	-6.76	12.22	-1.04
IM U.S. Large Cap Growth Equity (MF) Median		25.08	20.13	10.96	2.85	16.89	19.35	27.38	0.51	10.19	-2.52
Rhumbline S&P MidCap 400 (Net)	7.9	14.03 (25)	17.38 (28)	15.20 (20)	1.46 (24)	11.89 (56)	27.63 (47)	27.96 (32)	-1.90 (32)	17.66 (14)	-2.99 (34)
S&P MidCap 400 Index		14.21 (24)	17.52 (26)	15.33 (20)	1.40 (24)	11.82 (56)	27.68 (46)	28.54 (28)	-1.28 (29)	17.78 (13)	-3.11 (35)
Difference		-0.18	-0.14	-0.13	0.06	0.07	-0.05	-0.58	-0.62	-0.12	0.12
IM U.S. Mid Cap Core Equity (MF) Median		10.82	15.25	11.65	-1.26	12.56	27.41	26.17	-3.68	13.75	-4.46
Wellington (Net)	11.8	13.92 (36)	25.41 (11)	15.81 (34)	3.35 (23)	10.15 (6)	32.43 (19)	37.20 (7)	-2.24 (31)	23.81 (2)	-4.68 (32)
Russell 2000 Index		15.24 (27)	20.74 (34)	15.47 (36)	1.25 (43)	3.93 (64)	30.06 (44)	31.91 (27)	-3.53 (46)	13.35 (42)	-9.55 (54)
Difference		-1.32	4.67	0.34	2.10	6.22	2.37	5.29	1.29	10.46	4.87
IM U.S. Small Cap Core Equity (MF) Median		11.73	19.78	14.04	0.31	4.78	29.14	29.11	-4.03	12.67	-8.84
International Equity											
Rhumbline Intl Equity (Net)	3.8	2.69 (25)	19.18 (53)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI EAFE Index		3.25 (21)	19.65 (48)	7.06 (65)	-8.27 (47)	4.70 (44)	24.29 (19)	14.33 (66)	-8.94 (24)	3.71 (74)	3.80 (51)
Difference		-0.56	-0.47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM International Equity (MF) Median		0.08	19.36	9.33	-8.76	4.27	17.81	16.20	-12.09	8.59	3.97
Total Fixed Income Composite (Gross)	**30.4**	**-1.08**	**-1.12**	**6.97**	**1.71**	**3.45**	**-1.18**	**6.30**	**3.67**	**9.02**	**13.97**
Total Fixed Income Index		-1.42	-0.33	5.79	1.31	2.56	-1.84	4.82	4.27	8.25	10.74
Difference		0.34	-0.79	1.18	0.40	0.89	0.66	1.48	-0.60	0.77	3.23
Inverness Fixed Income (Gross)	26.7	-0.50 (61)	-0.89 (100)	6.33 (4)	3.03 (26)	3.36 (30)	-0.84 (83)	6.45 (27)	3.67 (47)	9.02 (25)	13.97 (15)
Inverness Fixed Income Index		-1.16 (98)	0.11 (93)	4.68 (17)	2.71 (48)	3.13 (38)	-1.23 (93)	5.03 (66)	4.27 (21)	8.25 (51)	10.74 (67)
Difference		0.66	-1.00	1.65	0.32	0.23	0.39	1.42	-0.60	0.77	3.23
IM U.S. Intermediate Duration (SA+CF) Median		-0.38	0.69	3.90	2.70	2.88	-0.27	5.56	3.60	8.25	11.53
Wells Capital Fixed Income (Net)	3.7	-5.24 (71)	-3.01 (100)	10.71 (73)	-8.35 (50)	3.67 (52)	-4.20 (53)	4.98 (89)	N/A	N/A	N/A
FTSE Non-U.S. World Government Bond		-1.57 (14)	-3.14 (100)	12.61 (59)	-7.01 (41)	-0.99 (78)	-5.63 (77)	3.45 (95)	4.13 (4)	4.46 (90)	16.04 (57)
Difference		-3.67	0.13	-1.90	-1.34	4.66	1.43	1.53	N/A	N/A	N/A
IM International Fixed Income All (MF) Median		-3.90	6.27	13.82	-8.41	4.03	-4.01	13.45	-0.39	13.85	16.85

	Allocation	Performance(%)									
	%	4 Quarters Ending Sep-2018	4 Quarters Ending Sep-2017	4 Quarters Ending Sep-2016	4 Quarters Ending Sep-2015	4 Quarters Ending Sep-2014	4 Quarters Ending Sep-2013	4 Quarters Ending Sep-2012	4 Quarters Ending Sep-2011	4 Quarters Ending Sep-2010	4 Quarters Ending Sep-2009
Total Real Estate											
JP Morgan RE (Net)	5.0	6.94 (100)	6.51 (77)	8.56 (100)	14.48 (66)	12.13 (79)	14.92 (33)	12.41 (53)	18.07 (44)	5.78 (59)	-31.00 (26)
NCREIF Property Index		7.16 (97)	6.89 (74)	9.22 (96)	13.48 (75)	11.26 (89)	11.00 (81)	11.00 (75)	16.10 (69)	5.84 (56)	-22.09 (5)
Difference		-0.22	-0.38	-0.66	1.00	0.87	3.92	1.41	1.97	-0.06	-8.91
IM U.S. Open End Private Real Estate (SA+CF) Median		9.04	8.29	11.32	15.45	12.78	13.18	12.87	16.96	6.43	-35.32
Intercontinental RE (Net)	4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)		8.82 (59)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (63)	18.03 (44)	6.14 (55)	-36.09 (54)
Difference		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Open End Private Real Estate (SA+CF) Median		9.04	8.29	11.32	15.45	12.78	13.18	12.87	16.96	6.43	-35.32

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Historical Rolling Performance

	QTR	1 YR	3 YR	5 YR	Inception
03/31/2019	9.99	6.18	8.72	6.78	8.20
12/31/2018	-8.96	-3.54	5.85	5.17	7.89
09/30/2018	3.65	9.81	10.28	8.36	8.35
06/30/2018	2.30	9.30	7.31	8.65	8.29
03/31/2018	-0.08	9.58	6.53	8.29	8.28
12/31/2017	3.64	13.91	7.46	9.70	8.36
09/30/2017	3.16	11.09	7.20	9.03	8.30
06/30/2017	2.57	11.30	5.77	9.48	8.25
03/31/2017	3.87	10.44	6.05	8.49	8.22
12/31/2016	1.07	7.93	5.40	9.33	8.14
09/30/2016	3.35	9.94	6.99	10.71	8.18
06/30/2016	1.79	1.59	7.58	7.68	8.12
03/31/2016	1.51	-0.10	7.16	7.27	8.13
12/31/2015	2.95	0.94	8.92	7.77	8.15
09/30/2015	-4.50	0.88	8.05	8.49	8.11
06/30/2015	0.10	4.65	11.64	11.23	8.42
03/31/2015	2.56	8.11	10.84	10.15	8.51
12/31/2014	2.89	7.49	12.77	10.55	8.49
09/30/2014	-0.93	10.42	14.46	10.61	8.45
06/30/2014	3.41	17.11	10.84	12.95	8.59
03/31/2014	1.97	13.93	9.55	14.14	8.53
12/31/2013	5.70	19.09	10.24	12.77	8.53
09/30/2013	5.07	13.25	10.50	8.93	8.35
06/30/2013	0.60	13.53	11.58	6.38	8.20
03/31/2013	6.59	10.58	9.61	6.40	8.27
12/31/2012	0.52	12.03	8.86	4.18	8.04
09/30/2012	5.33	19.91	9.80	4.04	8.11
06/30/2012	-2.02	2.43	11.40	3.58	7.94
03/31/2012	7.99	4.38	15.42	4.83	8.16
12/31/2011	7.59	0.42	10.99	3.77	7.83
09/30/2011	-10.02	-0.64	4.14	3.09	7.53
06/30/2011	-0.16	19.46	5.41	6.04	8.24
03/31/2011	3.90	14.09	5.72	5.83	8.36
12/31/2010	6.45	14.67	2.93	5.93	8.26
09/30/2010	8.18	11.10	0.76	4.92	8.00
06/30/2010	-4.65	12.99	-0.86	3.99	7.64
03/31/2010	4.43	29.12	2.06	5.34	8.05
12/31/2009	3.14	18.72	1.47	4.30	7.90
09/30/2009	10.02	2.32	1.79	4.76	7.82
06/30/2009	8.96	-13.22	-0.22	2.78	7.33

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

Historical Rolling Performance

	QTR	1 YR	3 YR	5 YR	Inception
03/31/2019	8.49	5.67	8.17	6.49	7.62
12/31/2018	-7.63	-3.05	5.95	5.13	7.36
09/30/2018	3.38	8.59	9.84	7.91	7.76
06/30/2018	1.99	8.14	7.23	8.11	7.70
03/31/2018	-0.45	8.57	6.44	7.81	7.70
12/31/2017	3.46	12.76	7.25	9.17	7.80
09/30/2017	2.95	10.41	7.16	8.58	7.73
06/30/2017	2.40	10.37	5.78	8.85	7.68
03/31/2017	3.39	10.33	6.07	8.06	7.66
12/31/2016	1.30	8.77	5.51	8.85	7.60
09/30/2016	2.91	10.53	6.87	10.04	7.62
06/30/2016	2.36	3.31	7.35	7.66	7.57
03/31/2016	1.93	0.67	6.74	7.35	7.55
12/31/2015	2.93	0.59	8.13	7.75	7.55
09/30/2015	-3.81	0.85	7.34	8.39	7.50
06/30/2015	-0.26	3.81	10.24	10.92	7.76
03/31/2015	1.86	7.46	9.88	9.86	7.87
12/31/2014	3.19	7.35	11.78	10.30	7.87
09/30/2014	-0.98	9.50	13.12	10.24	7.81
06/30/2014	3.25	15.35	10.49	12.74	7.95
03/31/2014	1.76	12.42	9.64	14.27	7.89
12/31/2013	5.25	17.06	10.39	12.24	7.89
09/30/2013	4.31	12.02	10.66	8.50	7.73
06/30/2013	0.62	11.89	11.93	6.40	7.61
03/31/2013	5.96	9.81	9.83	6.03	7.67
12/31/2012	0.72	11.13	9.12	3.92	7.46
09/30/2012	4.20	18.03	9.91	3.64	7.52
06/30/2012	-1.25	4.49	12.16	3.15	7.39
03/31/2012	7.24	6.76	16.42	3.99	7.56
12/31/2011	6.97	3.39	11.04	2.80	7.27
09/30/2011	-7.75	2.49	4.38	2.24	6.99
06/30/2011	0.89	19.92	5.25	4.82	7.55
03/31/2011	3.86	13.00	4.56	4.52	7.60
12/31/2010	6.03	13.07	1.79	4.16	7.49
09/30/2010	7.94	9.76	-0.38	3.25	7.25
06/30/2010	-4.93	12.59	-2.32	2.06	6.89
03/31/2010	3.92	30.80	0.26	3.50	7.30
12/31/2009	2.92	17.12	-0.61	2.44	7.17
09/30/2009	10.73	1.10	-0.23	2.90	7.10
06/30/2009	10.44	-13.64	-2.15	0.94	6.56

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.

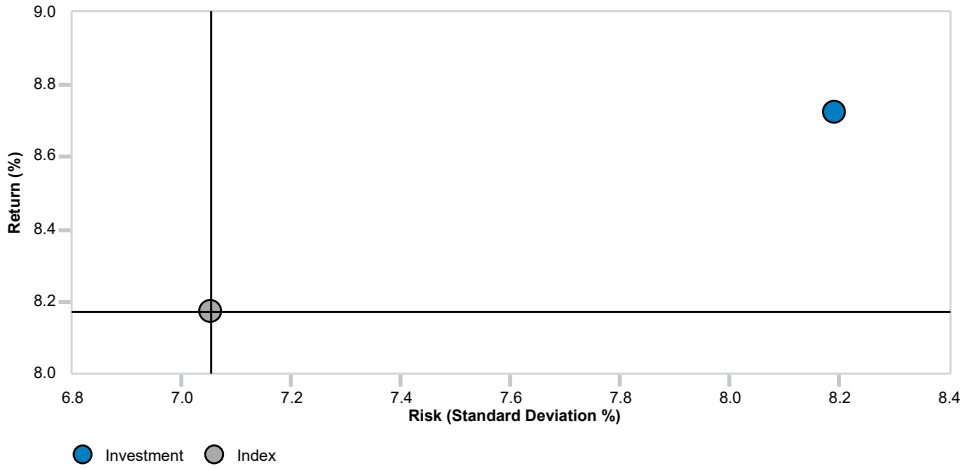
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.72	8.19	0.93	108.50	10	111.84	2
Index	8.17	7.06	0.99	100.00	10	100.00	2

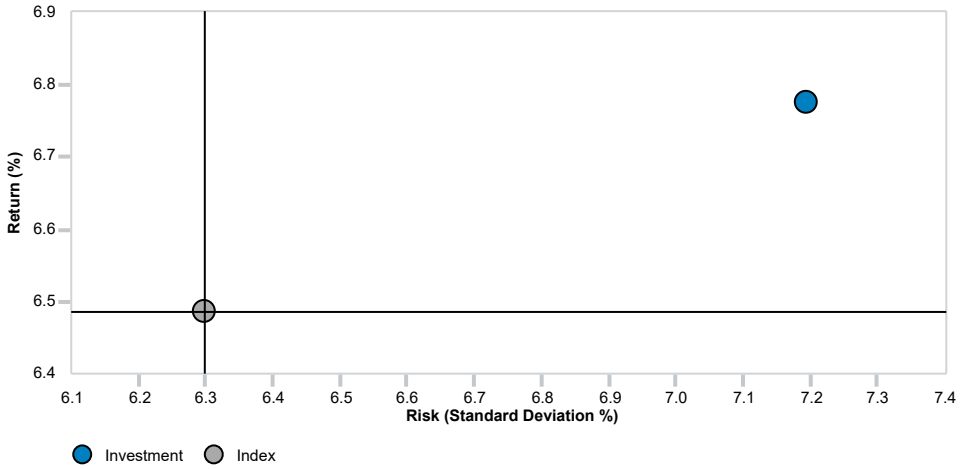
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.78	7.20	0.86	106.40	16	109.43	4
Index	6.49	6.30	0.92	100.00	15	100.00	5

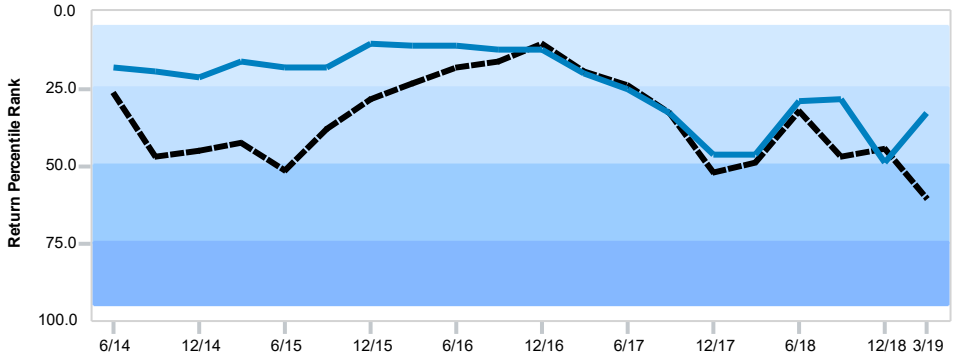
Risk and Return 3 Years



Risk and Return 5 Years

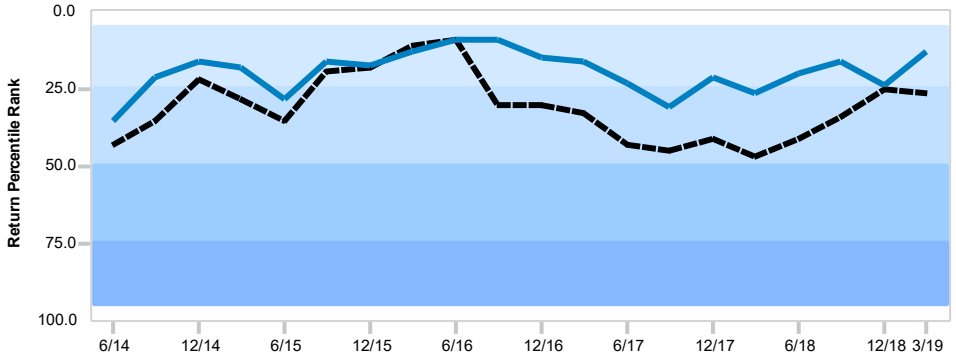


3 Year Rolling Percentile Rank All Public Plans-Total Fund



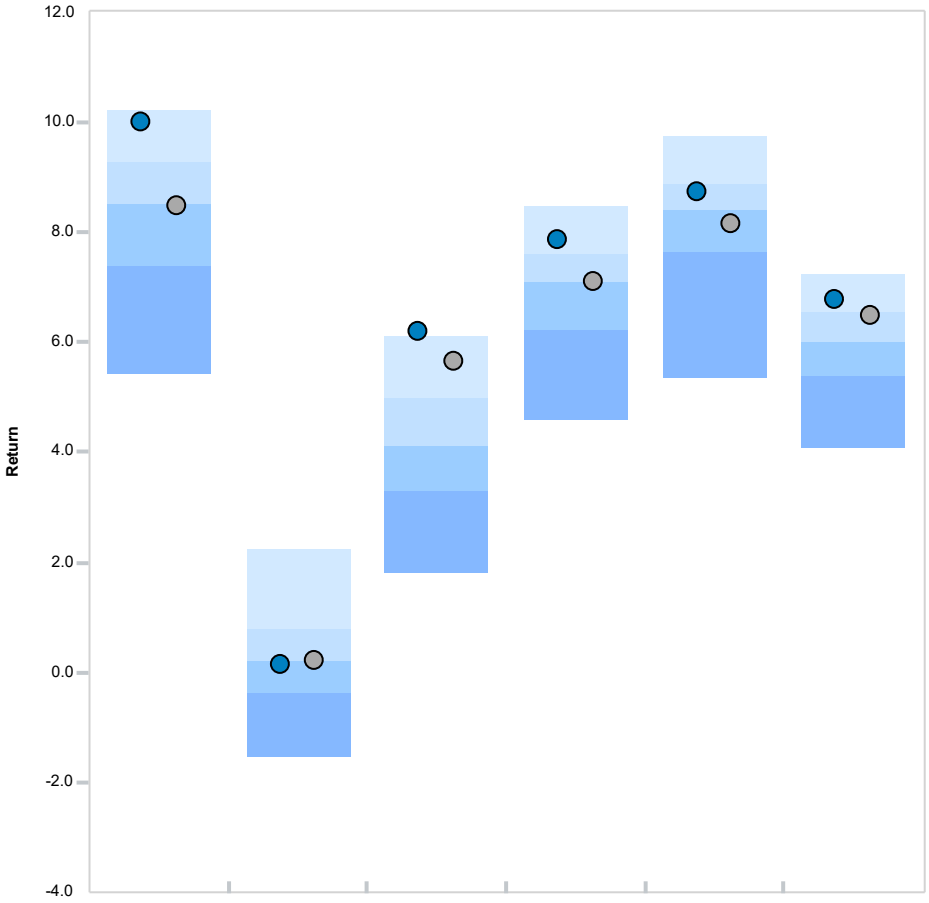
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)
Index	20	6 (30%)	11 (55%)	3 (15%)	0 (0%)

5 Year Rolling Percentile Rank All Public Plans-Total Fund



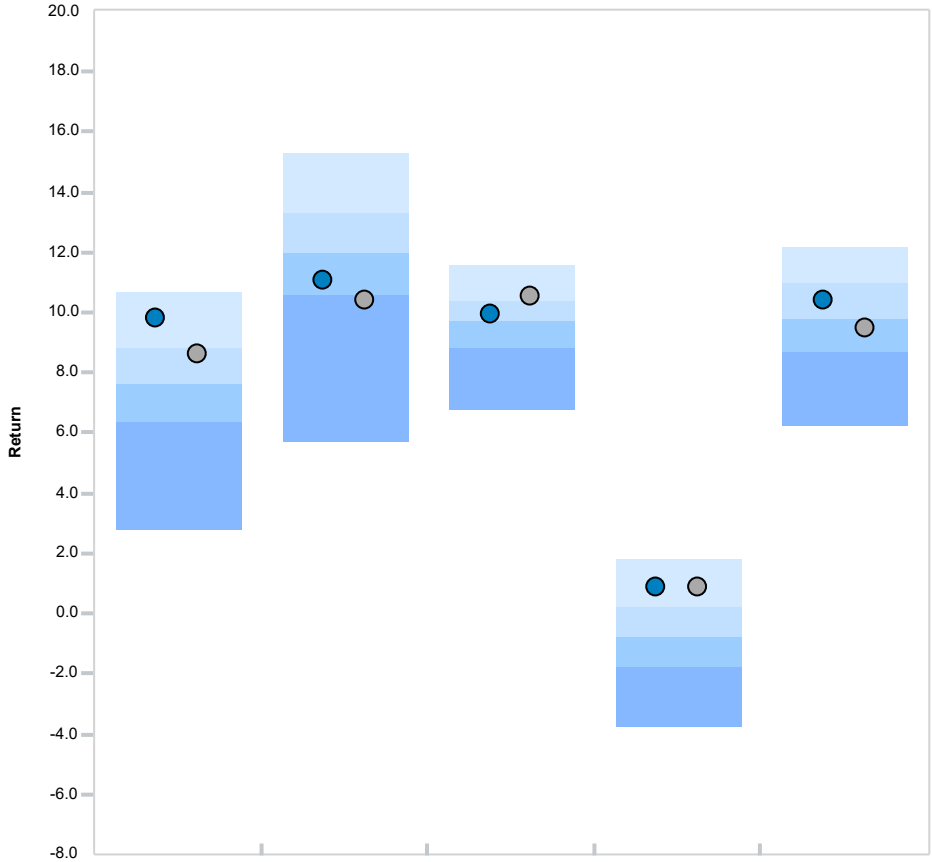
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)
Index	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	5 YR
Investment	9.99 (7)	0.14 (54)	6.18 (5)	7.87 (17)	8.72 (33)	6.78 (13)
Index	8.49 (51)	0.22 (50)	5.67 (10)	7.11 (51)	8.17 (60)	6.49 (26)
Median	8.50	0.21	4.13	7.12	8.39	6.01

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

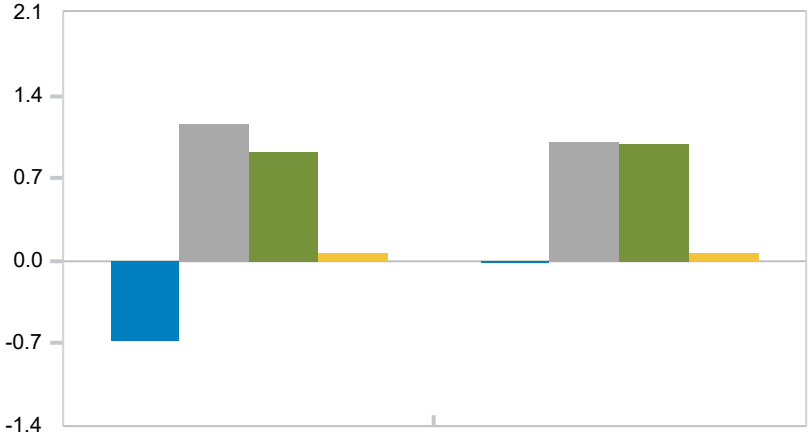


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
Investment	9.81 (11)	11.09 (67)	9.94 (42)	0.88 (16)	10.42 (41)
Index	8.59 (29)	10.41 (78)	10.53 (21)	0.85 (17)	9.50 (59)
Median	7.59	12.01	9.72	-0.78	9.83

Comparative Performance

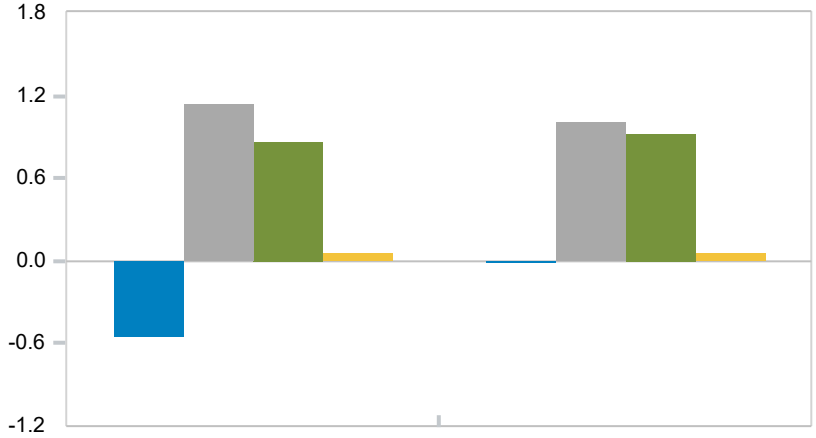
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-8.96 (81)	3.65 (11)	2.30 (8)	-0.08 (39)	3.64 (51)	3.16 (71)
Index	-7.63 (46)	3.38 (16)	1.99 (17)	-0.45 (64)	3.46 (61)	2.95 (84)
Median	-7.75	2.70	1.19	-0.27	3.64	3.46

