Investment Performance Review
Period Ending June 30, 2019

Miami Beach Fire & Police Pension Fund

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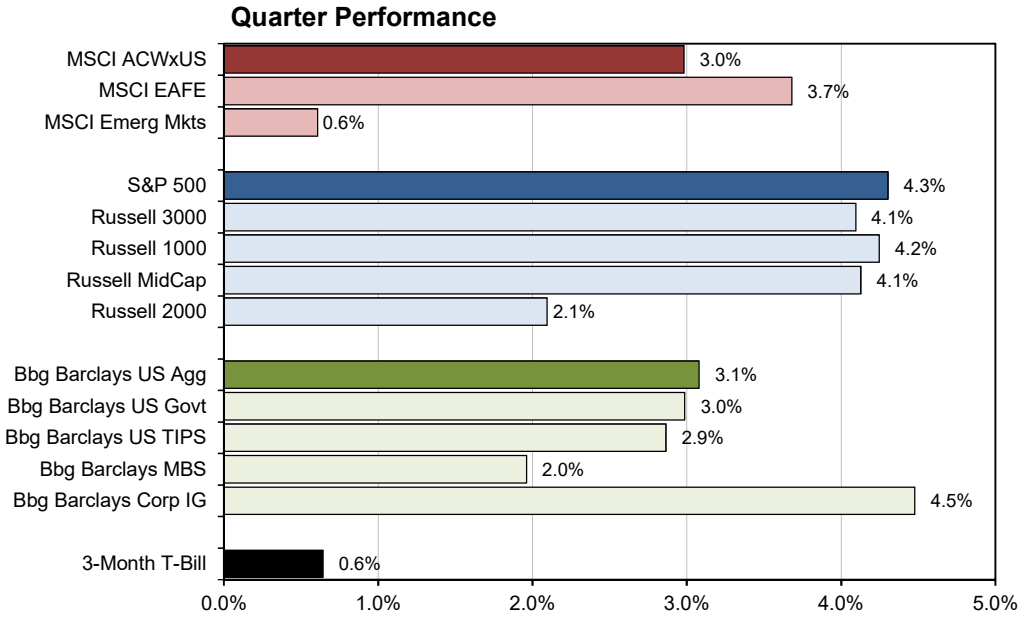
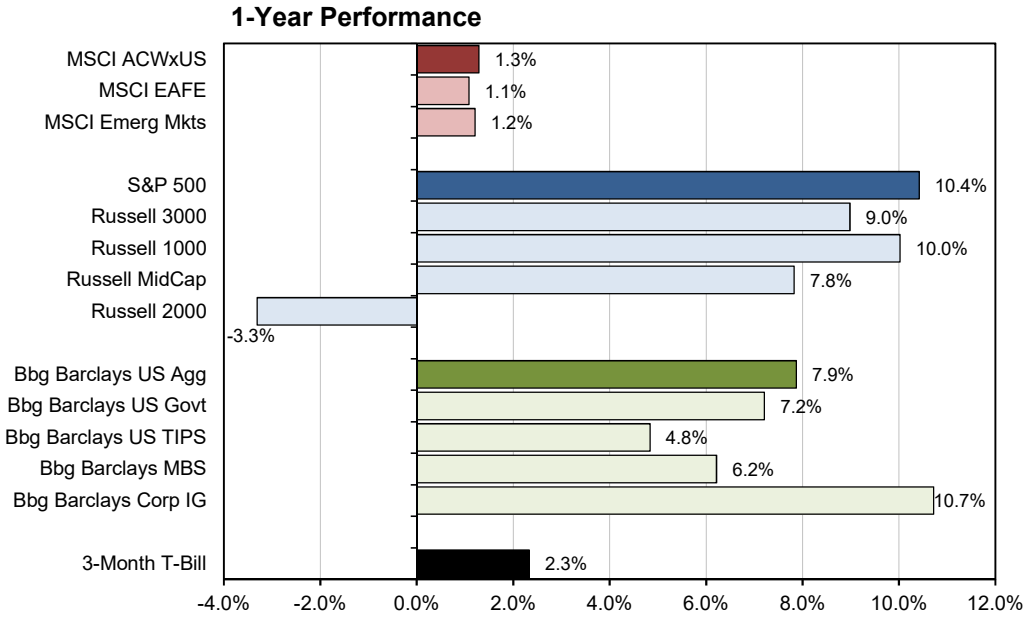
2nd Quarter 2019 Market Environment

- Broad asset class returns were positive during the 2nd quarter of 2019 with both equity and fixed income indices extending their year-to-date gains. US stocks outperformed international stocks during a very volatile quarter. Equity indices rose to start the period as progress in global trade negotiations outweighed signs of weakness in macroeconomic data. However, trade discussions between the US and China fell apart in May prompting increased tariffs and sharp declines in equity markets. The softening in economic data, stubbornly low inflation and the threat of slower future growth caused by ongoing disruption in trade led the Federal Reserve (Fed) to communicate a shift toward a more accommodative policy stance. This change in central bank posture caused markets to rebound strongly, ending the quarter higher for the period. Fixed income returns were also positive during the quarter as the prospect of more accommodative monetary policy pushed interest rates lower, increasing bond prices. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning 4.3% versus a 2.1% return on the small cap Russell 2000 Index. US equity returns over the 1-year period were positive within large and mid cap stocks, returning 10.4% and 7.8% respectively, but small cap stocks posted a loss, falling -3.3%.