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



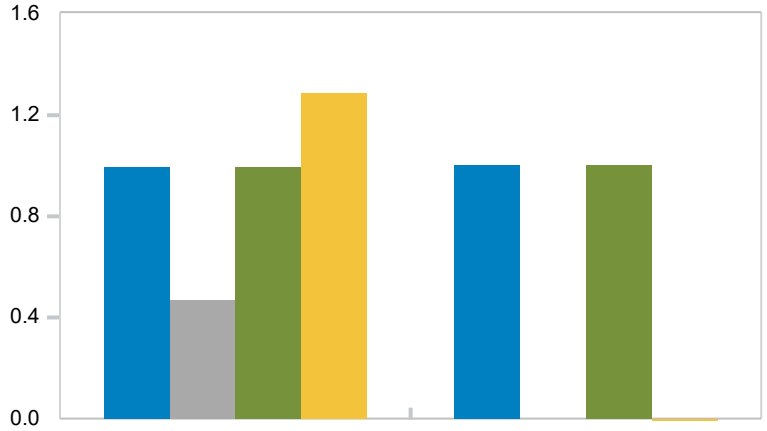
	Total Fund Composite	Total Policy Index
Alpha	-0.68	0.00
Beta	1.16	1.00
Sharpe Ratio	0.93	0.99
Treynor Ratio	0.07	0.07

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



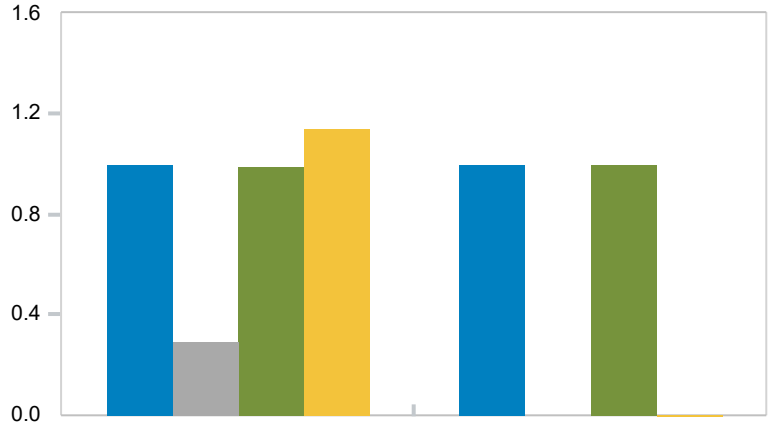
	Total Fund Composite	Total Policy Index
Alpha	-0.55	0.00
Beta	1.14	1.00
Sharpe Ratio	0.86	0.92
Treynor Ratio	0.05	0.06

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Total Fund Composite	Total Policy Index
Actual Correlation	1.00	1.00
Information Ratio	0.47	N/A
R-Squared	0.99	1.00
Tracking Error	1.29	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Total Fund Composite	Total Policy Index
Actual Correlation	0.99	1.00
Information Ratio	0.30	N/A
R-Squared	0.99	1.00
Tracking Error	1.14	0.00

Benchmark: Total Policy Index

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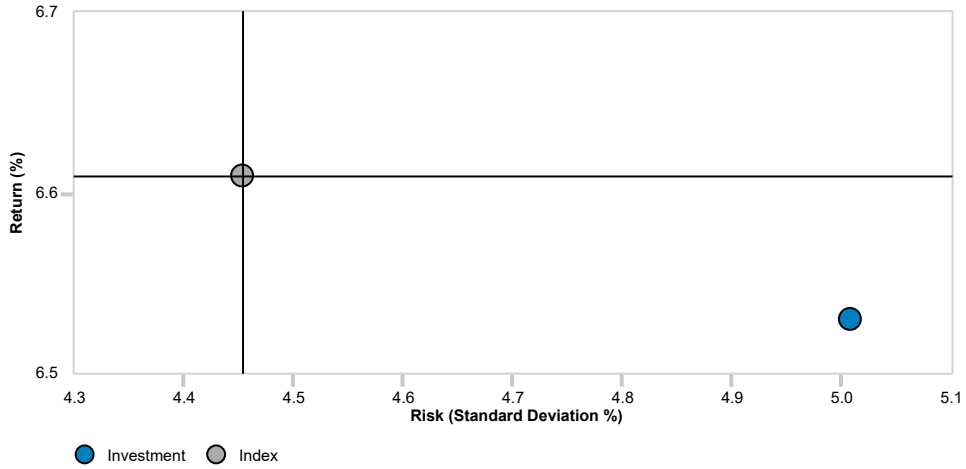
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.53	5.01	1.06	98.85	9	98.07	3
Index	6.61	4.45	1.20	100.00	10	100.00	2

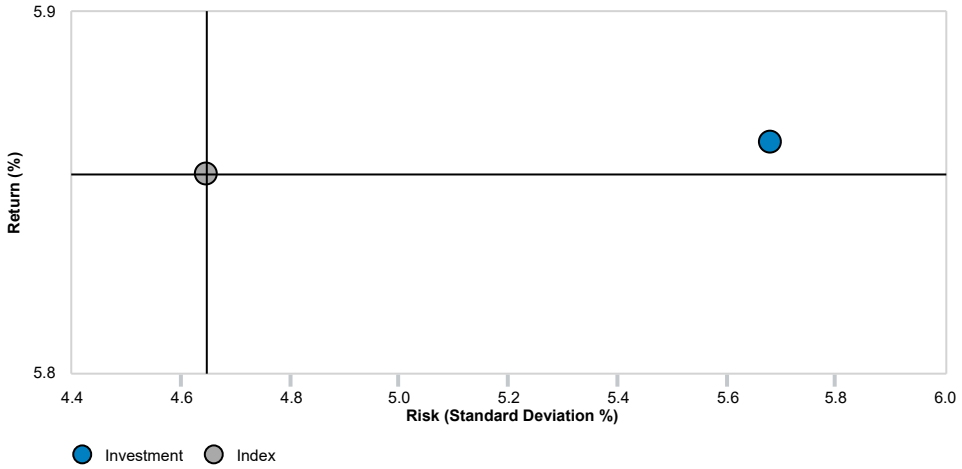
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.86	5.68	0.91	104.92	16	118.43	4
Index	5.86	4.65	1.10	100.00	16	100.00	4

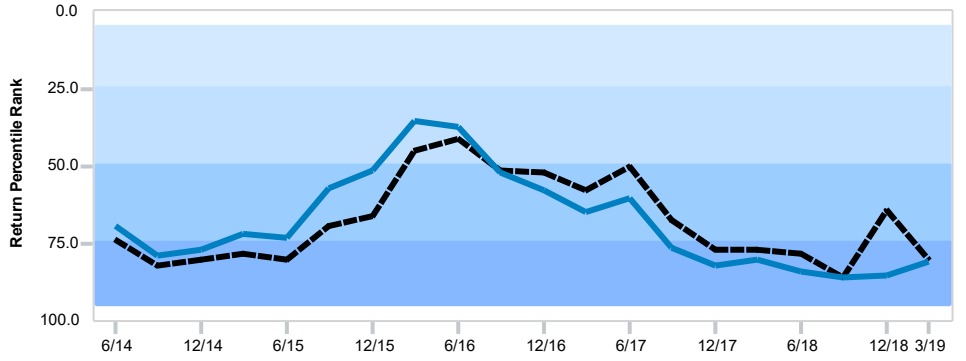
Risk and Return 3 Years



Risk and Return 5 Years

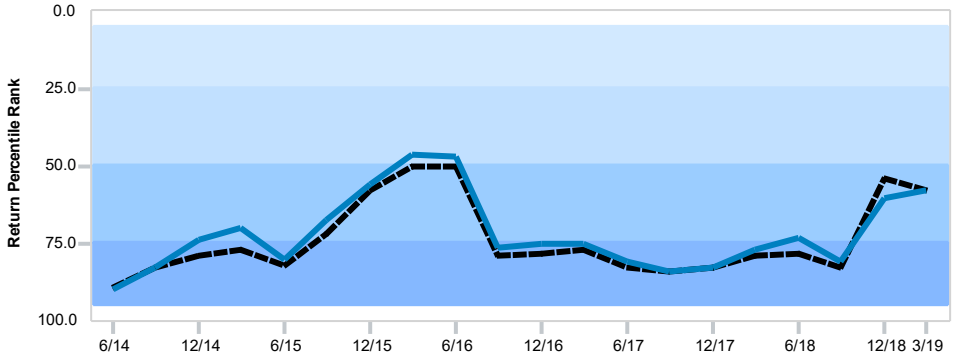


3 Year Rolling Percentile Rank IM U.S. Balanced (SA+CF)



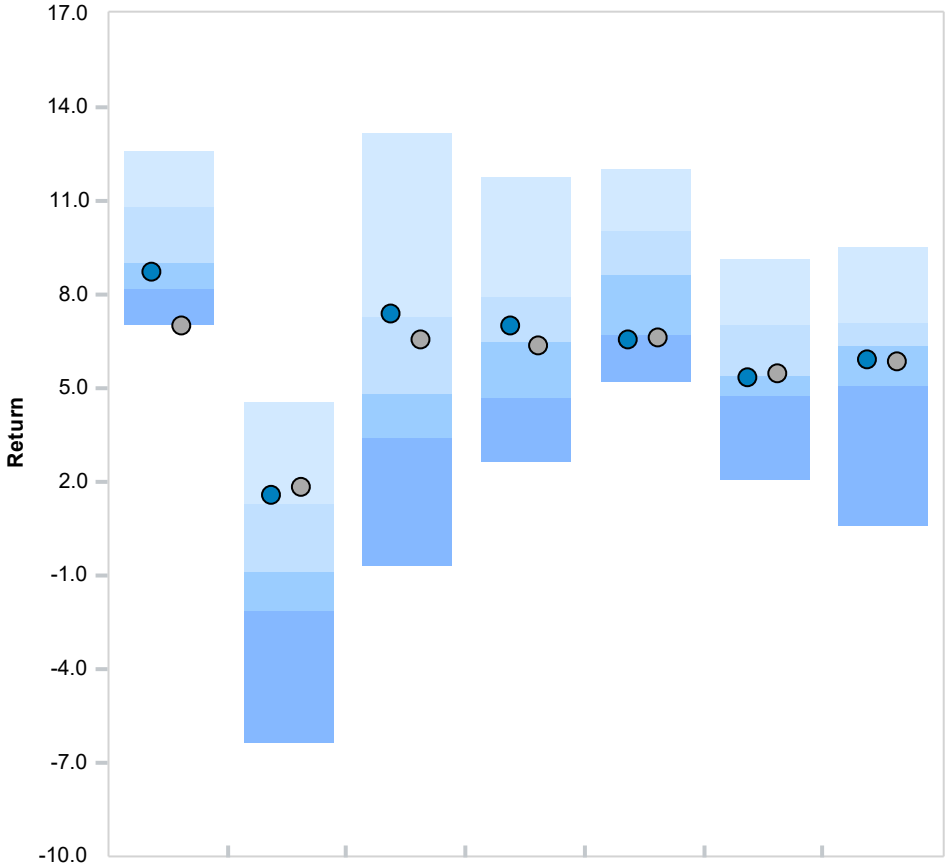
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	2 (10%)	9 (45%)	9 (45%)
Index	20	0 (0%)	3 (15%)	8 (40%)	9 (45%)

5 Year Rolling Percentile Rank IM U.S. Balanced (SA+CF)



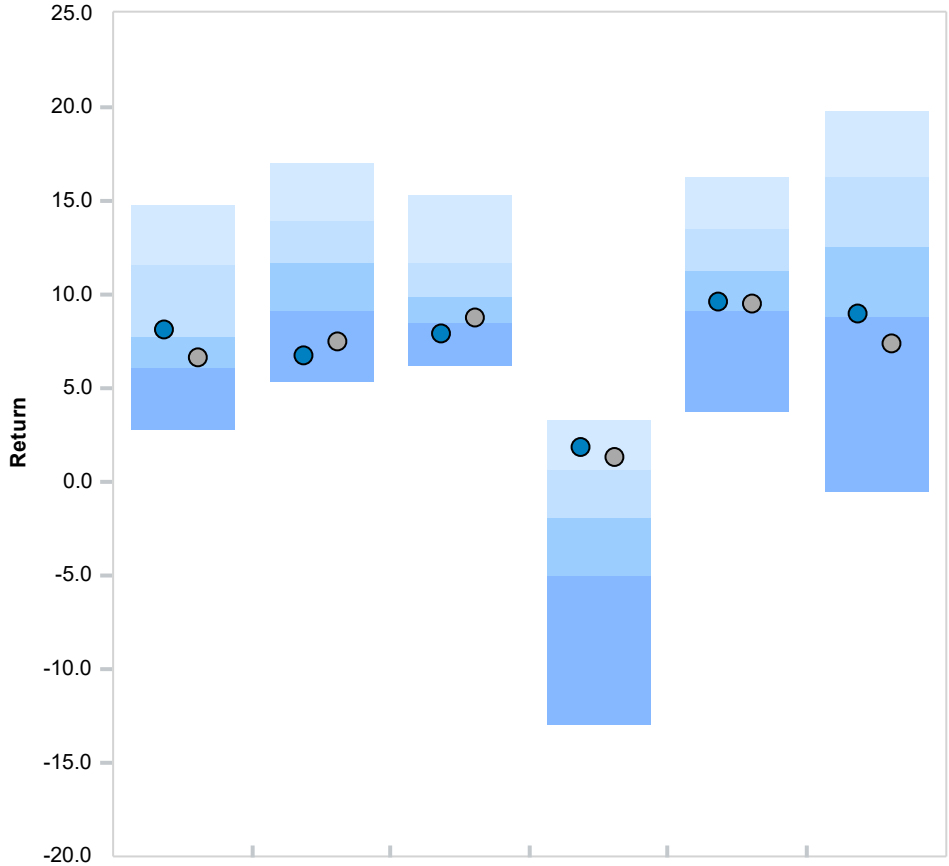
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	2 (10%)	9 (45%)	9 (45%)
Index	20	0 (0%)	2 (10%)	4 (20%)	14 (70%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	8.68 (65)	1.53 (17)	7.35 (25)	6.95 (41)	6.53 (81)	5.29 (55)	5.86 (58)
Index	6.98 (96)	1.83 (14)	6.55 (34)	6.37 (52)	6.61 (80)	5.42 (50)	5.86 (58)
Median	9.02	-0.87	4.80	6.47	8.66	5.40	6.34

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

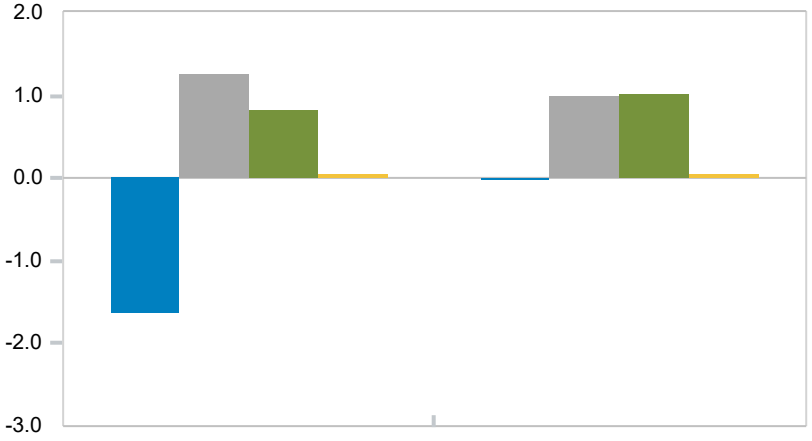


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	8.11 (45)	6.74 (90)	7.90 (83)	1.78 (12)	9.62 (69)	8.91 (75)
Index	6.65 (67)	7.45 (87)	8.74 (71)	1.25 (15)	9.46 (70)	7.38 (83)
Median	7.80	11.73	9.87	-1.92	11.25	12.57

Comparative Performance

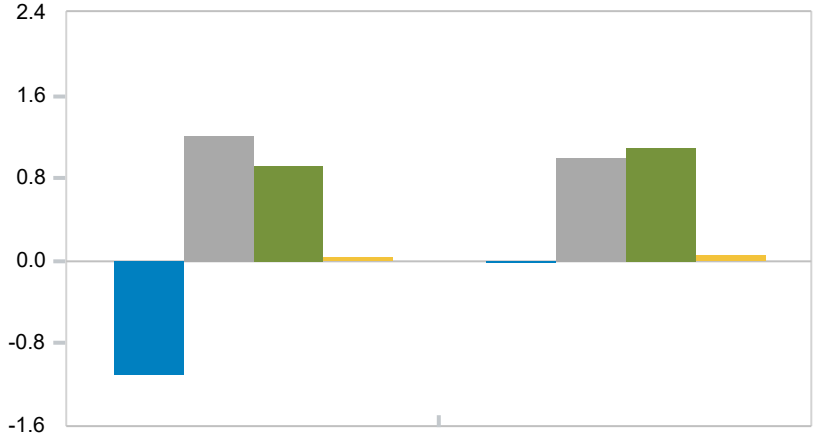
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-6.58 (23)	3.86 (44)	1.81 (49)	-0.53 (27)	2.78 (83)	2.30 (78)
Index	-4.81 (11)	3.24 (66)	1.36 (65)	-0.85 (44)	2.79 (83)	2.21 (83)
Median	-8.62	3.74	1.72	-0.98	3.77	3.16

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



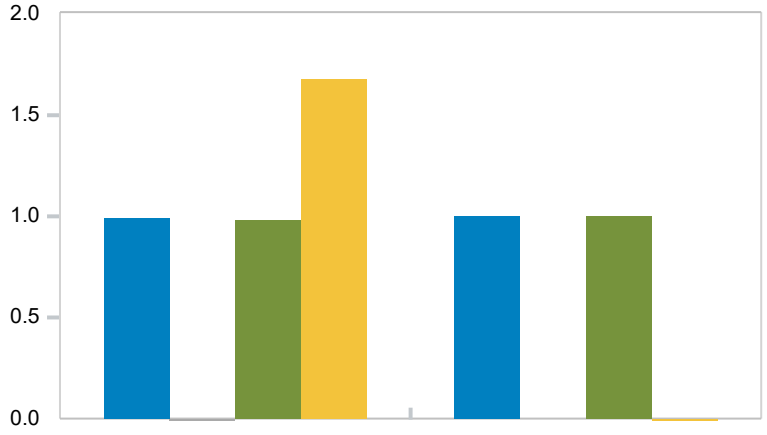
	Inverness Balanced	Inverness Balanced Policy
Alpha	-1.62	0.00
Beta	1.25	1.00
Sharpe Ratio	0.81	1.02
Treynor Ratio	0.04	0.05

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



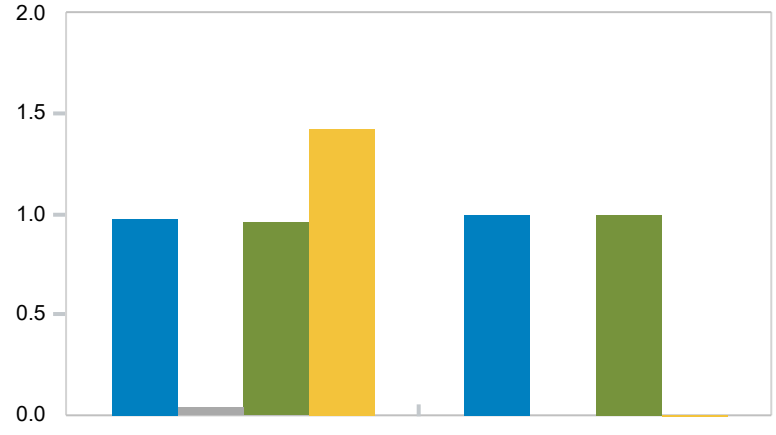
	Inverness Balanced	Inverness Balanced Policy
Alpha	-1.10	0.00
Beta	1.20	1.00
Sharpe Ratio	0.91	1.10
Treynor Ratio	0.04	0.05

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Inverness Balanced	Inverness Balanced Policy
Actual Correlation	0.99	1.00
Information Ratio	0.00	N/A
R-Squared	0.98	1.00
Tracking Error	1.67	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Inverness Balanced	Inverness Balanced Policy
Actual Correlation	0.98	1.00
Information Ratio	0.04	N/A
R-Squared	0.96	1.00
Tracking Error	1.42	0.00

Benchmark: Inverness Balanced Policy

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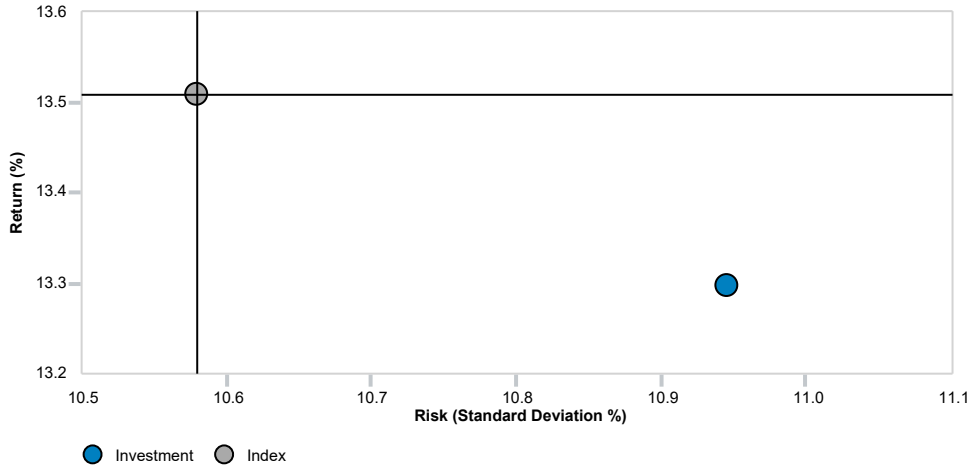
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.30	10.95	1.09	97.23	10	94.46	2
Index	13.51	10.58	1.15	100.00	10	100.00	2

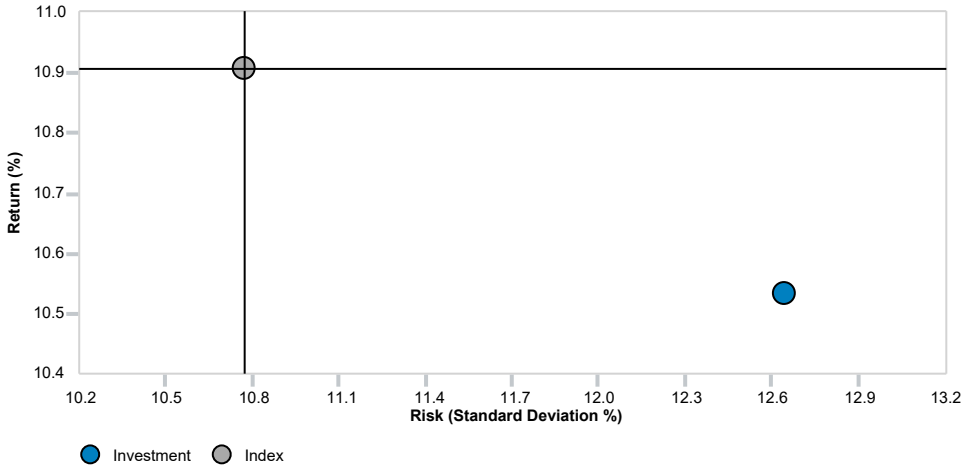
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.53	12.65	0.81	104.26	16	118.42	4
Index	10.91	10.77	0.96	100.00	17	100.00	3

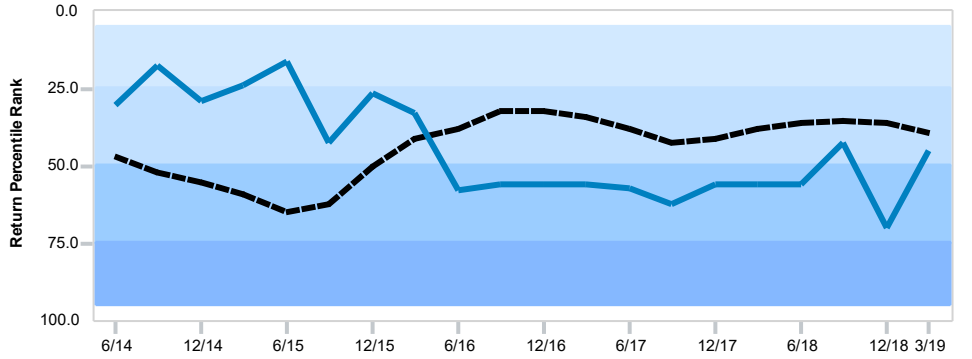
Risk and Return 3 Years



Risk and Return 5 Years

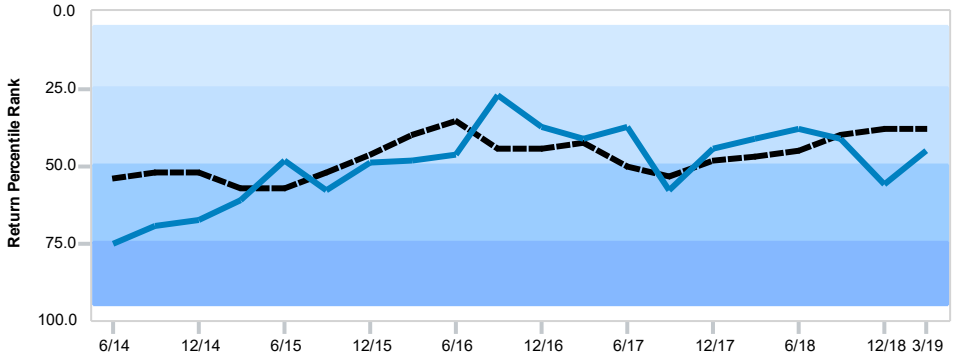


3 Year Rolling Percentile Rank IM U.S. Large Cap Equity (SA+CF)



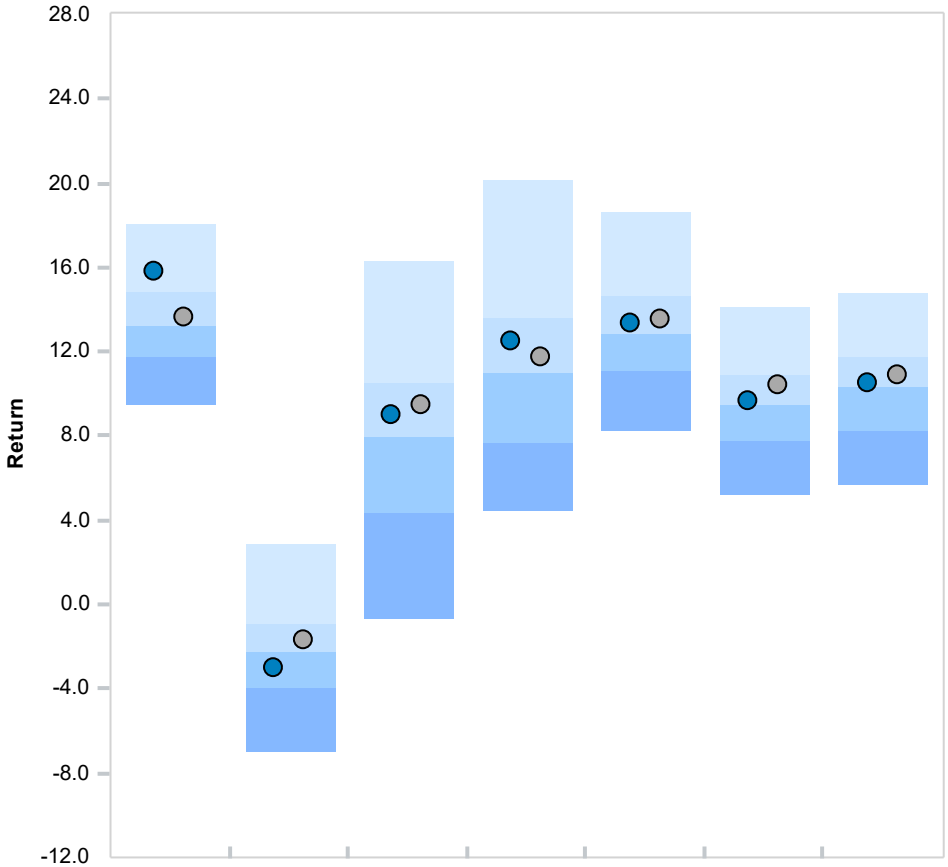
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	7 (35%)	10 (50%)	0 (0%)
Index	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Large Cap Equity (SA+CF)



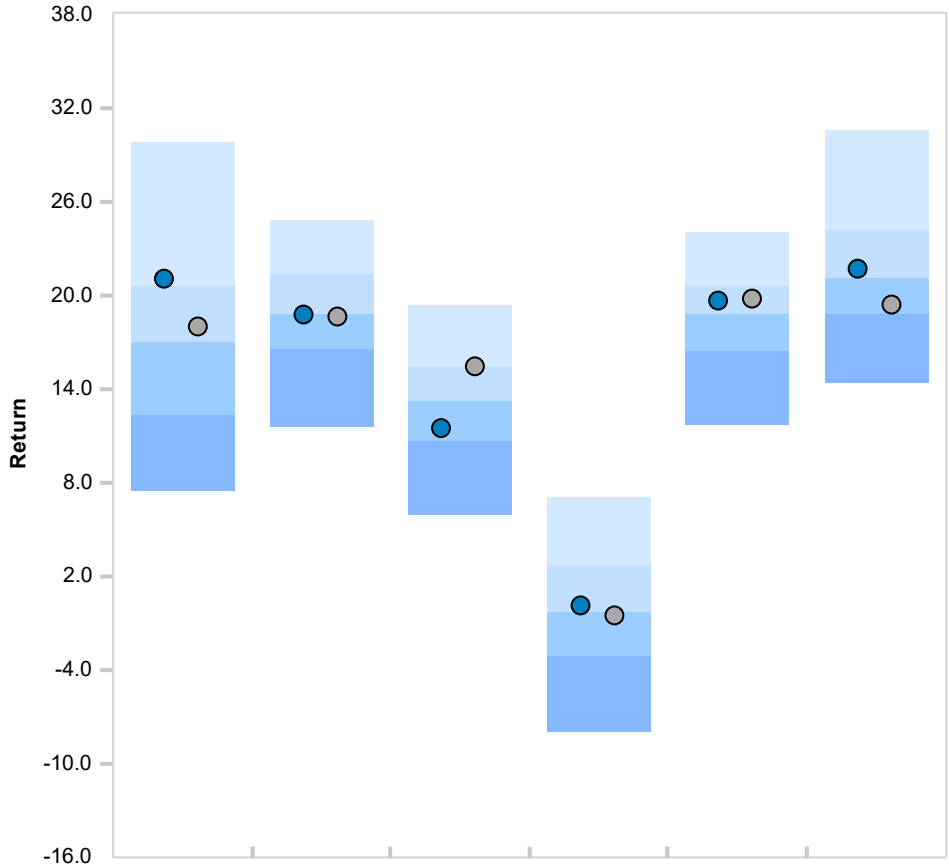
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)
Index	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	15.84 (18)	-2.99 (63)	9.03 (40)	12.48 (32)	13.30 (45)	9.65 (48)	10.53 (45)
Index	13.65 (44)	-1.72 (39)	9.50 (35)	11.72 (40)	13.51 (39)	10.46 (33)	10.91 (38)
Median	13.29	-2.25	7.99	10.97	12.91	9.48	10.32

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

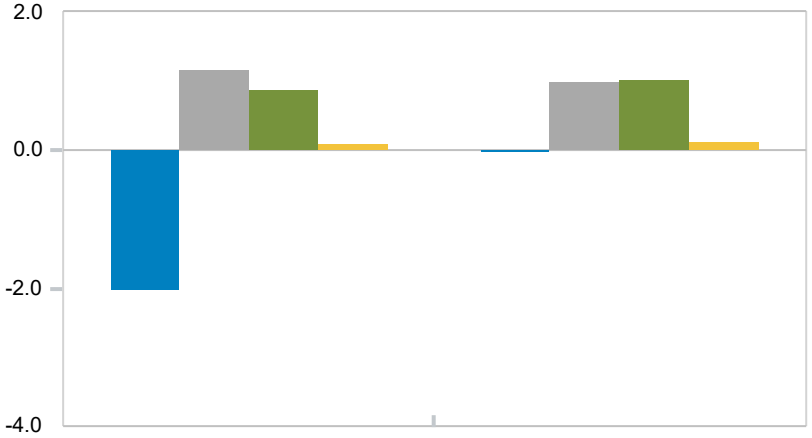


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	21.05 (24)	18.70 (53)	11.47 (68)	0.06 (45)	19.67 (39)	21.68 (44)
Index	17.91 (40)	18.61 (55)	15.43 (24)	-0.61 (57)	19.73 (37)	19.34 (70)
Median	17.02	18.83	13.22	-0.32	18.79	21.12

Comparative Performance

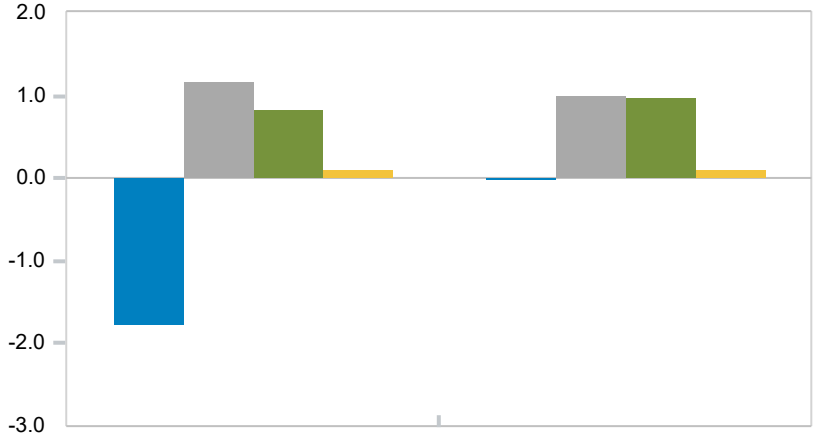
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-16.26 (84)	7.88 (29)	4.17 (26)	0.46 (32)	7.21 (32)	4.64 (48)
Index	-13.52 (41)	7.71 (34)	3.43 (41)	-0.76 (55)	6.64 (50)	4.48 (57)
Median	-13.94	7.11	2.99	-0.69	6.64	4.58

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



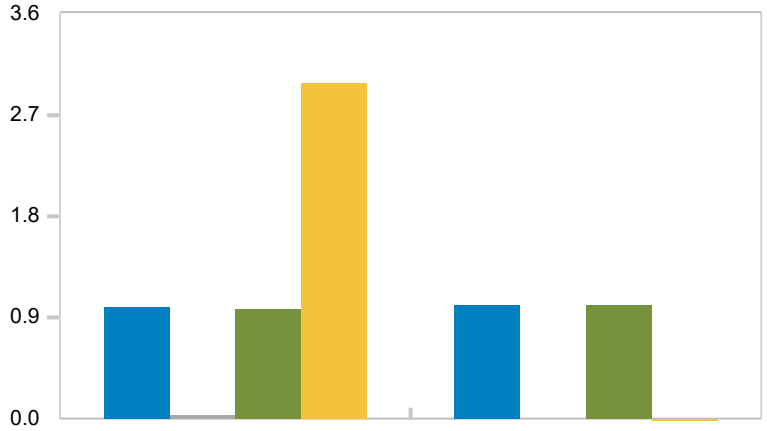
	Inverness Equity	S&P 500 Index
Alpha	-2.01	0.00
Beta	1.16	1.00
Sharpe Ratio	0.88	1.02
Treynor Ratio	0.11	0.12

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



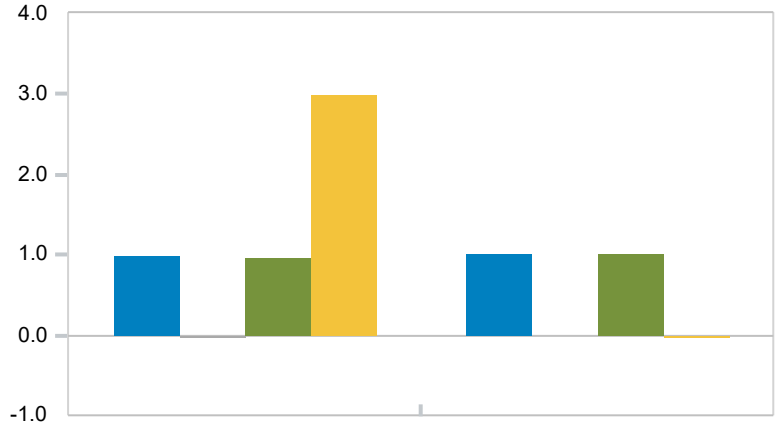
	Inverness Equity	S&P 500 Index
Alpha	-1.77	0.00
Beta	1.15	1.00
Sharpe Ratio	0.81	0.96
Treynor Ratio	0.09	0.10

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Inverness Equity	S&P 500 Index
Actual Correlation	0.99	1.00
Information Ratio	0.03	N/A
R-Squared	0.97	1.00
Tracking Error	2.98	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Inverness Equity	S&P 500 Index
Actual Correlation	0.98	1.00
Information Ratio	-0.04	N/A
R-Squared	0.96	1.00
Tracking Error	2.99	0.00

Benchmark: S&P 500 Index

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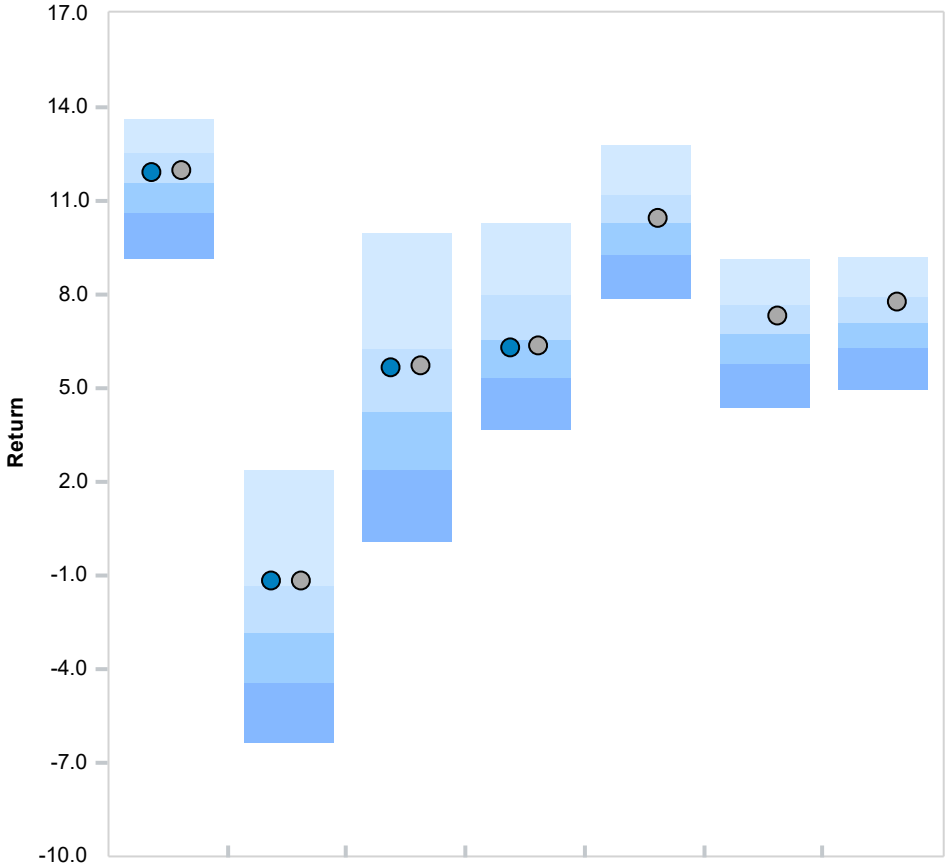
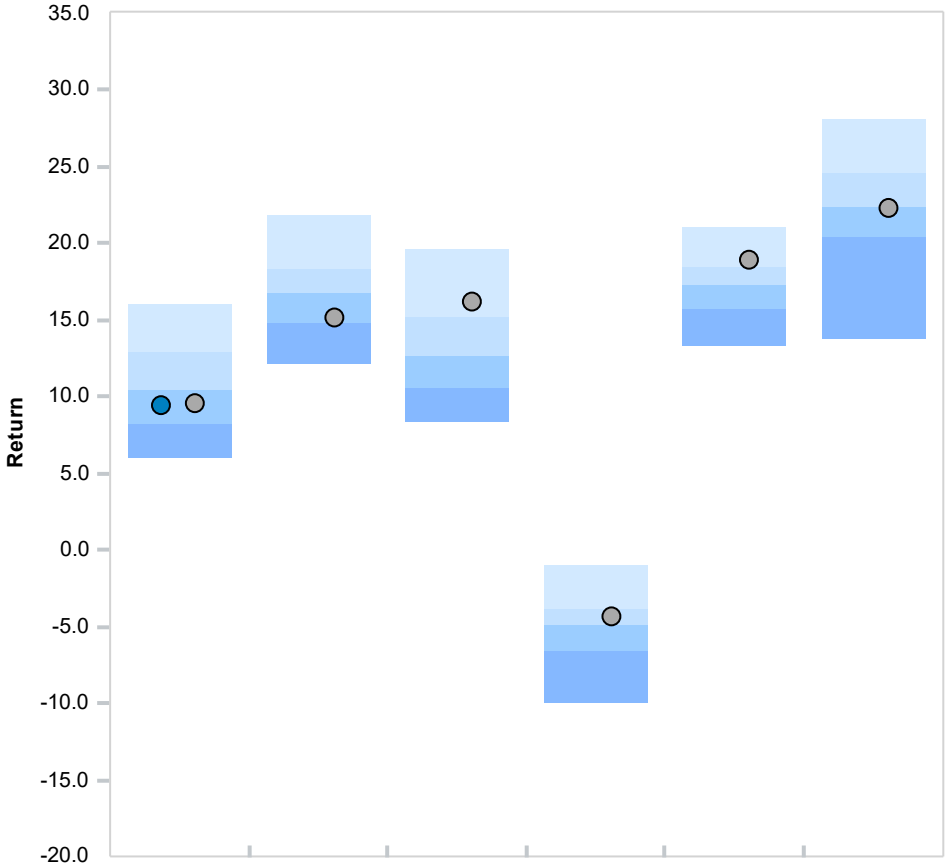
Peer Group Analysis - IM U.S. Large Cap Value Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	11.86 (42)	-1.22 (22)	5.61 (34)	6.25 (56)	N/A	N/A	N/A
Index	11.93 (40)	-1.19 (22)	5.67 (33)	6.31 (54)	10.45 (47)	7.32 (36)	7.72 (32)
Median	11.56	-2.83	4.23	6.51	10.28	6.73	7.12

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



	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	9.38 (61)	N/A	N/A	N/A	N/A	N/A
Index	9.45 (60)	15.12 (73)	16.19 (18)	-4.42 (40)	18.89 (20)	22.30 (52)
Median	10.41	16.79	12.58	-4.96	17.27	22.42

Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-11.69 (29)	5.69 (57)	1.15 (59)	-2.84 (58)	5.30 (64)	3.10 (72)
Index	-11.72 (29)	5.70 (57)	1.18 (58)	-2.83 (58)	5.33 (63)	3.11 (71)
Median	-12.94	5.93	1.37	-2.59	5.77	3.75

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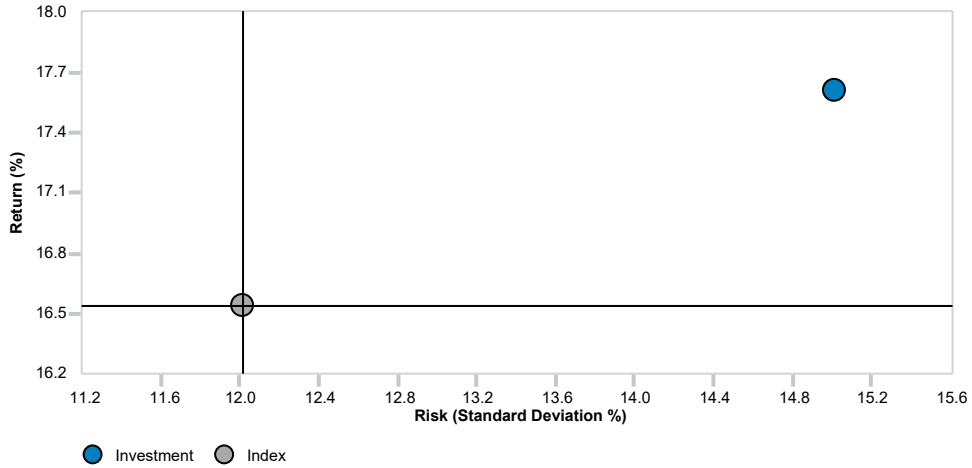
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	17.61	15.01	1.09	110.17	9	113.42	3
Index	16.53	12.02	1.24	100.00	11	100.00	1

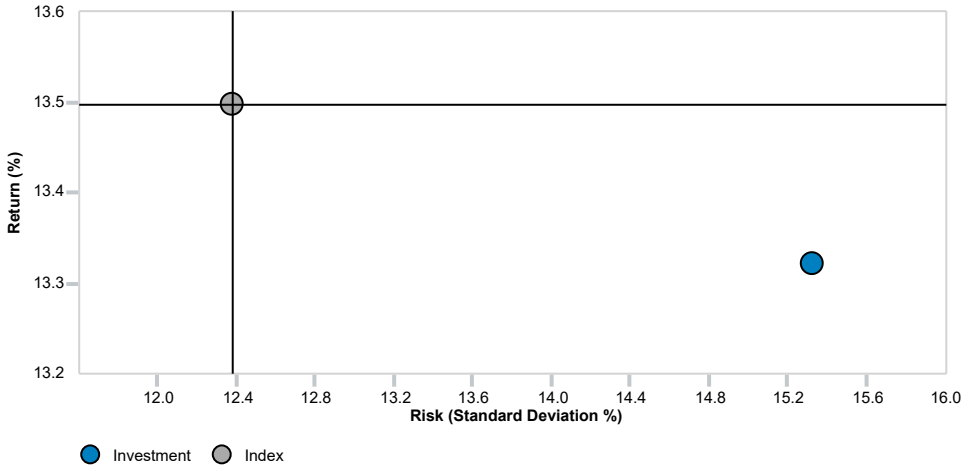
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.32	15.33	0.86	105.10	15	115.80	5
Index	13.50	12.38	1.05	100.00	18	100.00	2

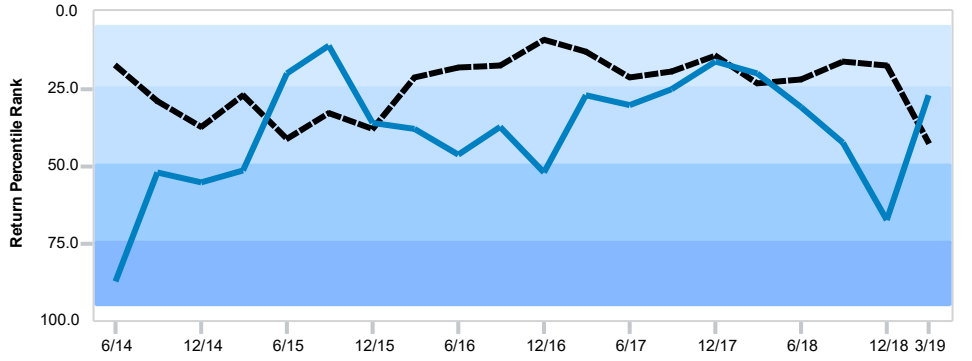
Risk and Return 3 Years



Risk and Return 5 Years

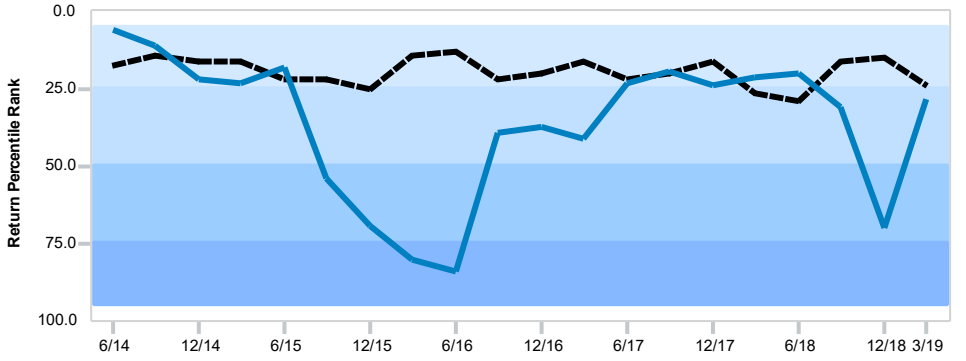


3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (MF)