- Similar to US markets, international markets were volatile during the 2nd quarter as investors reacted to mixed economic data, heightened geopolitical uncertainly, particularly around the outlook for global trade and Brexit, and increased accommodation in central bank policy with the European Central Bank (ECB) and People's Bank of China (PBoC) pledging additional stimulus if needed. Developed markets outperformed emerging markets during the period with the MSCI EAFE Index returning 3.7% versus a 0.6% return on the MSCI Emerging Markets Index. Both developing and emerging markets posted modest gains over the 1-year period, returning 1.1% and 1.2% respectively.

- Fixed income returns were in line with equities during the 2nd quarter. The broad market Bloomberg Barclays Aggregate Index returned 3.1% as a more dovish stance from the Fed and other global central banks pushed interest rates lower across the US Treasury Yield Curve. The curve steepened but remained inverted with shorter-term maturities paying higher interest rates than those in the middle of the curve. Investment grade corporate issues were the best performing securities for the second quarter in a row, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 4.5% for the period, as corporate credit had tailwinds due to 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 10.7% versus a 7.9% return for the Bloomberg Barclays Aggregate Index.



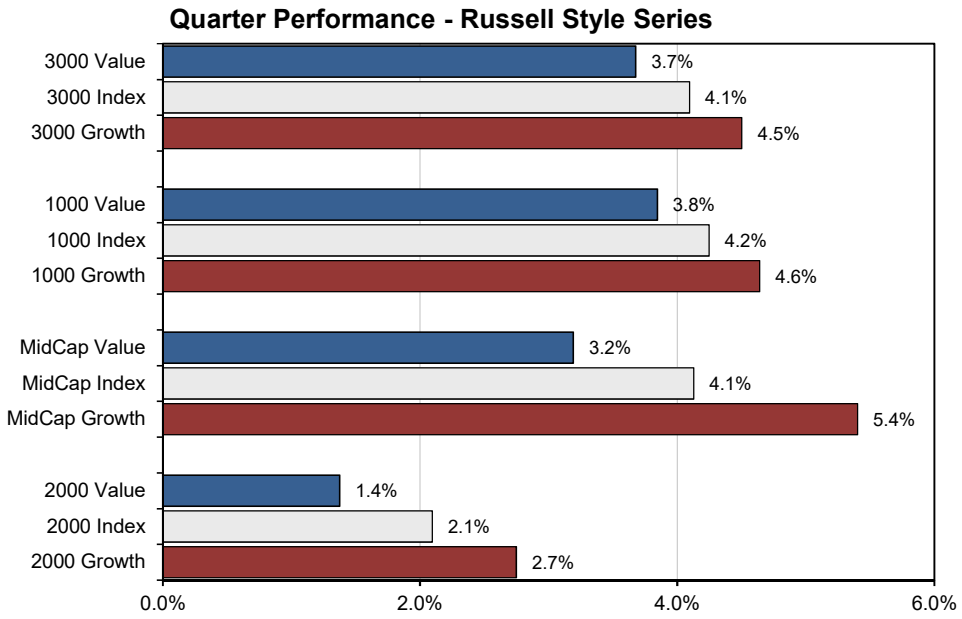


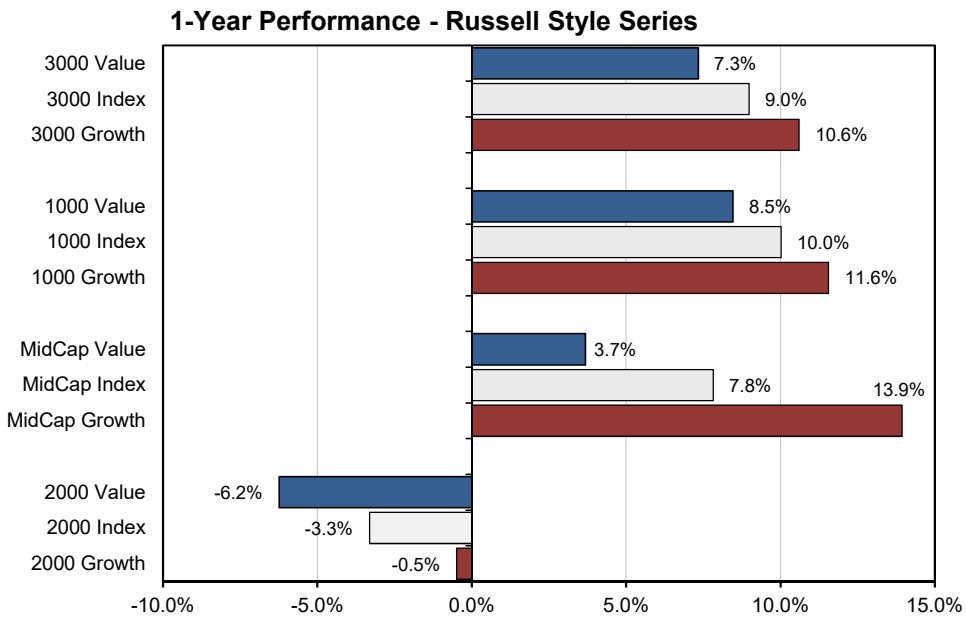
Source: Investment Metrics

- US equity index returns were modestly positive across the style and capitalization spectrum for the 2nd quarter. Corporate earnings reported during the quarter surprised to the upside, but economic data released during the period showed signs of slowing growth. Developments around global trade were particularly prominent during the period, heavily influencing market sentiment. Positive developments in trade negotiations with China came to an abrupt halt in May leading the US to increase tariffs on $200 billion of Chinese imports from 10% to 25% and announce that the US would consider tariffs on the remaining $300 billion in goods