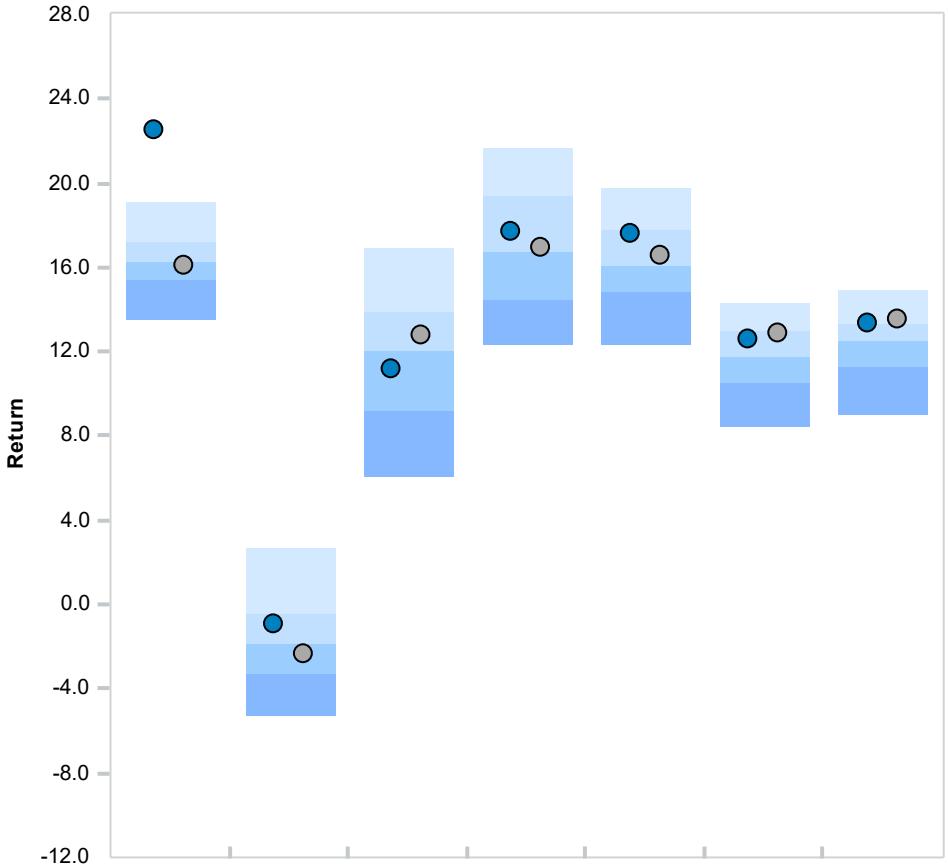
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	9 (45%)	5 (25%)	1 (5%)
Index	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (MF)



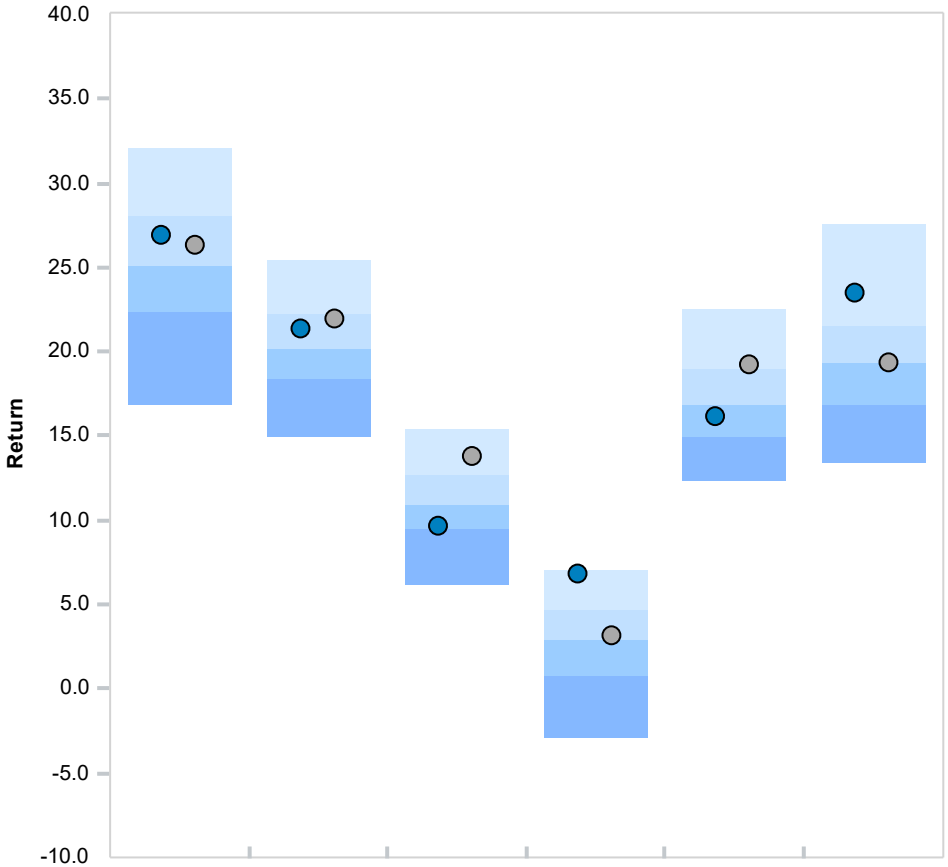
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	5 (25%)	3 (15%)	2 (10%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	22.52 (1)	-0.94 (31)	11.18 (64)	17.72 (40)	17.61 (27)	12.61 (33)	13.32 (28)
Index	16.10 (55)	-2.34 (60)	12.75 (41)	16.92 (48)	16.53 (42)	12.86 (28)	13.50 (24)
Median	16.26	-1.85	12.03	16.72	16.08	11.75	12.46

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

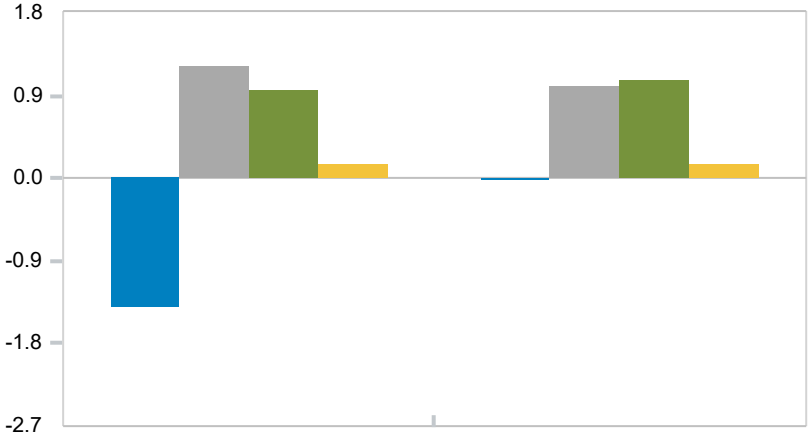


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	26.84 (34)	21.34 (36)	9.59 (72)	6.79 (6)	16.18 (62)	23.47 (16)
Index	26.30 (39)	21.94 (28)	13.76 (18)	3.17 (45)	19.15 (23)	19.27 (52)
Median	25.08	20.13	10.96	2.85	16.89	19.35

Comparative Performance

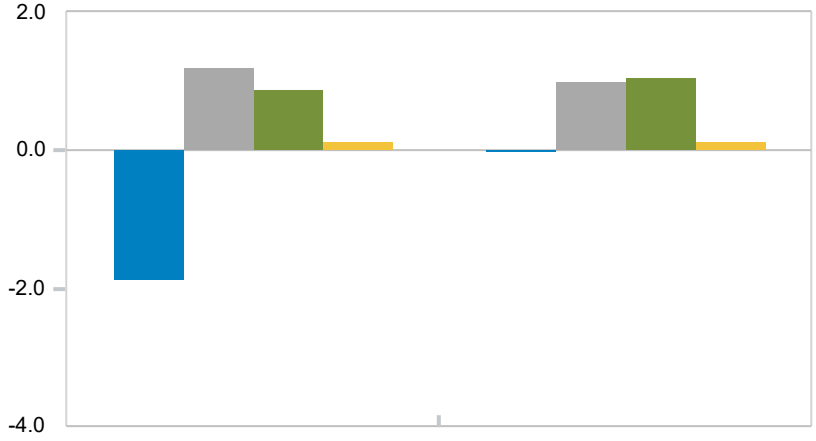
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-19.14 (99)	6.21 (86)	5.67 (55)	4.96 (19)	7.68 (14)	4.85 (70)
Index	-15.89 (53)	9.17 (11)	5.76 (51)	1.42 (78)	7.86 (10)	5.90 (35)
Median	-15.76	7.78	5.77	2.82	6.66	5.52

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



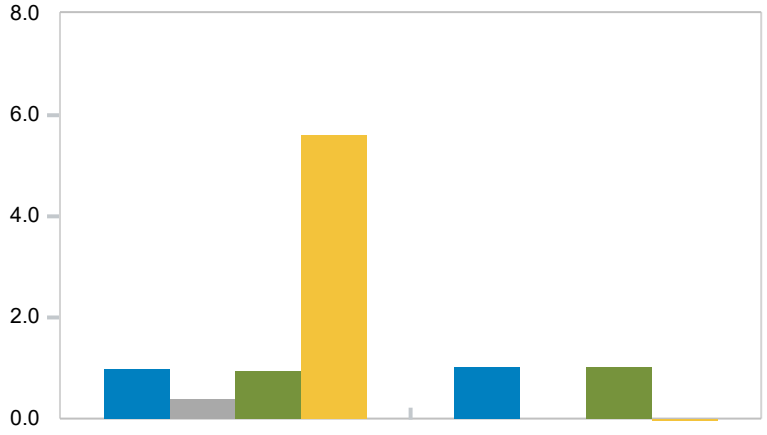
	Logan Equity	Russell 1000 Growth Index
Alpha	-1.39	0.00
Beta	1.22	1.00
Sharpe Ratio	0.97	1.06
Treynor Ratio	0.15	0.16

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



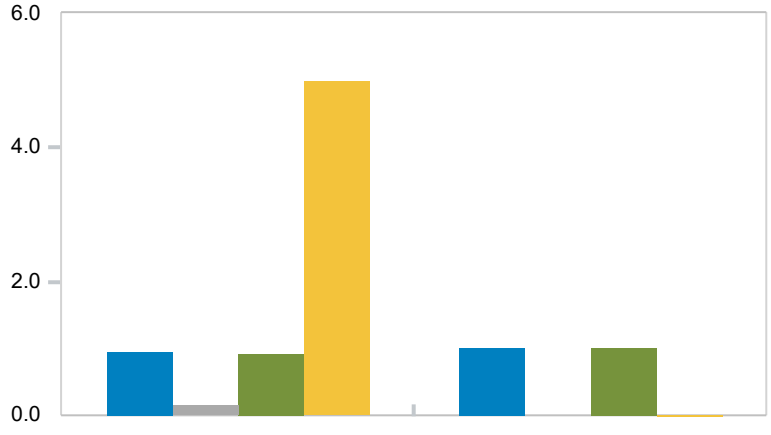
	Logan Equity	Russell 1000 Growth Index
Alpha	-1.87	0.00
Beta	1.19	1.00
Sharpe Ratio	0.89	1.05
Treynor Ratio	0.11	0.13

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Logan Equity	Russell 1000 Growth Index
Actual Correlation	0.97	1.00
Information Ratio	0.39	N/A
R-Squared	0.94	1.00
Tracking Error	5.60	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Logan Equity	Russell 1000 Growth Index
Actual Correlation	0.96	1.00
Information Ratio	0.14	N/A
R-Squared	0.92	1.00
Tracking Error	4.98	0.00

Benchmark: Russell 1000 Growth Index

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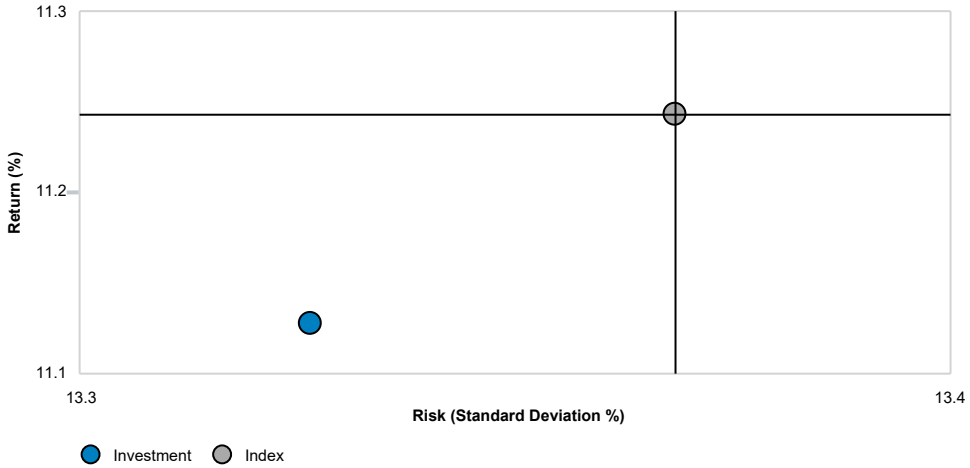
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.13	13.33	0.77	99.42	10	99.82	2
Index	11.24	13.37	0.78	100.00	10	100.00	2

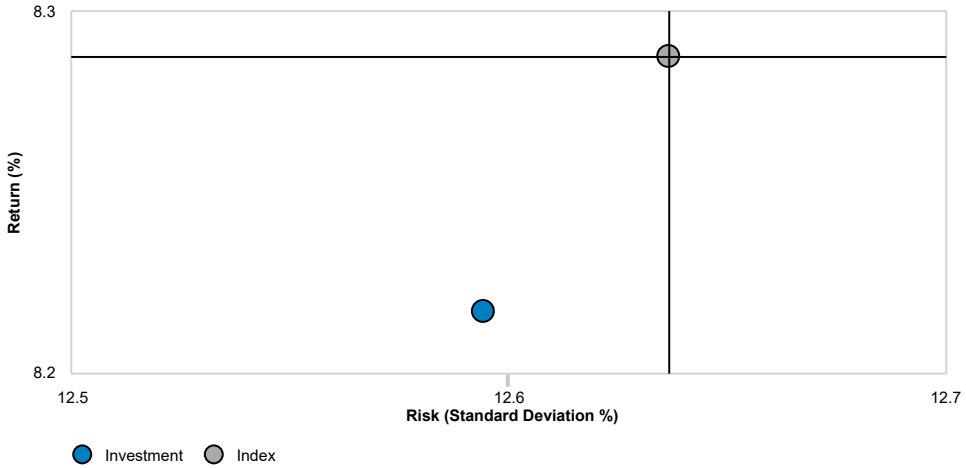
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.22	12.59	0.64	99.51	15	99.95	5
Index	8.29	12.64	0.64	100.00	15	100.00	5

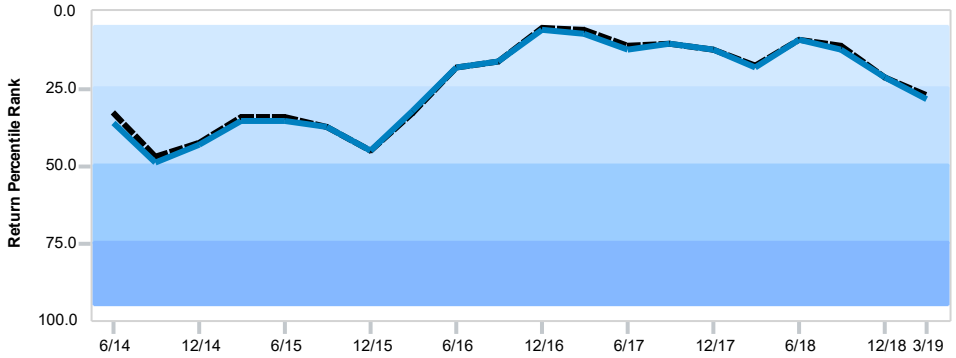
Risk and Return 3 Years



Risk and Return 5 Years

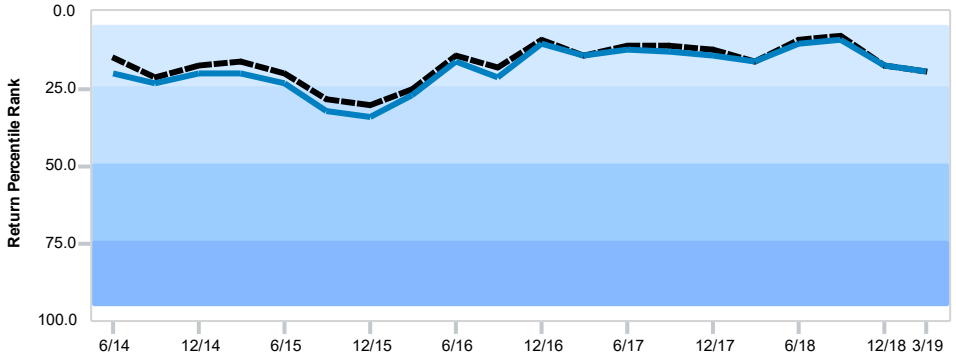


3 Year Rolling Percentile Rank IM U.S. Mid Cap Core Equity (MF)



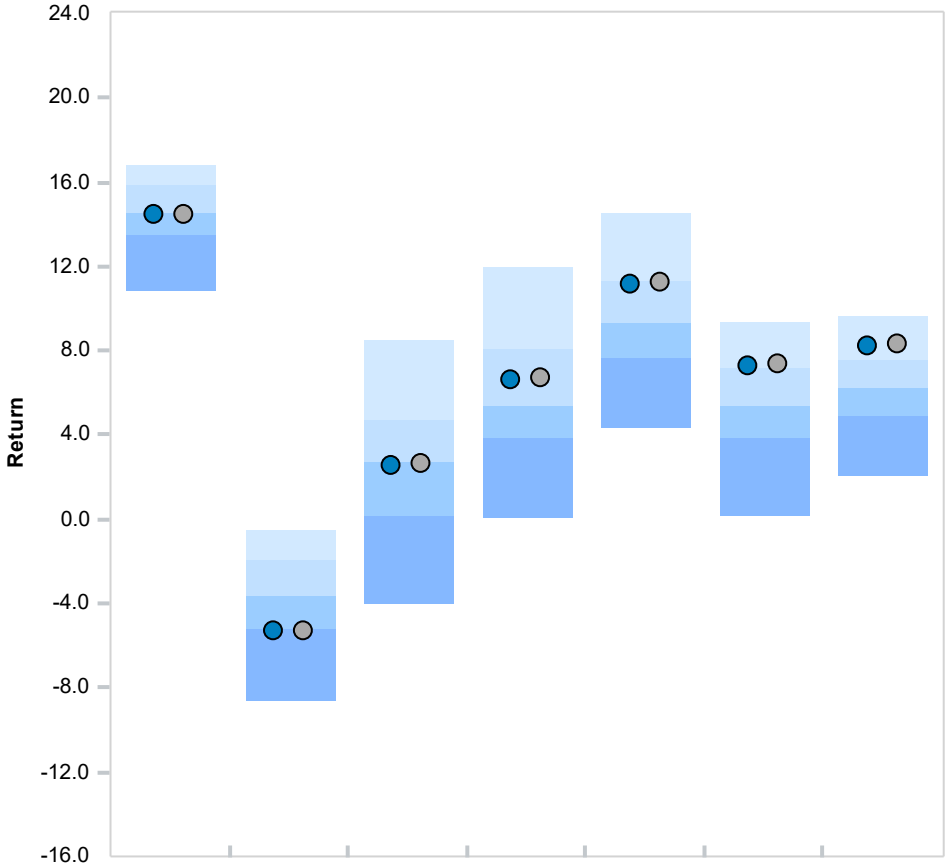
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)
Index	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Mid Cap Core Equity (MF)



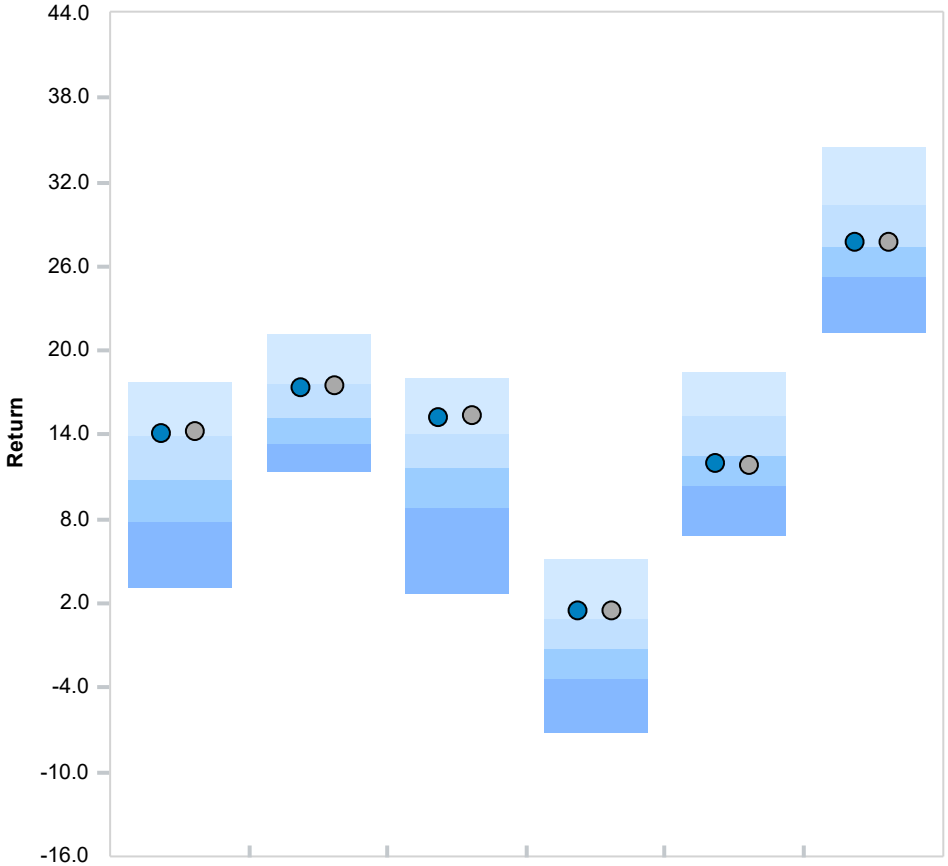
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	14.41 (57)	-5.30 (77)	2.55 (54)	6.58 (39)	11.13 (28)	7.24 (24)	8.22 (19)
Index	14.49 (54)	-5.29 (77)	2.59 (54)	6.70 (38)	11.24 (27)	7.33 (24)	8.29 (19)
Median	14.58	-3.59	2.76	5.37	9.32	5.34	6.19

Peer Group Analysis - IM U.S. Mid Cap Core Equity (MF)

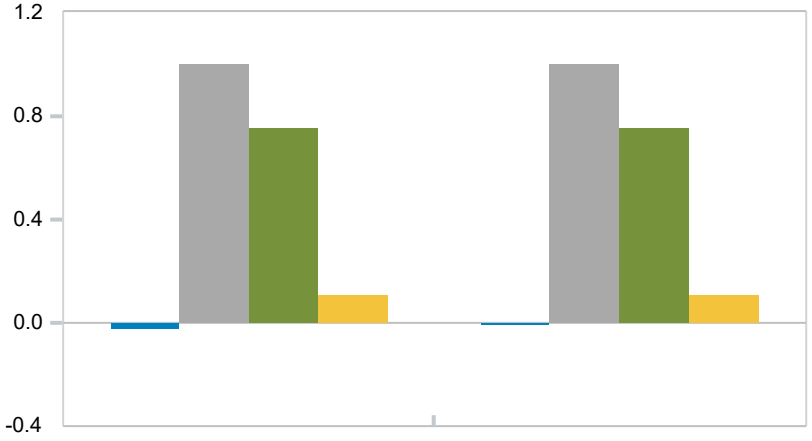


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	14.03 (25)	17.38 (28)	15.20 (20)	1.46 (24)	11.89 (56)	27.63 (47)
Index	14.21 (24)	17.52 (26)	15.33 (20)	1.40 (24)	11.82 (56)	27.68 (46)
Median	10.82	15.25	11.65	-1.26	12.56	27.41

Comparative Performance

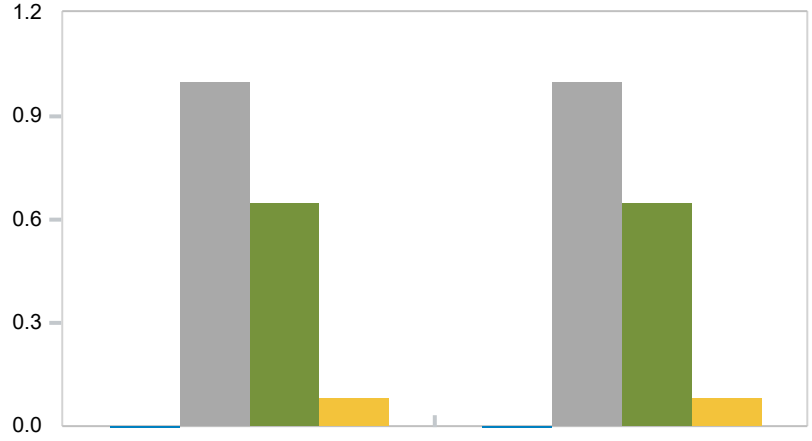
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-17.23 (72)	3.85 (55)	4.28 (17)	-0.89 (40)	6.24 (25)	3.19 (55)
Index	-17.28 (73)	3.86 (55)	4.29 (17)	-0.77 (36)	6.25 (25)	3.22 (54)
Median	-15.76	4.11	2.31	-1.27	5.43	3.43

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



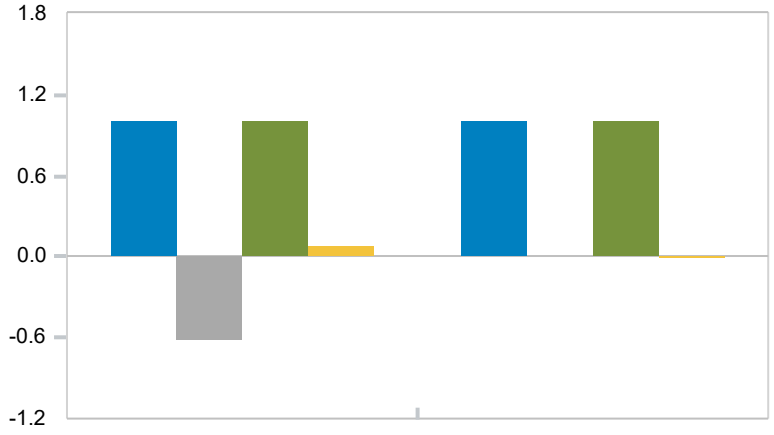
	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Alpha	-0.02	0.00
Beta	1.00	1.00
Sharpe Ratio	0.75	0.75
Treynor Ratio	0.11	0.11

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



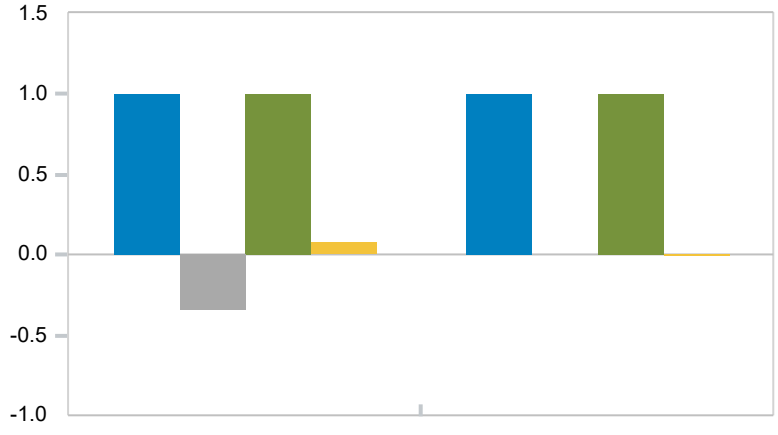
	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Alpha	0.00	0.00
Beta	1.00	1.00
Sharpe Ratio	0.64	0.64
Treynor Ratio	0.08	0.08

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-0.61	N/A
R-Squared	1.00	1.00
Tracking Error	0.09	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-0.34	N/A
R-Squared	1.00	1.00
Tracking Error	0.08	0.00

Benchmark: S&P MidCap 400 Index

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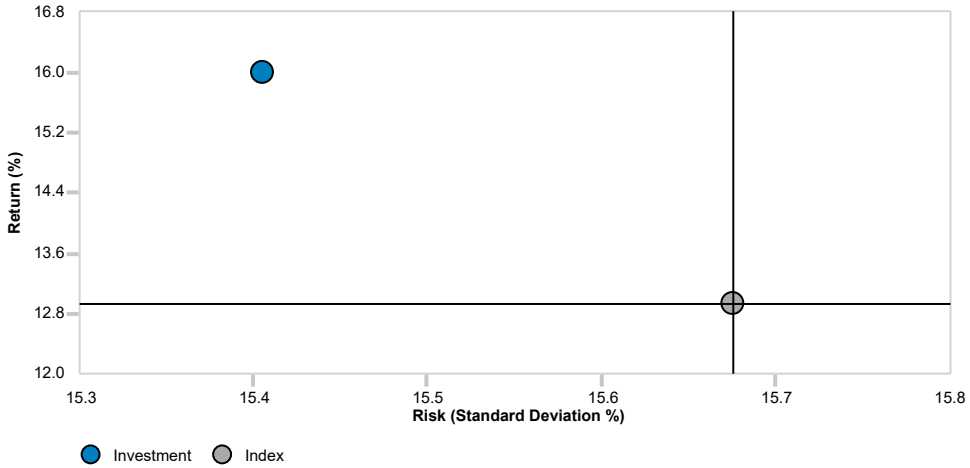
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	16.00	15.41	0.97	102.72	10	85.23	2
Index	12.92	15.68	0.78	100.00	10	100.00	2

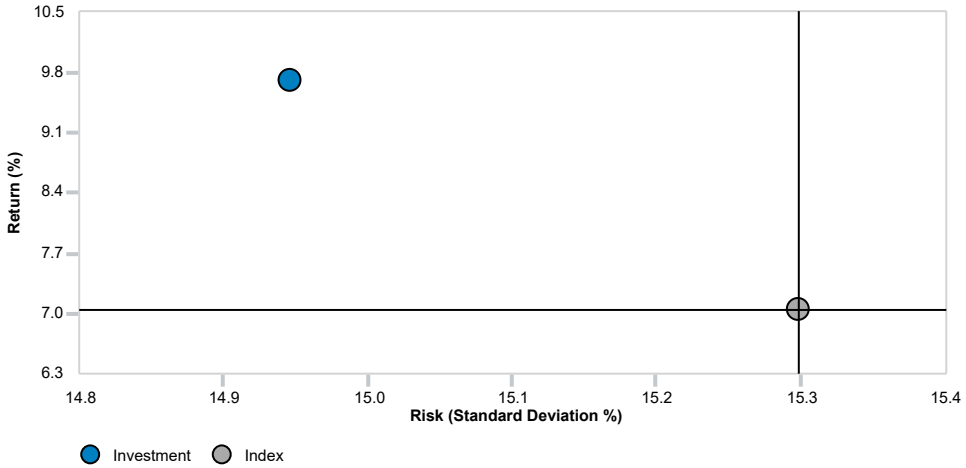
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.71	14.95	0.66	110.89	15	92.17	5
Index	7.05	15.30	0.48	100.00	15	100.00	5

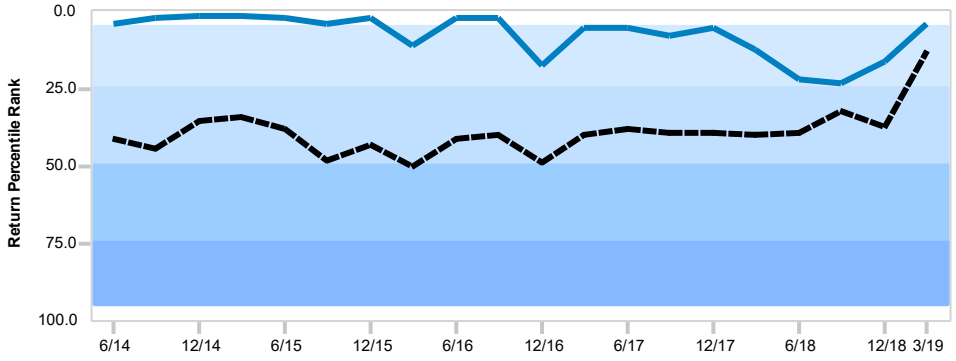
Risk and Return 3 Years



Risk and Return 5 Years

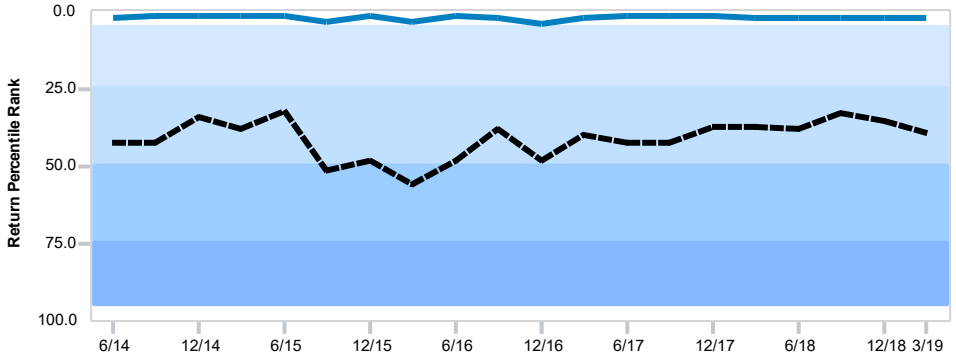


3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (MF)



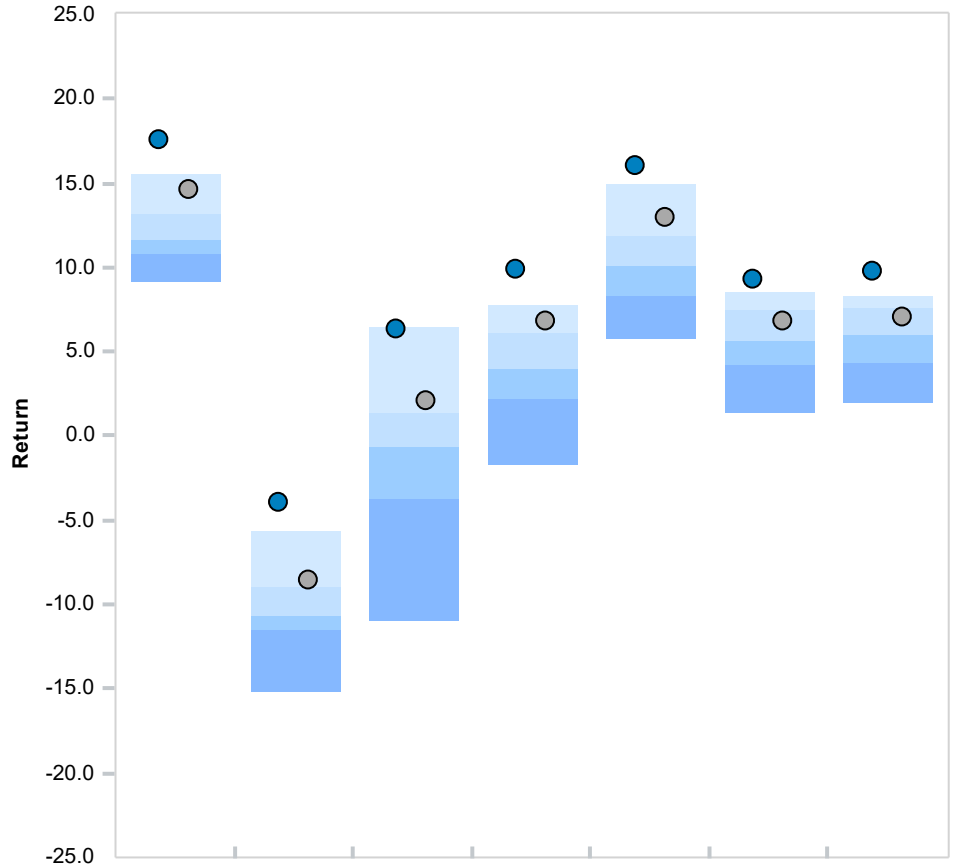
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	1 (5%)	19 (95%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (MF)



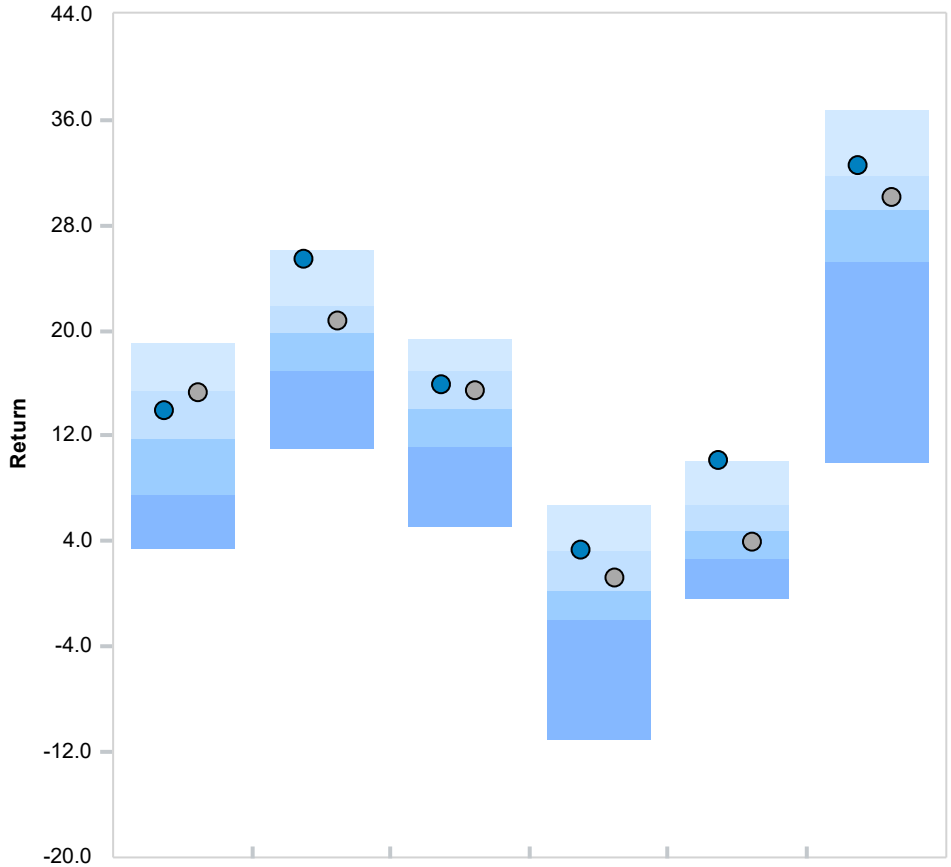
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	18 (90%)	2 (10%)	0 (0%)

Peer Group Analysis - IM U.S. Small Cap Core Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	17.60 (3)	-4.00 (3)	6.31 (6)	9.89 (4)	16.00 (4)	9.22 (3)	9.71 (2)
Index	14.58 (14)	-8.56 (22)	2.05 (15)	6.81 (14)	12.92 (13)	6.77 (36)	7.05 (39)
Median	11.60	-10.65	-0.66	3.91	10.15	5.61	5.98

Peer Group Analysis - IM U.S. Small Cap Core Equity (MF)

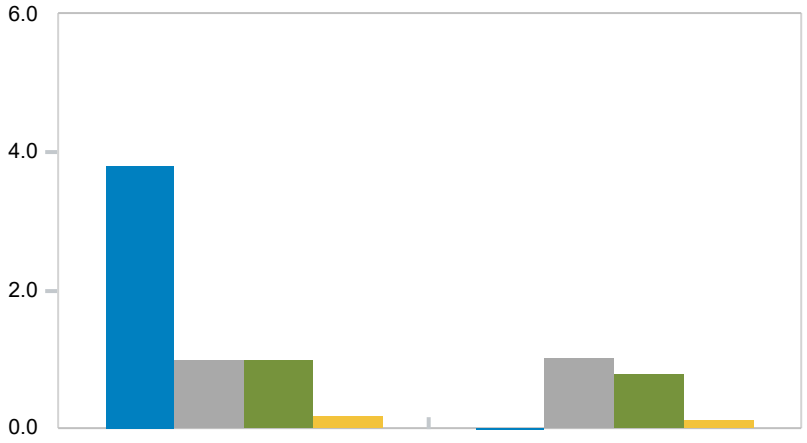


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	13.92 (36)	25.41 (11)	15.81 (34)	3.35 (23)	10.15 (6)	32.43 (19)
Index	15.24 (27)	20.74 (34)	15.47 (36)	1.25 (43)	3.93 (64)	30.06 (44)
Median	11.73	19.78	14.04	0.31	4.78	29.14

Comparative Performance

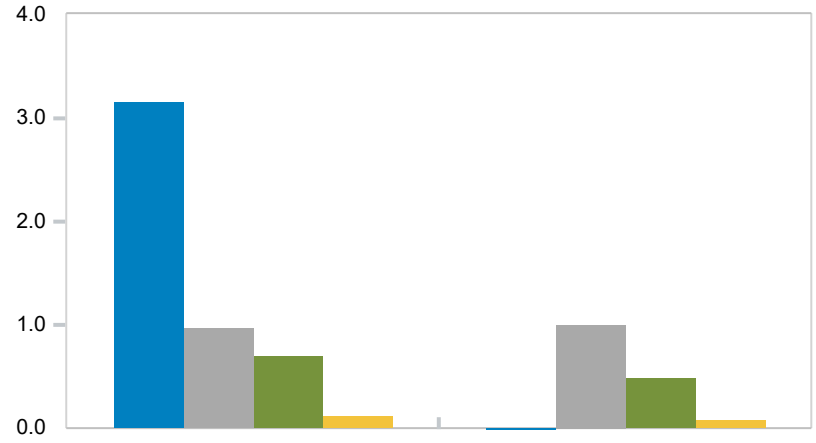
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-18.37 (21)	3.83 (27)	6.65 (55)	-0.93 (58)	3.84 (24)	6.05 (27)
Index	-20.20 (53)	3.58 (30)	7.75 (45)	-0.08 (30)	3.34 (38)	5.67 (46)
Median	-20.17	2.78	7.57	-0.57	3.01	5.53

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



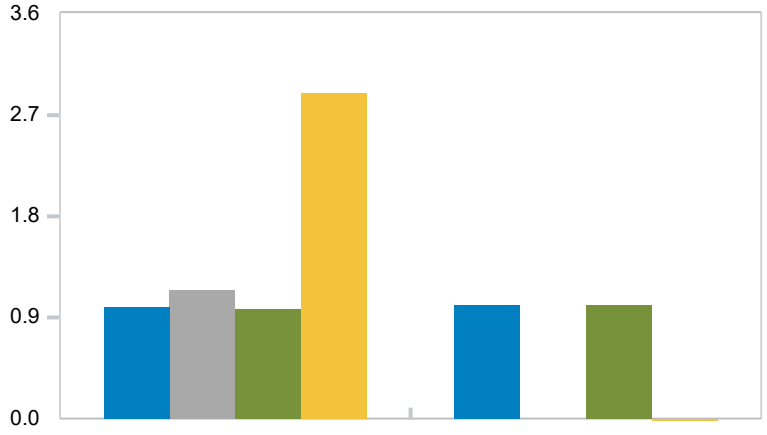
	Wellington	Russell 2000 Index
Alpha	3.80	0.00
Beta	0.97	1.00
Sharpe Ratio	0.99	0.77
Treynor Ratio	0.16	0.13

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



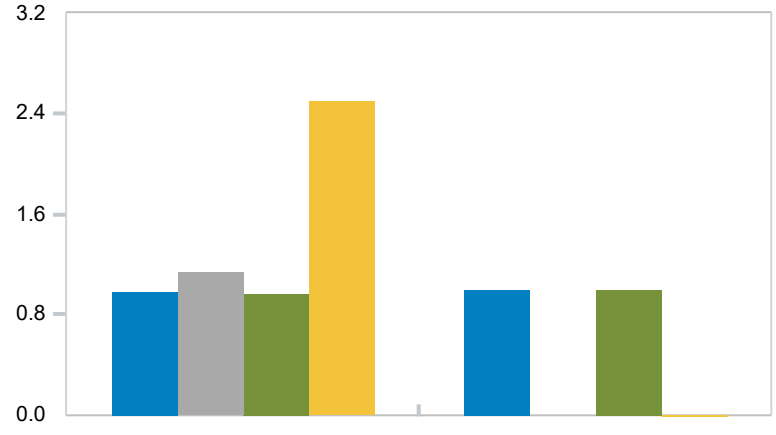
	Wellington	Russell 2000 Index
Alpha	3.16	0.00
Beta	0.97	1.00
Sharpe Ratio	0.68	0.48
Treynor Ratio	0.11	0.07

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Wellington	Russell 2000 Index
Actual Correlation	0.98	1.00
Information Ratio	1.14	N/A
R-Squared	0.97	1.00
Tracking Error	2.90	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Wellington	Russell 2000 Index
Actual Correlation	0.99	1.00
Information Ratio	1.13	N/A
R-Squared	0.97	1.00
Tracking Error	2.51	0.00

Benchmark: Russell 2000 Index

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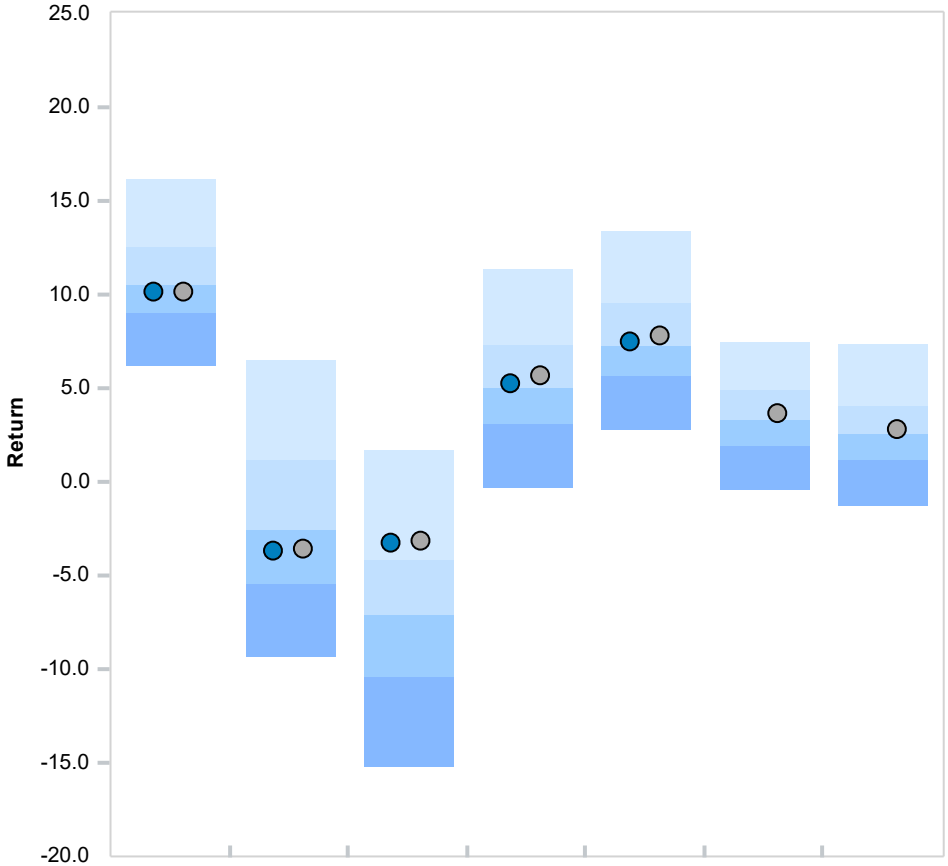
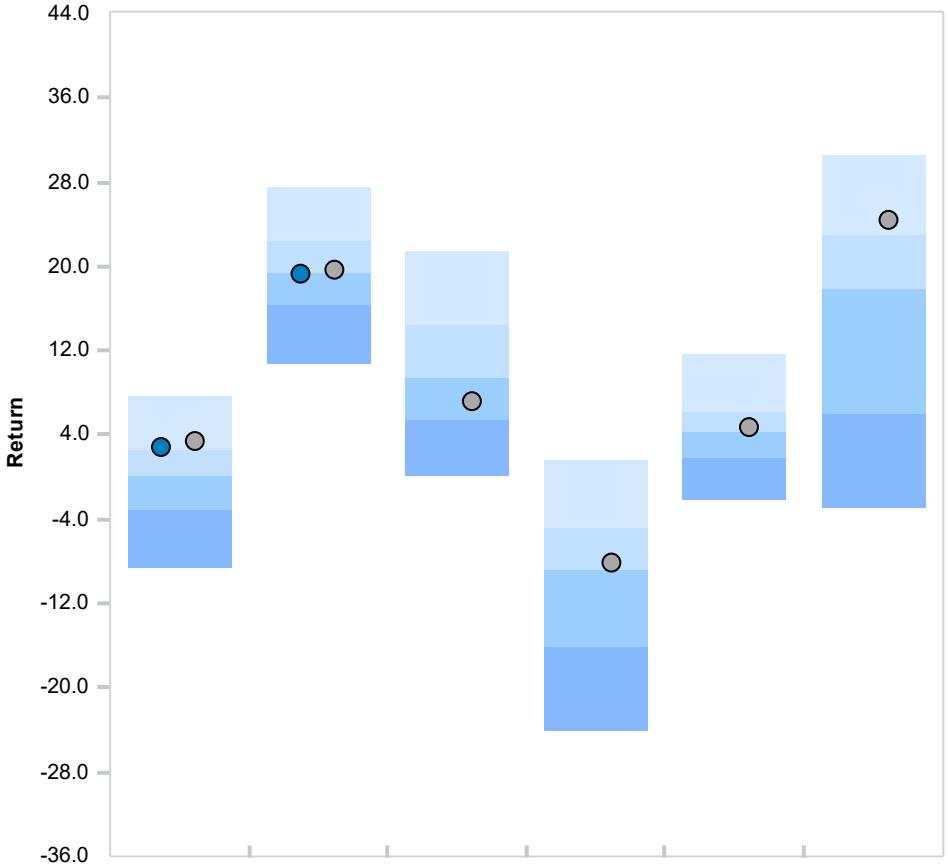
Peer Group Analysis - IM International Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	10.08 (60)	-3.71 (60)	-3.32 (20)	5.26 (46)	7.42 (47)	N/A	N/A
Index	10.13 (59)	-3.64 (59)	-3.22 (20)	5.65 (41)	7.80 (42)	3.65 (43)	2.81 (45)
Median	10.53	-2.60	-7.09	4.99	7.21	3.25	2.55

Peer Group Analysis - IM International Equity (MF)



	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	2.69 (25)	19.18 (53)	N/A	N/A	N/A	N/A
Index	3.25 (21)	19.65 (48)	7.06 (65)	-8.27 (47)	4.70 (44)	24.29 (19)
Median	0.08	19.36	9.33	-8.76	4.27	17.81

Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	-12.52 (53)	1.36 (19)	-0.94 (18)	-1.60 (83)	3.94 (65)	5.46 (65)
Index	-12.50 (53)	1.42 (17)	-0.97 (18)	-1.41 (81)	4.27 (58)	5.47 (65)
Median	-12.23	-0.27	-3.33	-0.07	4.67	6.20

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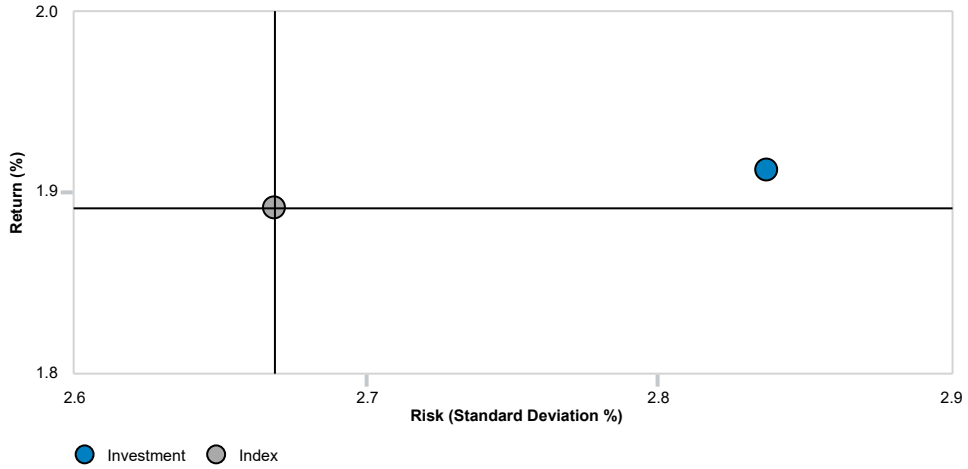
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.91	2.84	0.28	99.88	9	98.78	3
Index	1.89	2.67	0.28	100.00	9	100.00	3

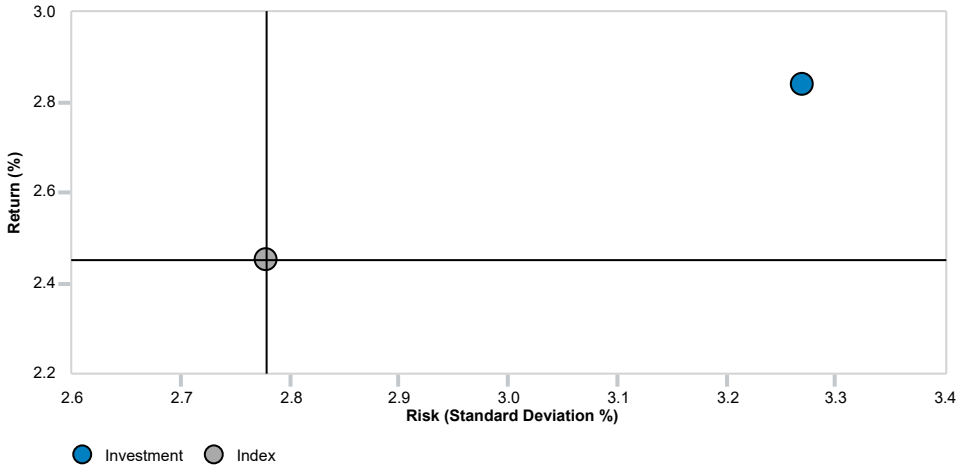
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.84	3.27	0.66	111.50	14	102.58	6
Index	2.45	2.78	0.63	100.00	15	100.00	5

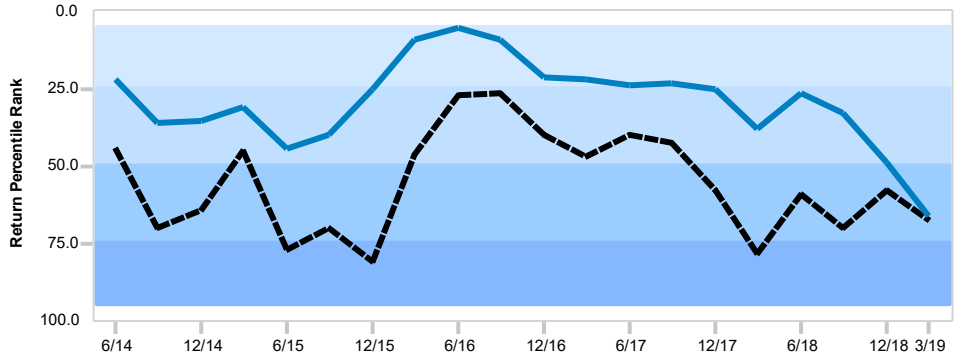
Risk and Return 3 Years



Risk and Return 5 Years

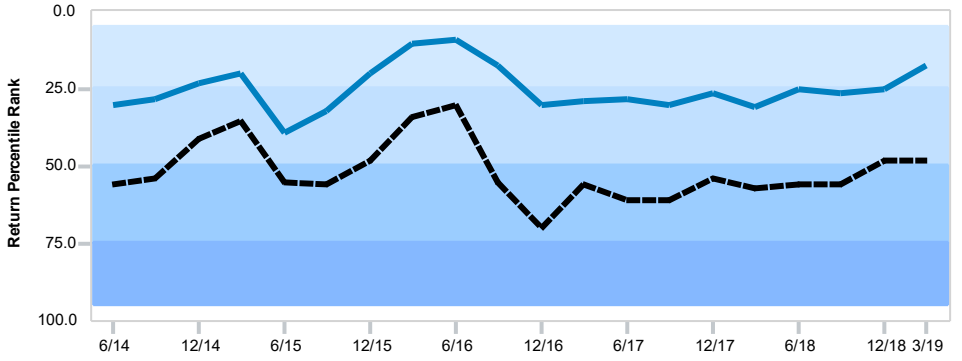


3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



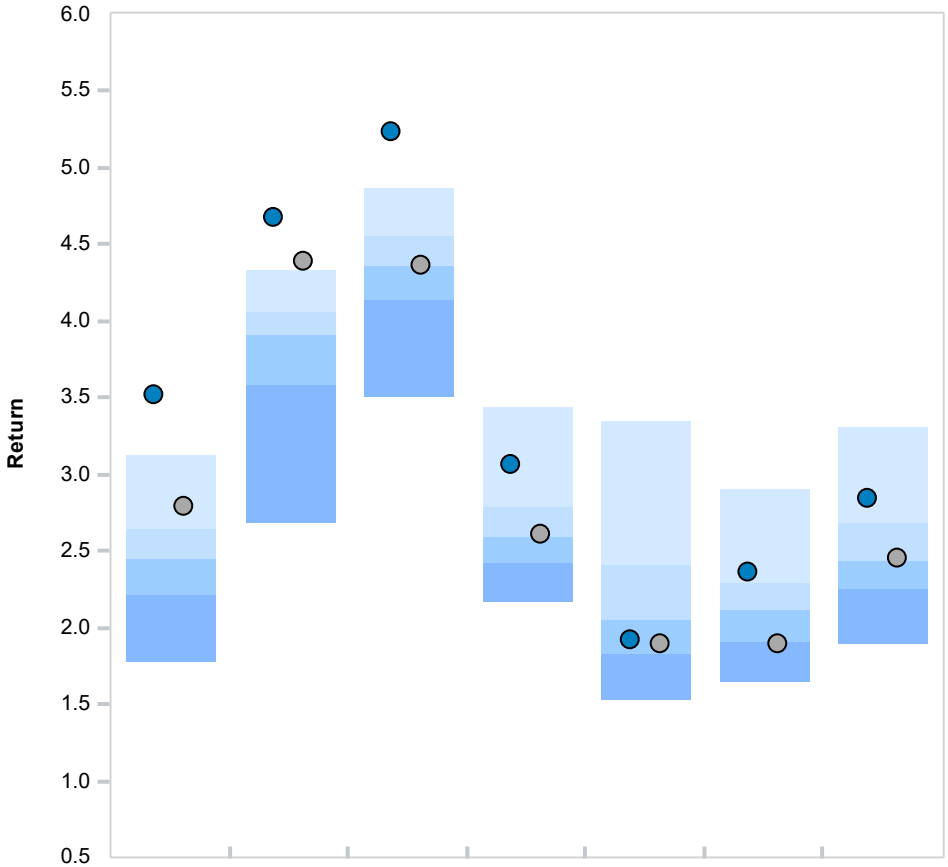
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	9 (45%)	1 (5%)	0 (0%)
Index	20	0 (0%)	9 (45%)	8 (40%)	3 (15%)

5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



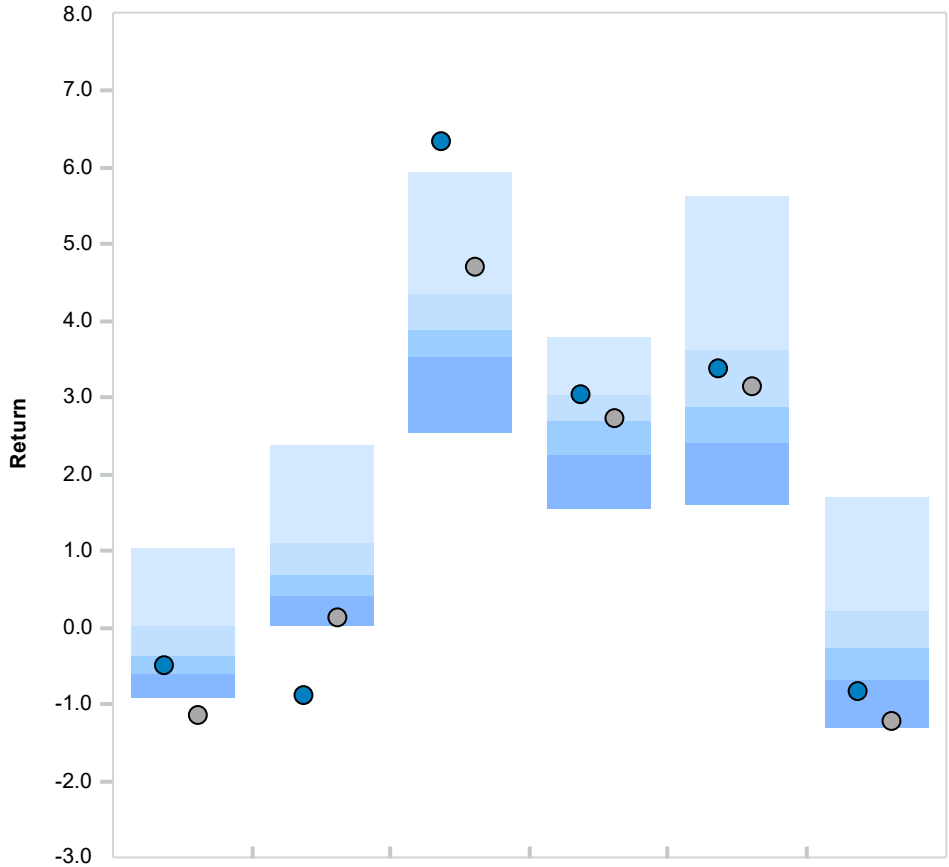
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	11 (55%)	0 (0%)	0 (0%)
Index	20	0 (0%)	7 (35%)	13 (65%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.52 (2)	4.67 (2)	5.23 (3)	3.07 (11)	1.91 (66)	2.37 (21)	2.84 (17)
Index	2.79 (15)	4.39 (4)	4.36 (50)	2.60 (50)	1.89 (67)	1.90 (76)	2.45 (48)
Median	2.45	3.90	4.36	2.59	2.04	2.11	2.43

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

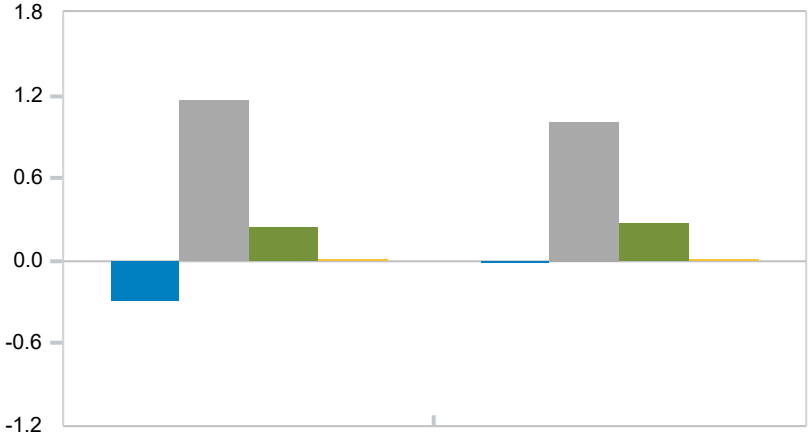


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	-0.50 (61)	-0.89 (100)	6.33 (4)	3.03 (26)	3.36 (30)	-0.84 (83)
Index	-1.16 (98)	0.11 (93)	4.68 (17)	2.71 (48)	3.13 (38)	-1.23 (93)
Median	-0.38	0.69	3.90	2.70	2.88	-0.27

Comparative Performance

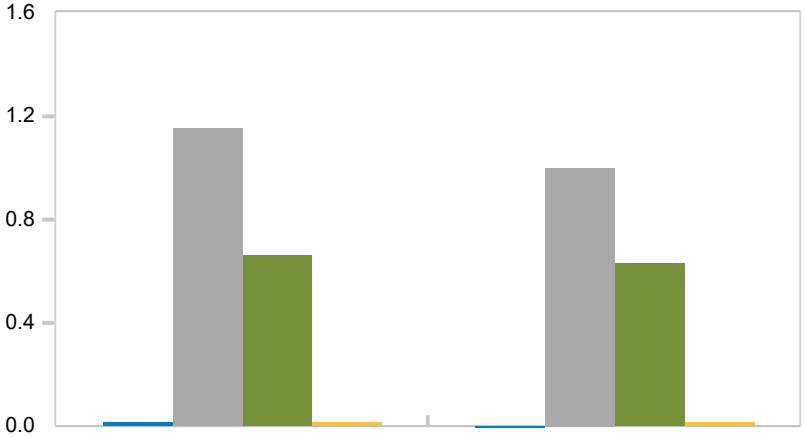
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	1.11 (72)	0.55 (15)	-0.01 (88)	-1.19 (95)	0.16 (25)	0.81 (30)
Index	1.56 (28)	0.14 (94)	-0.16 (97)	-1.28 (98)	0.14 (27)	0.71 (55)
Median	1.39	0.37	0.12	-0.90	0.02	0.72

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



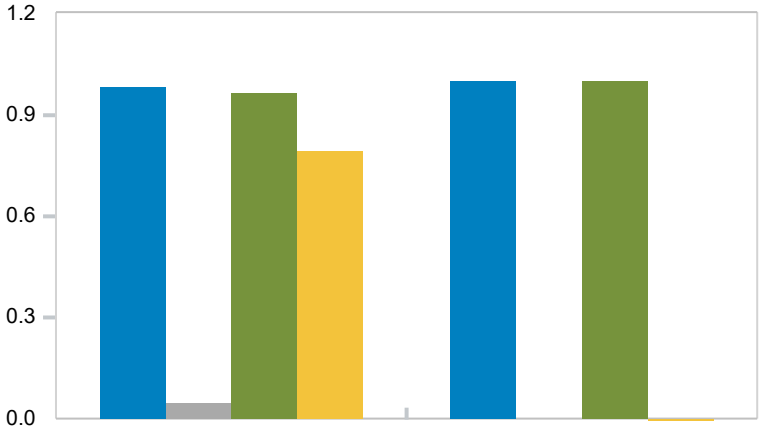
	Inverness Balanced	Inverness Fixed Income Index
Alpha	-0.29	0.00
Beta	1.17	1.00
Sharpe Ratio	0.24	0.27
Treynor Ratio	0.01	0.01

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



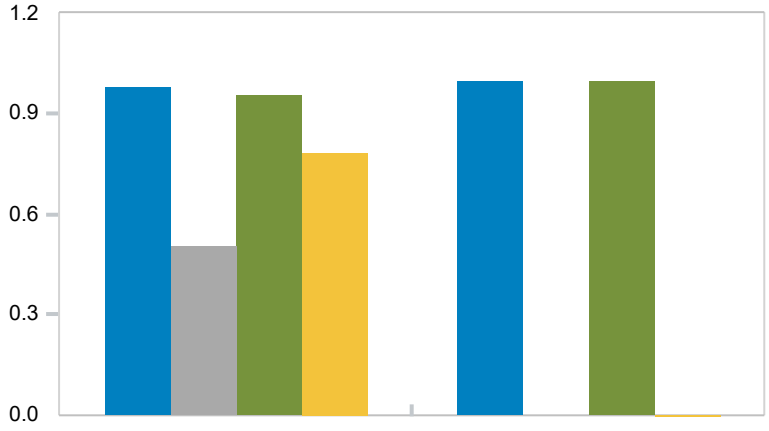
	Inverness Balanced	Inverness Fixed Income Index
Alpha	0.02	0.00
Beta	1.15	1.00
Sharpe Ratio	0.66	0.63
Treynor Ratio	0.02	0.02

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Inverness Balanced	Inverness Fixed Income Index
Actual Correlation	0.98	1.00
Information Ratio	0.05	N/A
R-Squared	0.97	1.00
Tracking Error	0.79	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Inverness Balanced	Inverness Fixed Income Index
Actual Correlation	0.98	1.00
Information Ratio	0.50	N/A
R-Squared	0.96	1.00
Tracking Error	0.78	0.00

Benchmark: Inverness Fixed Income Index

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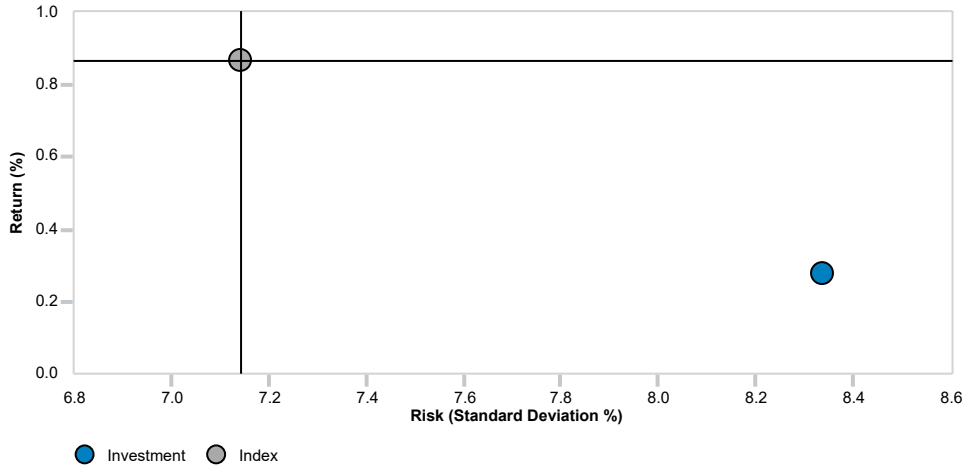
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.27	8.34	-0.07	112.04	9	118.90	3
Index	0.87	7.14	-0.01	100.00	9	100.00	3

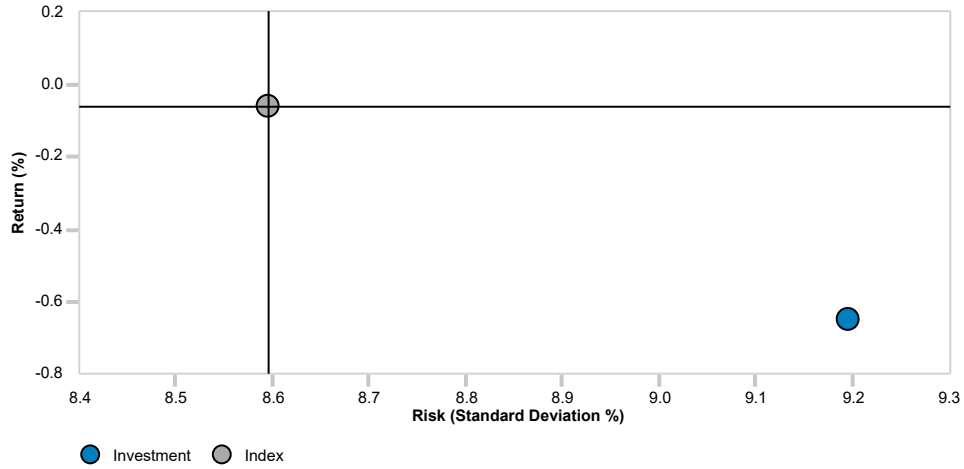
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.65	9.20	-0.10	103.18	12	111.25	8
Index	-0.06	8.60	-0.05	100.00	12	100.00	8

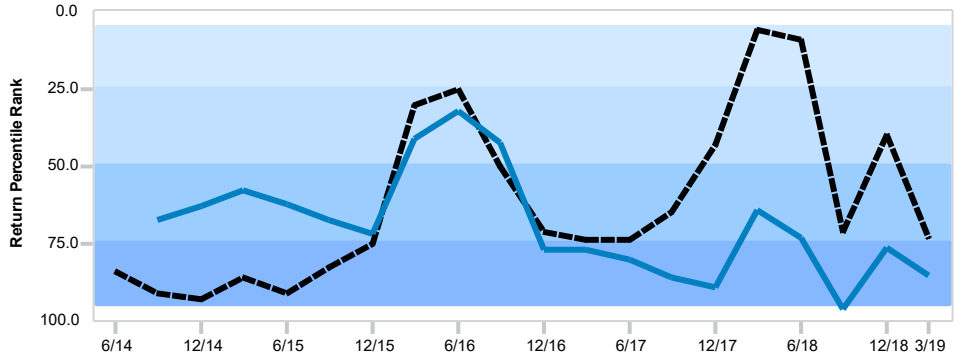
Risk and Return 3 Years



Risk and Return 5 Years

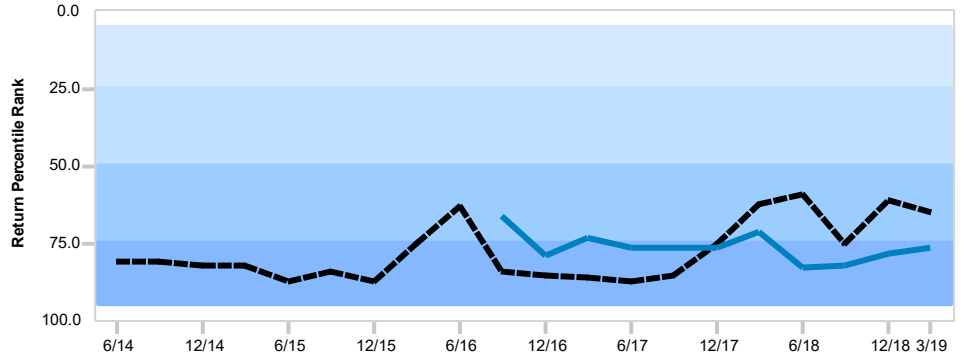


3 Year Rolling Percentile Rank IM International Fixed Income (MF)



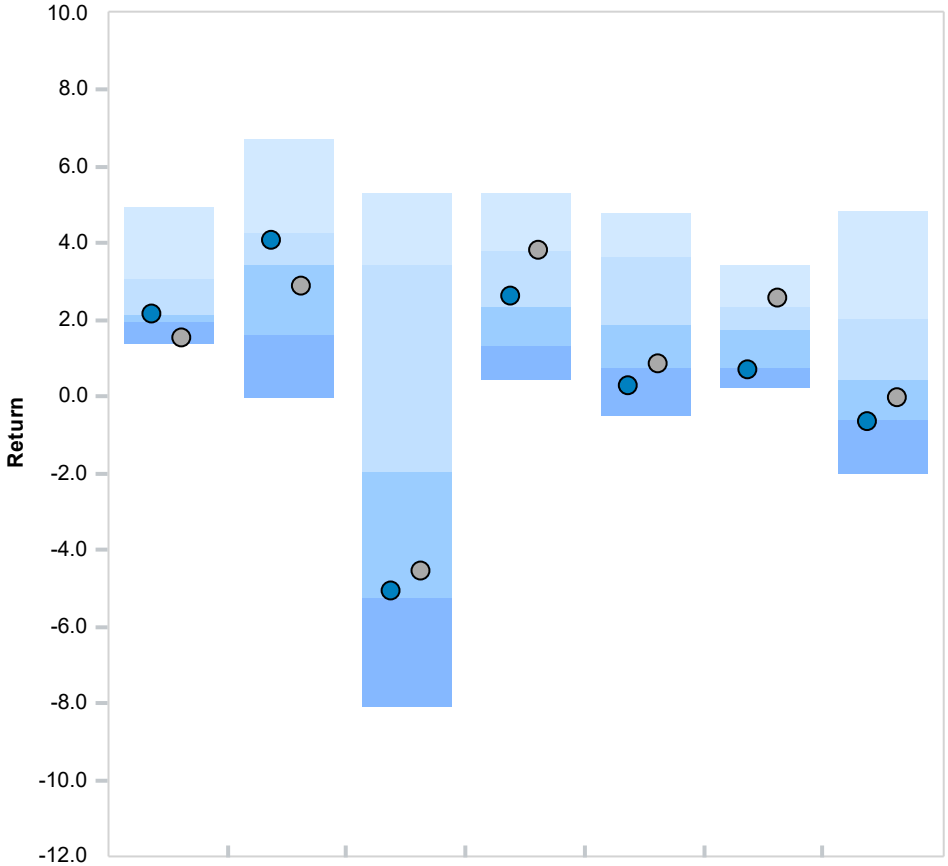
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	19	0 (0%)	3 (16%)	8 (42%)	8 (42%)
Index	20	3 (15%)	4 (20%)	7 (35%)	6 (30%)

5 Year Rolling Percentile Rank IM International Fixed Income (MF)



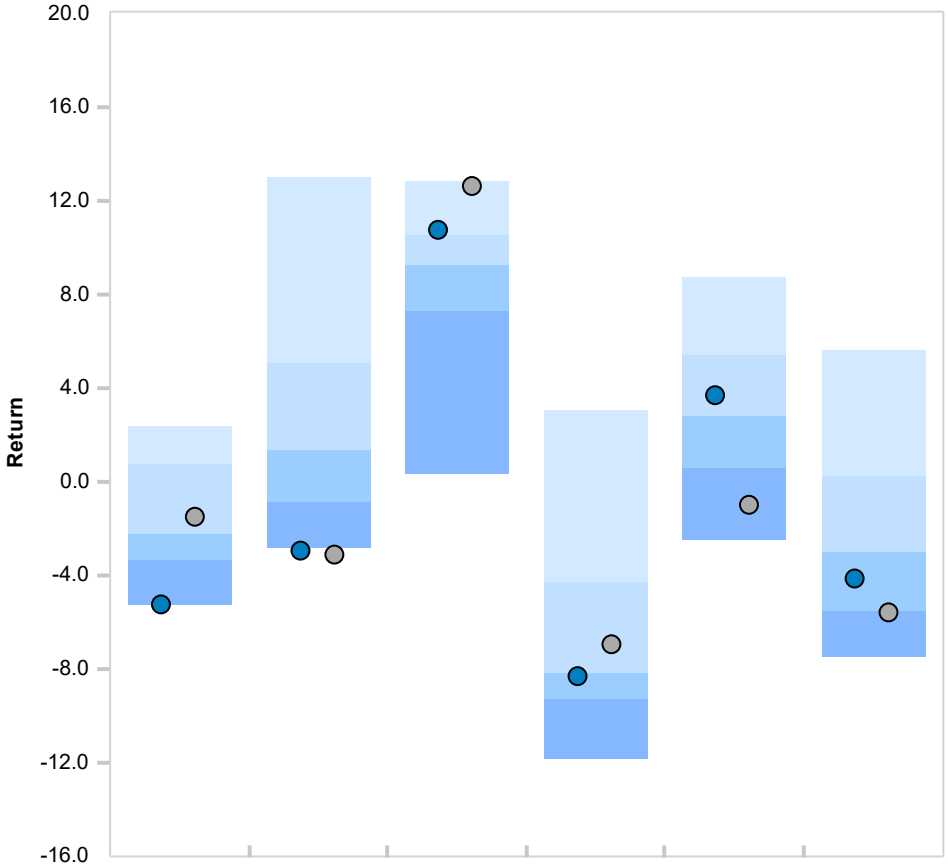
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	11	0 (0%)	0 (0%)	3 (27%)	8 (73%)
Index	20	0 (0%)	0 (0%)	8 (40%)	12 (60%)

Peer Group Analysis - IM International Fixed Income (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	2.13 (52)	4.06 (35)	-5.06 (69)	2.60 (47)	0.27 (85)	0.71 (77)	-0.65 (76)
Index	1.52 (94)	2.85 (62)	-4.55 (61)	3.82 (26)	0.87 (73)	2.54 (23)	-0.06 (65)
Median	2.16	3.47	-1.94	2.37	1.89	1.71	0.43

Peer Group Analysis - IM International Fixed Income (MF)

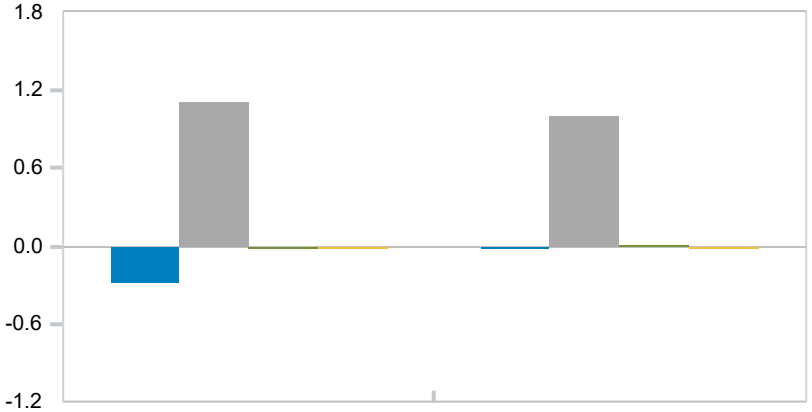


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	-5.24 (95)	-3.01 (97)	10.71 (24)	-8.35 (55)	3.67 (41)	-4.20 (58)
Index	-1.57 (34)	-3.14 (98)	12.61 (8)	-7.01 (38)	-0.99 (85)	-5.63 (77)
Median	-2.20	1.37	9.26	-8.21	2.83	-2.96

Comparative Performance

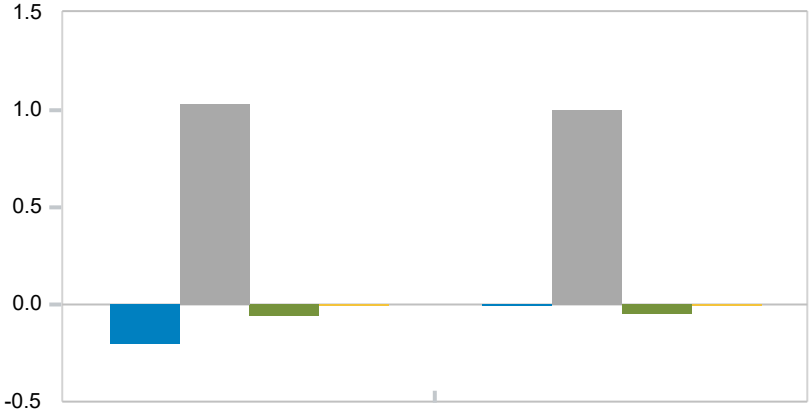
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	1.89 (19)	-1.74 (84)	-7.15 (87)	3.63 (17)	0.22 (74)	2.49 (24)
Index	1.31 (38)	-2.19 (96)	-5.11 (59)	4.42 (2)	1.57 (16)	2.57 (21)
Median	0.78	-0.63	-4.61	1.55	1.06	2.07

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



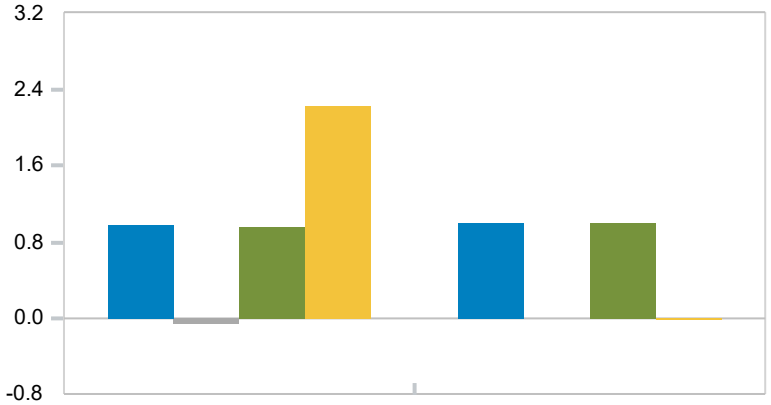
	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Alpha	-0.28	0.00
Beta	1.11	1.00
Sharpe Ratio	-0.01	0.01
Treynor Ratio	0.00	0.00

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



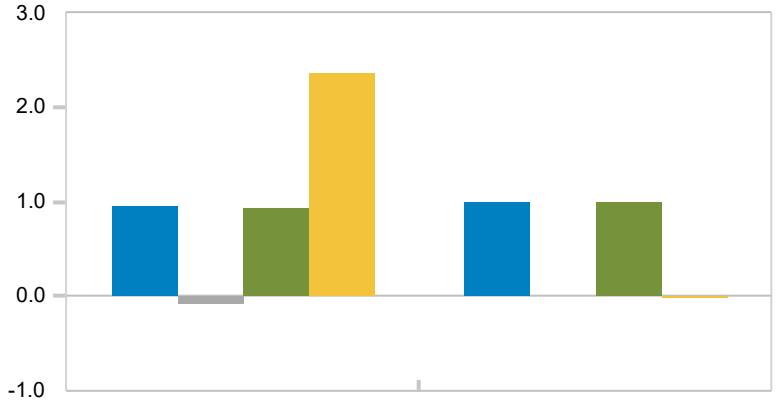
	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Alpha	-0.20	0.00
Beta	1.03	1.00
Sharpe Ratio	-0.07	-0.05
Treynor Ratio	-0.01	0.00

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Actual Correlation	0.98	1.00
Information Ratio	-0.07	N/A
R-Squared	0.96	1.00
Tracking Error	2.24	0.00

Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Actual Correlation	0.97	1.00
Information Ratio	-0.08	N/A
R-Squared	0.93	1.00
Tracking Error	2.37	0.00

Benchmark: FTSE Non-U.S. World Government Bond

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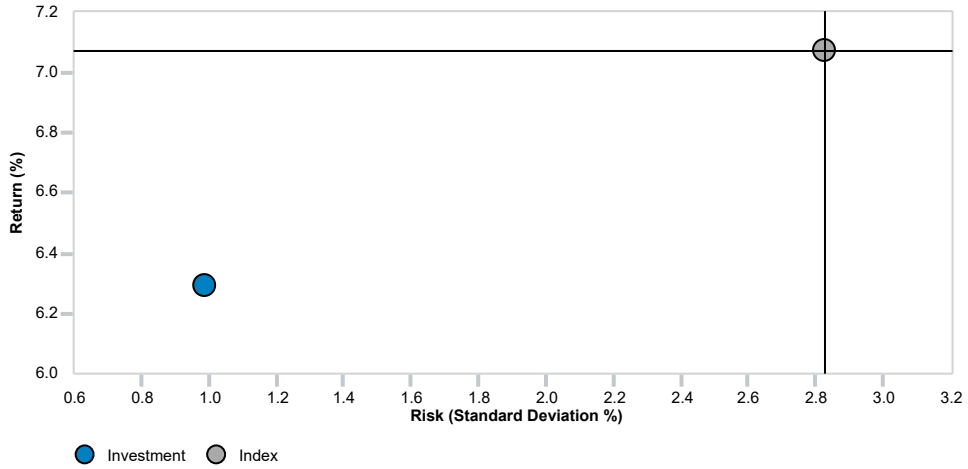
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.29	0.99	4.59	88.85	12	N/A	N/A
Index	7.07	2.83	2.03	100.00	12	N/A	N/A

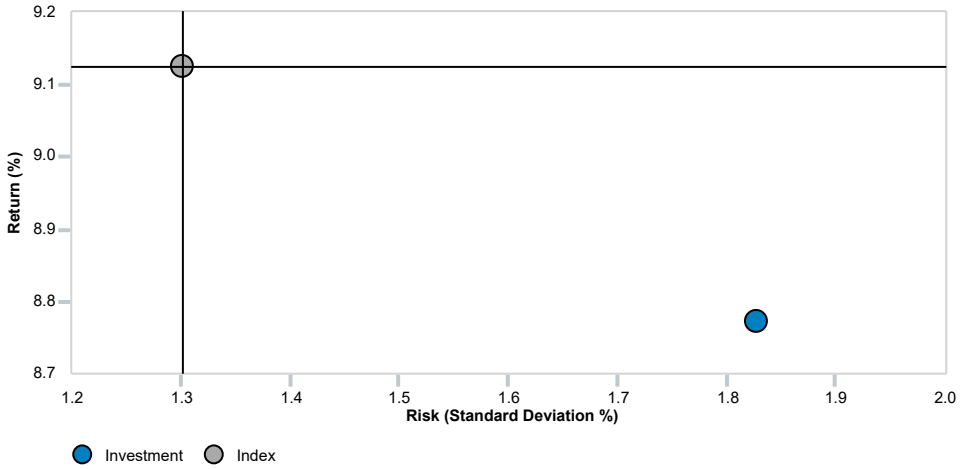
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.77	1.83	3.66	96.33	20	N/A	N/A
Index	9.13	1.30	5.06	100.00	20	N/A	N/A

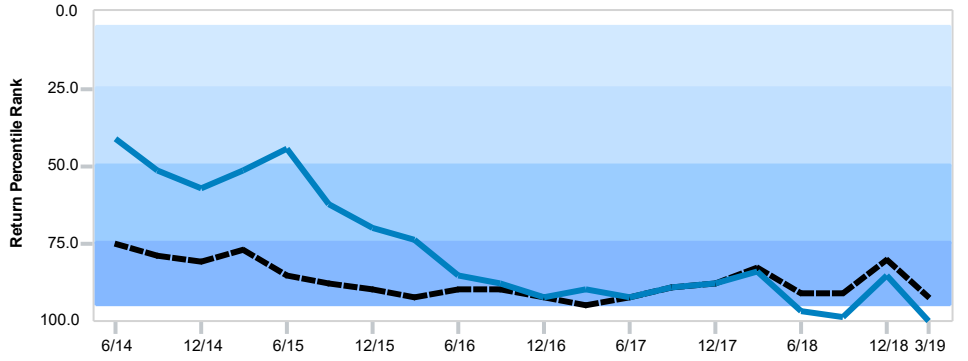
Risk and Return 3 Years



Risk and Return 5 Years

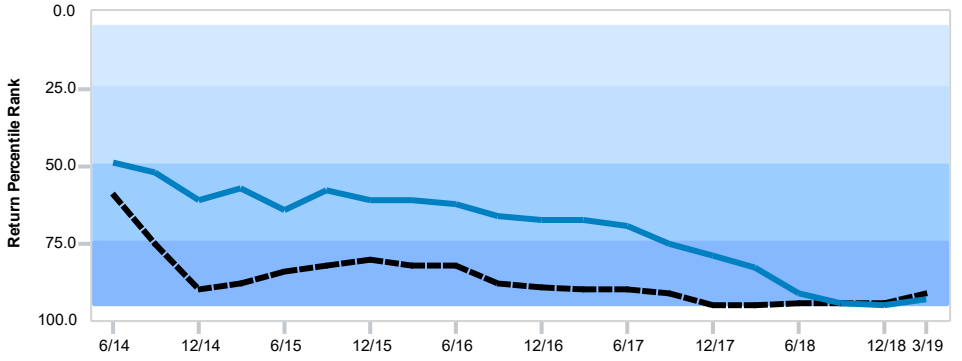


3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



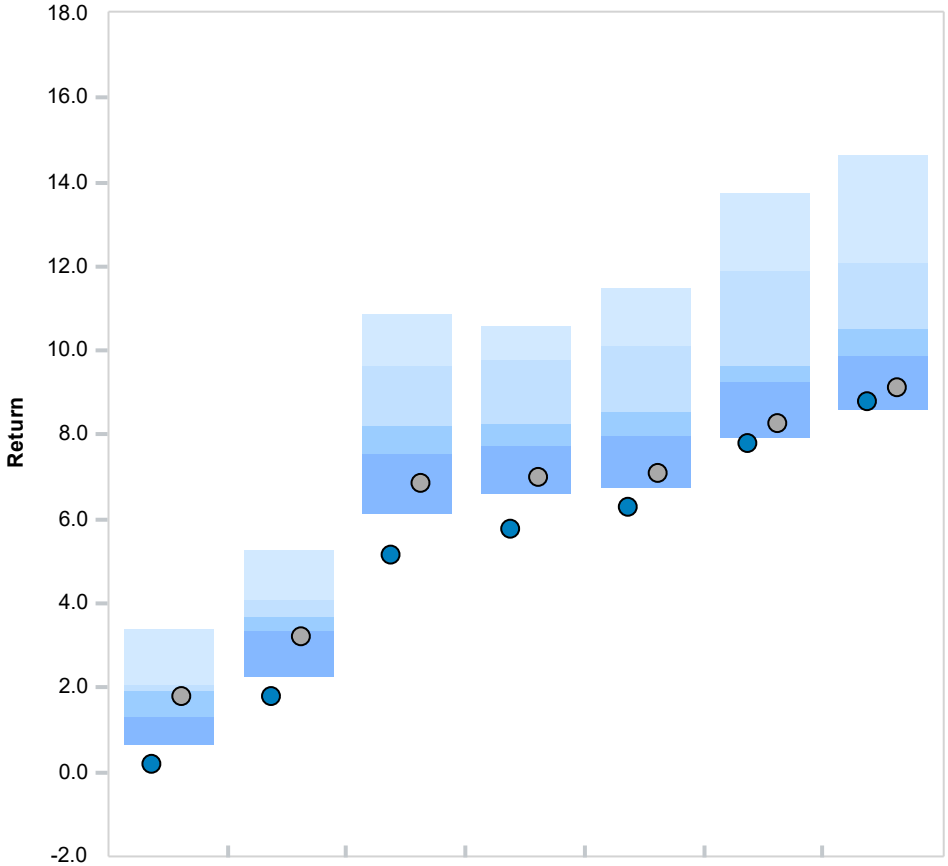
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	2 (10%)	6 (30%)	12 (60%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



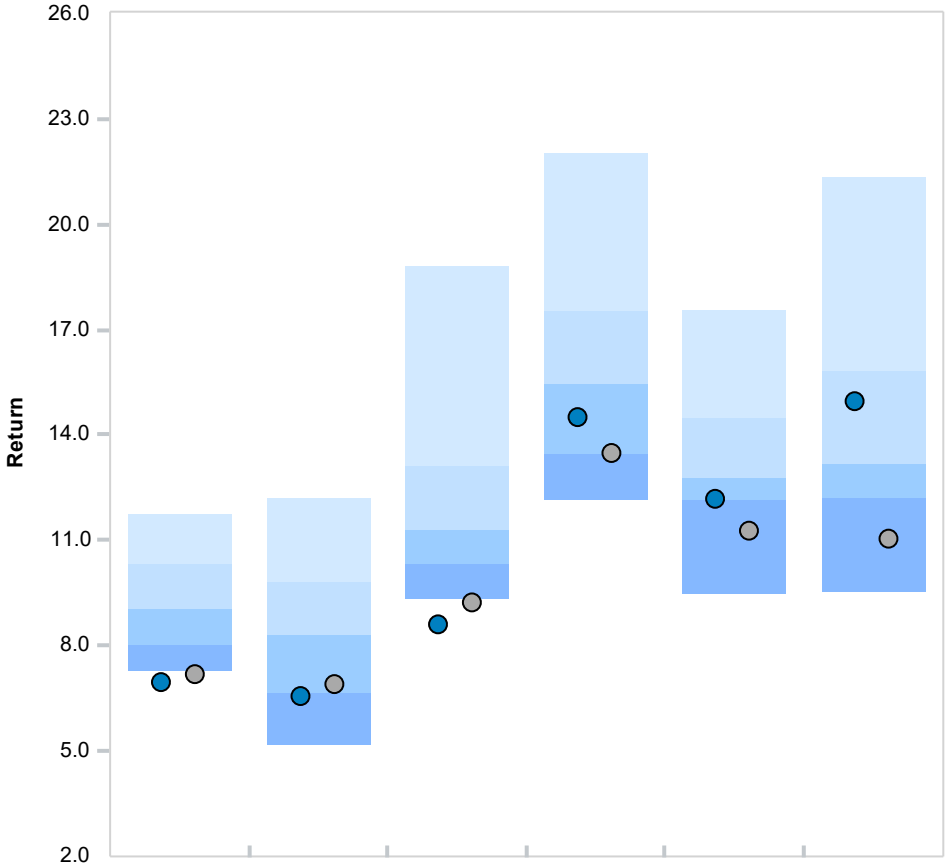
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	1 (5%)	13 (65%)	6 (30%)
Index	20	0 (0%)	0 (0%)	2 (10%)	18 (90%)

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
Investment	0.20 (100)	1.77 (100)	5.12 (100)	5.78 (100)	6.29 (100)	7.77 (99)	8.77 (93)
Index	1.80 (60)	3.20 (80)	6.83 (90)	6.97 (86)	7.07 (92)	8.24 (92)	9.13 (91)
Median	1.93	3.68	8.23	8.25	8.56	9.65	10.54

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

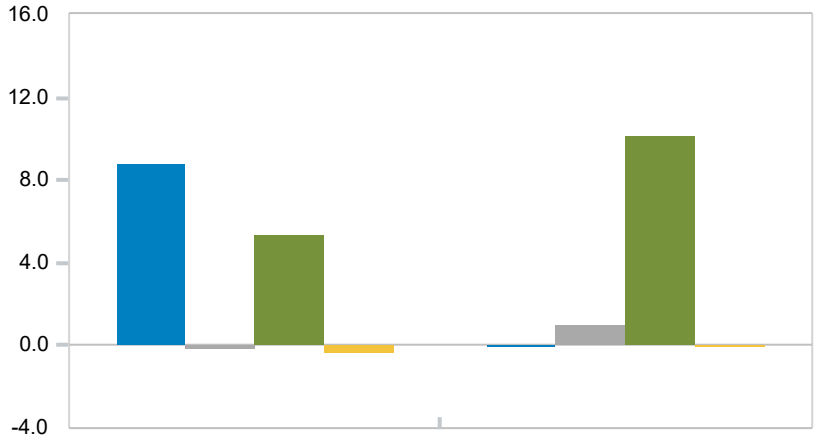


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	6.94 (100)	6.51 (77)	8.56 (100)	14.48 (66)	12.13 (79)	14.92 (33)
Index	7.16 (97)	6.89 (74)	9.22 (96)	13.48 (75)	11.26 (89)	11.00 (81)
Median	9.04	8.29	11.32	15.45	12.78	13.18

Comparative Performance

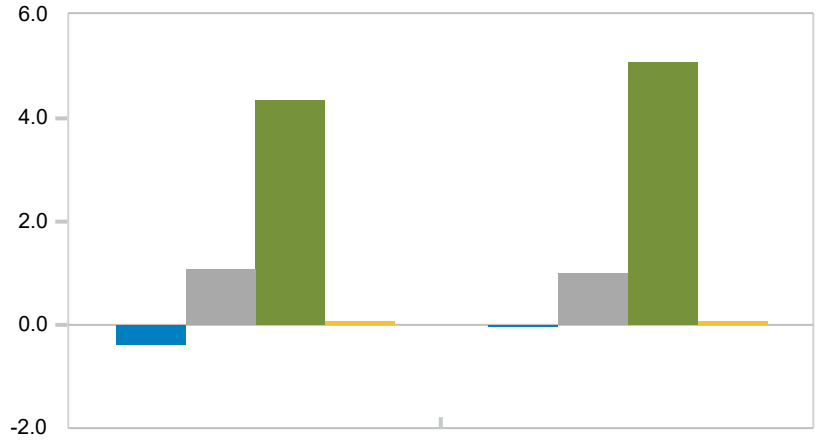
	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	1.57 (66)	1.57 (91)	1.70 (100)	1.95 (71)	1.55 (100)	1.47 (79)
Index	1.37 (78)	1.67 (81)	1.81 (87)	1.70 (87)	1.80 (81)	1.70 (59)
Median	1.76	2.10	2.22	2.21	2.25	1.75

Risk / Reward Historical Statistics 3 Years Ending March 31, 2019



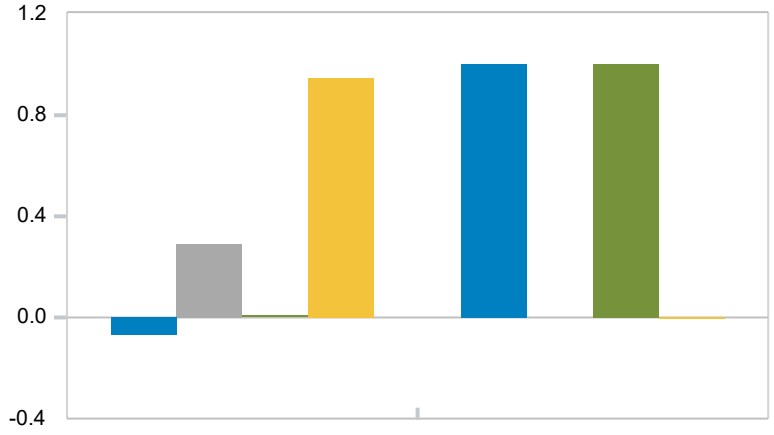
	JP Morgan RE	NCREIF Property Index
Alpha	8.81	0.00
Beta	-0.20	1.00
Sharpe Ratio	5.30	10.15
Treynor Ratio	-0.30	0.06

Risk / Reward Historical Statistics 5 Years Ending March 31, 2019



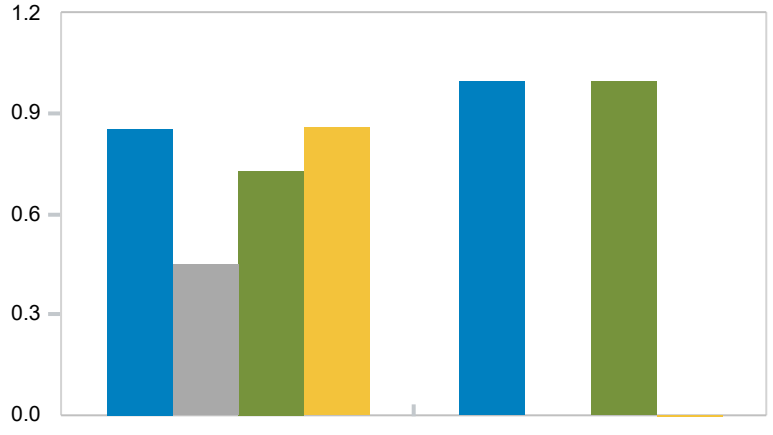
	JP Morgan RE	NCREIF Property Index
Alpha	-0.38	0.00
Beta	1.09	1.00
Sharpe Ratio	4.35	5.06
Treynor Ratio	0.08	0.08

Benchmark Relative Historical Statistics 3 Years Ending March 31, 2019



	JP Morgan RE	NCREIF Property Index
Actual Correlation	-0.07	1.00
Information Ratio	0.29	N/A
R-Squared	0.00	1.00
Tracking Error	0.95	0.00

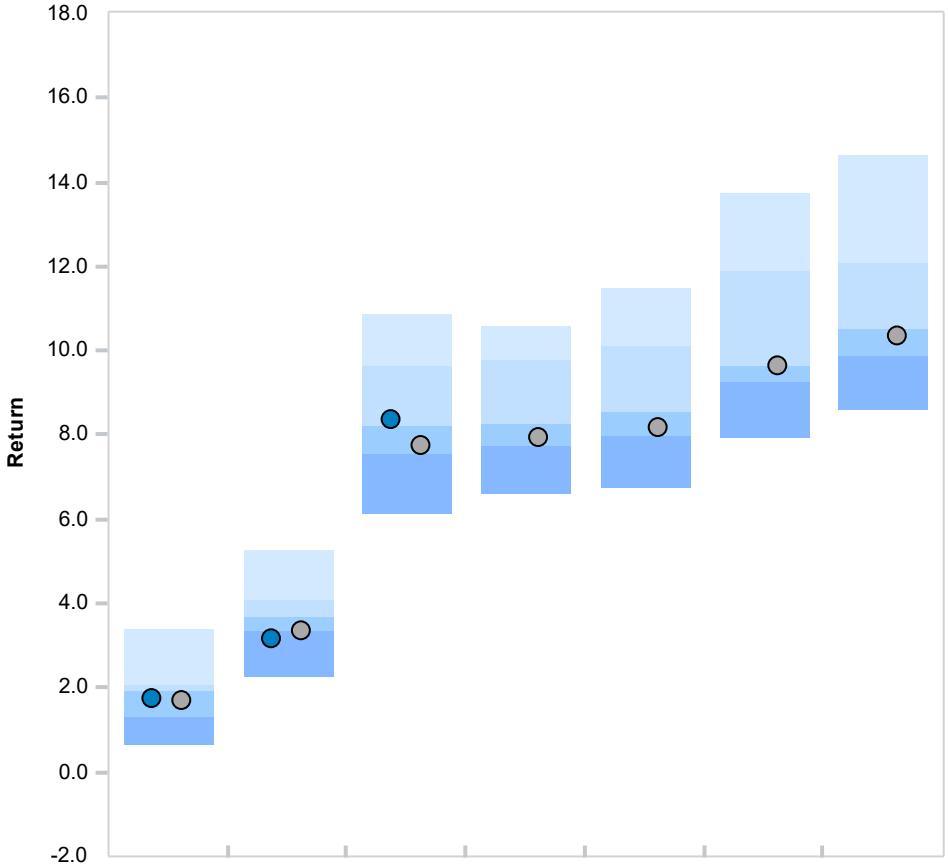
Benchmark Relative Historical Statistics 5 Years Ending March 31, 2019



	JP Morgan RE	NCREIF Property Index
Actual Correlation	0.86	1.00
Information Ratio	0.45	N/A
R-Squared	0.73	1.00
Tracking Error	0.86	0.00

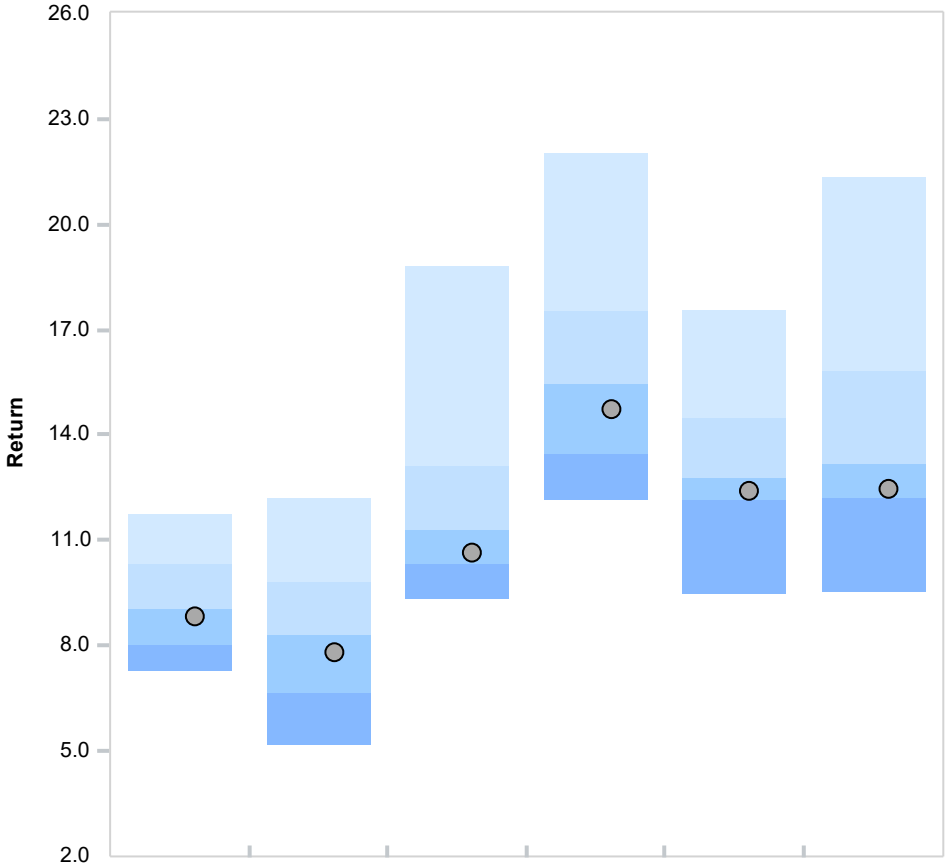
Benchmark: NCREIF Property Index

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
Investment	1.74 (65)	3.15 (81)	8.35 (43)	N/A	N/A	N/A	N/A
Index	1.69 (66)	3.33 (75)	7.74 (69)	7.95 (69)	8.17 (63)	9.62 (58)	10.34 (62)
Median	1.93	3.68	8.23	8.25	8.56	9.65	10.54

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



	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	N/A	N/A	N/A	N/A	N/A	N/A
Index	8.82 (59)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)
Median	9.04	8.29	11.32	15.45	12.78	13.18

Comparative Performance

	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017
Investment	1.38 (77)	2.24 (45)	2.75 (30)	N/A	N/A	N/A
Index	1.62 (65)	2.09 (54)	2.13 (61)	2.17 (55)	2.15 (57)	1.89 (42)
Median	1.76	2.10	2.22	2.21	2.25	1.75

	Estimated Annual Fee (%)	Market Value ($)	Estimated Annual Fee ($)	Fee Schedule
Rhumbline LCV	0.05	53,690,833	26,845	0.05 % of Assets
Inverness Balanced	0.35	465,362,860	1,628,770	0.35 % of Assets
Logan Equity	0.60	52,756,995	316,542	0.60 % of Assets
Rhumbline S&P MidCap 400	0.05	71,569,006	35,785	0.05 % of Assets
Wellington	0.60	106,787,921	640,728	0.60 % of Assets
Wells Capital Fixed	0.36	33,689,649	121,283	0.36 % of Assets
Rhumbline Intl Equity	0.05	34,787,764	17,394	0.05 % of Assets
JP Morgan RE	1.00	45,453,652	454,537	1.00 % of Assets
Intercontinental RE	1.00	43,341,246	433,412	1.00 % of Assets
Total Fund Composite	**0.41**	**907,439,926**	**3,675,295**	

Total Policy Historical Hybrid Composition

Allocation Mandate	Weight (%)
Oct-1992	
S&P 500 Index	49.00
Blmbg. Barc. U.S. Gov't/Credit	23.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	23.00
FTSE 3 Month T-Bill	5.00
Apr-2003	
S&P 500 Index	46.00
Blmbg. Barc. U.S. Gov't/Credit	23.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	23.00
FTSE 3 Month T-Bill	3.00
MSCI EAFE Index	5.00
Apr-2007	
S&P 500 Index	23.00
Blmbg. Barc. U.S. Gov't/Credit	23.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	23.00
FTSE 3 Month T-Bill	5.00
MSCI EAFE Index	5.00
Russell 2000 Index	8.00
S&P MidCap 400 Index	7.00
Russell 1000 Value Index	3.00
Russell 1000 Growth Index	3.00
Jul-2007	
S&P 500 Index	30.00
Blmbg. Barc. U.S. Gov't/Credit	17.50
Bloomberg Barclays Intermediate US Govt/Credit Idx	17.50
FTSE 3 Month T-Bill	5.00
MSCI EAFE Index	5.00
Russell 2000 Index	8.00
S&P MidCap 400 Index	7.00
Russell 1000 Value Index	3.00
Russell 1000 Growth Index	3.00
NCREIF Property Index	4.00

Allocation Mandate	Weight (%)
Oct-2011	
S&P 500 Index	30.00
Blmbg. Barc. U.S. Gov't/Credit	15.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	15.00
FTSE 3 Month T-Bill	5.00
MSCI EAFE Index	5.00
Russell 2000 Index	8.00
S&P MidCap 400 Index	7.00
Russell 1000 Value Index	3.00
Russell 1000 Growth Index	3.00
NCREIF Property Index	4.00
FTSE Non-U.S. World Government Bond	5.00
Oct-2013	
S&P 500 Index	24.00
Blmbg. Barc. U.S. Gov't/Credit	15.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	15.00
FTSE 3 Month T-Bill	5.00
MSCI EAFE Index	5.00
Russell 2000 Index	8.00
S&P MidCap 400 Index	8.00
Russell 1000 Value Index	5.00
Russell 1000 Growth Index	5.00
NCREIF Property Index	5.00
FTSE Non-U.S. World Government Bond	5.00
Apr-2018	
S&P 500 Index	24.00
Blmbg. Barc. U.S. Gov't/Credit	12.50
Bloomberg Barclays Intermediate US Govt/Credit Idx	12.50
FTSE 3 Month T-Bill	5.00
MSCI EAFE Index	5.00
Russell 2000 Index	8.00
S&P MidCap 400 Index	8.00
Russell 1000 Value Index	5.00
Russell 1000 Growth Index	5.00
NCREIF Property Index	10.00
FTSE Non-U.S. World Government Bond	5.00

Total Equity Historical Hybrid Composition

Allocation Mandate	Weight (%)
Oct-1990	
S&P 500 Index	100.00
Apr-2003	
S&P 500 Index	93.50
MSCI EAFE Index	6.50
Apr-2007	
S&P 500 Index	47.00
MSCI EAFE Index	10.00
Russell 2000 Index	16.00
S&P MidCap 400 Index	15.00
Russell 1000 Value Index	6.00
Russell 1000 Growth Index	6.00
Jul-2007	
S&P 500 Index	50.00
MSCI EAFE Index	8.00
Russell 2000 Index	13.00
S&P MidCap 400 Index	12.00
Russell 1000 Value Index	5.00
Russell 1000 Growth Index	5.00
NCREIF Property Index	7.00
Oct-2013	
S&P 500 Index	44.00
MSCI EAFE Index	9.00
Russell 2000 Index	14.50
S&P MidCap 400 Index	14.50
Russell 1000 Value Index	9.00
Russell 1000 Growth Index	9.00

Inverness Fixed Income Historical Hybrid Composition

Allocation Mandate	Weight (%)
Oct-1990	
Bloomberg Barclays Intermediate US Govt/Credit Idx	50.00
Blmbg. Barc. U.S. Gov't/Credit	50.00

Inverness Balanced Historical Hybrid Composition

Allocation Mandate	Weight (%)
Jan-2000	
S&P 500 Index	47.50
Blmbg. Barc. U.S. Gov't/Credit	23.80
Bloomberg Barclays Intermediate US Govt/Credit Idx	23.70
FTSE 3 Month T-Bill	5.00
Apr-2007	
S&P 500 Index	32.00
Blmbg. Barc. U.S. Gov't/Credit	31.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	31.00
FTSE 3 Month T-Bill	6.00
Jul-2007	
S&P 500 Index	43.00
Blmbg. Barc. U.S. Gov't/Credit	25.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	25.00
FTSE 3 Month T-Bill	7.00
Oct-2013	
S&P 500 Index	41.00
Blmbg. Barc. U.S. Gov't/Credit	25.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	25.00
FTSE 3 Month T-Bill	9.00

Total Fixed Income Historical Hybrid Composition

Allocation Mandate	Weight (%)
Jan-1973	
Bloomberg Barclays Intermediate US Govt/Credit Idx	50.00
Blmbg. Barc. U.S. Gov't/Credit	50.00
Oct-2011	
Bloomberg Barclays Intermediate US Govt/Credit Idx	43.00
Blmbg. Barc. U.S. Gov't/Credit	43.00
FTSE Non-U.S. World Government Bond	14.00
Apr-2018	
Bloomberg Barclays Intermediate US Govt/Credit Idx	41.50
Blmbg. Barc. U.S. Gov't/Credit	41.50
FTSE Non-U.S. World Government Bond	17.00

Annual Asset Class Performance
Market Indexes
As of March 31, 2019

Annual Asset Class Performance

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
Best	MSCI Emerging Markets (Net) Index 34.0 %	MSCI Emerging Markets (Net) Index 32.2 %	MSCI Emerging Markets (Net) Index 39.4 %	Blmbg. Barc. U.S. Aggregate Index 5.2 %	MSCI Emerging Markets (Net) Index 78.5 %	Russell 2000 Growth Index 29.1 %	NCREIF Fund Index-ODCE (EW) (Net) 15.0 %	MSCI Emerging Markets (Net) Index 18.2 %	Russell 2000 Growth Index 43.3 %	S&P 500 Index 13.7 %	NCREIF Fund Index-ODCE (EW) (Net) 14.2 %	Russell 2000 Value Index 31.7 %	MSCI Emerging Markets (Net) Index 37.3 %	NCREIF Fund Index-ODCE (EW) (Net) 7.3 %	Russell 2000 Growth Index 17.1 %
	NCREIF Fund Index-ODCE (EW) (Net) 19.0 %	MSCI EAFE (Net) Index 26.3 %	NCREIF Fund Index-ODCE (EW) (Net) 15.0 %	Bloomberg Barclays Global Aggregate Ex USD 4.4 %	Blmbg. Barc. U.S. Corp High Yield 58.2 %	Russell 2000 Index 26.9 %	Blmbg. Barc. U.S. Aggregate Index 7.8 %	Russell 2000 Value Index 18.1 %	Russell 2000 Index 38.8 %	Russell 1000 Value Index 13.5 %	Russell 1000 Growth Index 5.7 %	Russell 2000 Index 21.3 %	Russell 1000 Growth Index 30.2 %	Blmbg. Barc. U.S. Aggregate Index 0.0 %	Russell 1000 Growth Index 16.1 %
	MSCI EAFE (Net) Index 13.5 %	Russell 2000 Value Index 23.5 %	Russell 1000 Growth Index 11.8 %	NCREIF Fund Index-ODCE (EW) (Net) -11.1 %	Russell 1000 Growth Index 37.2 %	Russell 2000 Value Index 24.5 %	Blmbg. Barc. U.S. Corp High Yield 5.0 %	Russell 1000 Value Index 17.5 %	Russell 2000 Value Index 34.5 %	Russell 1000 Growth Index 13.1 %	S&P 500 Index 1.4 %	Russell 1000 Value Index 17.3 %	MSCI EAFE (Net) Index 25.0 %	Russell 1000 Growth Index -1.5 %	Russell 2000 Index 14.6 %
	Russell 1000 Value Index 7.1 %	Russell 1000 Value Index 22.2 %	MSCI EAFE (Net) Index 11.2 %	Blmbg. Barc. U.S. Corp High Yield -26.2 %	Russell 2000 Growth Index 34.5 %	MSCI Emerging Markets (Net) Index 18.9 %	Bloomberg Barclays Global Aggregate Ex USD 4.4 %	MSCI EAFE (Net) Index 17.3 %	Russell 1000 Growth Index 33.5 %	NCREIF Fund Index-ODCE (EW) (Net) 11.4 %	Blmbg. Barc. U.S. Aggregate Index 0.5 %	Blmbg. Barc. U.S. Corp High Yield 17.1 %	Russell 2000 Growth Index 22.2 %	Blmbg. Barc. U.S. Corp High Yield -2.1 %	S&P 500 Index 13.6 %
	Russell 1000 Growth Index 5.3 %	Russell 2000 Index 18.4 %	Bloomberg Barclays Global Aggregate Ex USD 11.0 %	Russell 2000 Value Index -28.9 %	MSCI EAFE (Net) Index 31.8 %	Russell 1000 Growth Index 16.7 %	Russell 1000 Growth Index 2.6 %	Russell 2000 Index 16.3 %	Russell 1000 Value Index 32.5 %	Blmbg. Barc. U.S. Aggregate Index 6.0 %	MSCI EAFE (Net) Index -0.8 %	S&P 500 Index 12.0 %	S&P 500 Index 21.8 %	Bloomberg Barclays Global Aggregate Ex USD -2.1 %	Russell 1000 Value Index 11.9 %
	S&P 500 Index 4.9 %	S&P 500 Index 15.8 %	Russell 2000 Growth Index 7.0 %	Russell 2000 Index -33.8 %	Russell 2000 Index 27.2 %	Russell 1000 Value Index 15.5 %	S&P 500 Index 2.1 %	S&P 500 Index 16.0 %	S&P 500 Index 32.4 %	Russell 2000 Growth Index 5.6 %	Russell 2000 Growth Index -1.4 %	Russell 2000 Growth Index 11.3 %	Russell 2000 Index 14.6 %	S&P 500 Index -4.4 %	Russell 2000 Value Index 11.9 %
	Russell 2000 Value Index 4.7 %	NCREIF Fund Index-ODCE (EW) (Net) 15.1 %	Blmbg. Barc. U.S. Aggregate Index 7.0 %	Russell 1000 Value Index -36.8 %	S&P 500 Index 26.5 %	Blmbg. Barc. U.S. Corp High Yield 15.1 %	Russell 1000 Value Index 0.4 %	Blmbg. Barc. U.S. Corp High Yield 15.8 %	MSCI EAFE (Net) Index 22.8 %	Russell 2000 Index 4.9 %	Russell 1000 Value Index -3.8 %	MSCI Emerging Markets (Net) Index 11.2 %	Russell 1000 Value Index 13.7 %	Russell 1000 Value Index -8.3 %	MSCI EAFE (Net) Index 10.0 %
	Russell 2000 Index 4.6 %	Russell 2000 Growth Index 13.3 %	S&P 500 Index 5.5 %	S&P 500 Index -37.0 %	Russell 2000 Value Index 20.6 %	NCREIF Fund Index-ODCE (EW) (Net) 15.1 %	Russell 2000 Growth Index -2.9 %	Russell 1000 Growth Index 15.3 %	NCREIF Fund Index-ODCE (EW) (Net) 12.4 %	Russell 2000 Value Index 4.2 %	Russell 2000 Index -4.4 %	NCREIF Fund Index-ODCE (EW) (Net) 8.4 %	Bloomberg Barclays Global Aggregate Ex USD 10.5 %	Russell 2000 Growth Index -9.3 %	MSCI Emerging Markets (Net) Index 9.9 %
	Russell 2000 Growth Index 4.2 %	Blmbg. Barc. U.S. Corp High Yield 11.9 %	Blmbg. Barc. U.S. Corp High Yield 1.9 %	Russell 1000 Growth Index -38.4 %	Russell 1000 Value Index 19.7 %	S&P 500 Index 15.1 %	Russell 2000 Index -4.2 %	Russell 2000 Growth Index 14.6 %	Blmbg. Barc. U.S. Corp High Yield 7.4 %	Blmbg. Barc. U.S. Corp High Yield 2.5 %	Blmbg. Barc. U.S. Corp High Yield -4.5 %	Russell 1000 Growth Index 7.1 %	Russell 2000 Value Index 7.8 %	Russell 2000 Index -11.0 %	Blmbg. Barc. U.S. Corp High Yield 7.3 %
	Blmbg. Barc. U.S. Corp High Yield 2.7 %	Russell 1000 Growth Index 9.1 %	Russell 1000 Value Index -0.2 %	Russell 2000 Growth Index -38.5 %	Bloomberg Barclays Global Aggregate Ex USD 7.5 %	MSCI EAFE (Net) Index 7.8 %	Russell 2000 Value Index -5.5 %	NCREIF Fund Index-ODCE (EW) (Net) 9.9 %	Blmbg. Barc. U.S. Aggregate Index -2.0 %	MSCI Emerging Markets (Net) Index -2.2 %	Bloomberg Barclays Global Aggregate Ex USD -6.0 %	Blmbg. Barc. U.S. Aggregate Index 2.6 %	Blmbg. Barc. U.S. Corp High Yield 7.5 %	Russell 2000 Value Index -12.9 %	Blmbg. Barc. U.S. Aggregate Index 2.9 %
	Blmbg. Barc. U.S. Aggregate Index 2.4 %	Bloomberg Barclays Global Aggregate Ex USD 8.2 %	Russell 2000 Index -1.6 %	MSCI EAFE (Net) Index -43.4 %	Blmbg. Barc. U.S. Aggregate Index 5.9 %	Blmbg. Barc. U.S. Aggregate Index 6.5 %	MSCI EAFE (Net) Index -12.1 %	Blmbg. Barc. U.S. Aggregate Index 4.2 %	MSCI Emerging Markets (Net) Index -2.6 %	Bloomberg Barclays Global Aggregate Ex USD -3.1 %	Russell 2000 Value Index -7.5 %	Bloomberg Barclays Global Aggregate Ex USD 1.5 %	NCREIF Fund Index-ODCE (EW) (Net) 6.9 %	MSCI EAFE (Net) Index -13.8 %	Bloomberg Barclays Global Aggregate Ex USD 1.5 %
Worst	Bloomberg Barclays Global Aggregate Ex USD -8.7 %	Blmbg. Barc. U.S. Aggregate Index 4.3 %	Russell 2000 Value Index -9.8 %	MSCI Emerging Markets (Net) Index -53.3 %	NCREIF Fund Index-ODCE (EW) (Net) -31.3 %	Bloomberg Barclays Global Aggregate Ex USD 4.9 %	MSCI Emerging Markets (Net) Index -18.4 %	Bloomberg Barclays Global Aggregate Ex USD 4.1 %	Bloomberg Barclays Global Aggregate Ex USD -3.1 %	MSCI EAFE (Net) Index -4.9 %	MSCI Emerging Markets (Net) Index -14.9 %	MSCI EAFE (Net) Index 1.0 %	Blmbg. Barc. U.S. Aggregate Index 3.5 %	MSCI Emerging Markets (Net) Index -14.6 %	NCREIF Fund Index-ODCE (EW) (Net) 1.5 %

Source: Investment Metrics

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