imported from China. China retaliated by increasing the tariff range on $60 billion of US goods from 5-10% to 5-25%. Additionally, the US instituted a ban on sales of technology equipment to Chinese telecommunications firm Huawei citing national security risks. China is expected to take similar action in retaliation although nothing has been announced. Trade talks are ready to resume and both sides have agreed to cease escalations following a meeting between President Trump and President Jinping at the G20 summit held at the end of the quarter. In addition, President Trump threatened a 5% tariff on all Mexican imports as a tact to reduce the level of illegal immigration at the US border with Mexico, and US waivers on sanctions for Iranian oil ended leading to increased tensions in the region that were further escalated after Iran downed a US drone. Despite these headwinds, markets rose following comments from an increasingly accommodative Fed as investors priced in greater odds of easy monetary policy going forward.

- During the quarter, higher market cap stocks outperformed lower market cap stocks across the style spectrum with the only exception being the outperformance of mid cap growth stocks relative to large cap growth stocks. The large cap Russell 1000 Index gained 4.2% during the period versus a 4.1% return for the Russell MidCap Index and a 2.1% gain on the small cap Russell 2000 Index as market participants may be moving toward the relative safety of large cap names as the economy continues to show growing signs of weakness. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 10.0% for the year while the Russell 2000 fell -3.3%.

- Growth indices outperformed value indices across the market cap spectrum during the 2nd quarter. Growth stocks have outperformed value in nine of the last ten quarters. The Russell MidCap Growth Index was the best performing style index for the period, returning 5.4% for the quarter with the small cap value index posting the lowest relative return, a gain of 1.4%. 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 energy which has been a relative detractor.

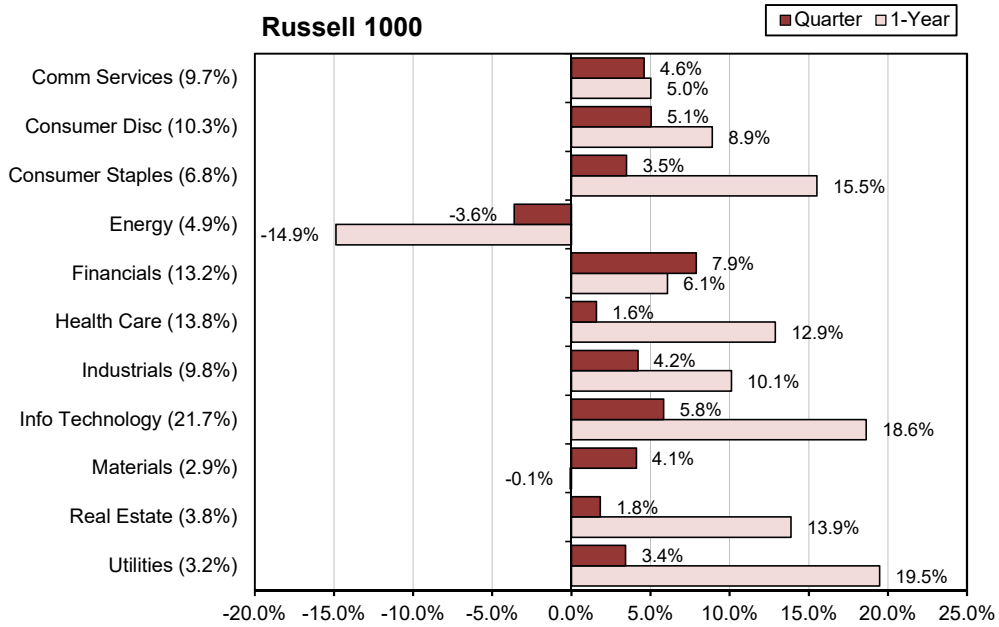


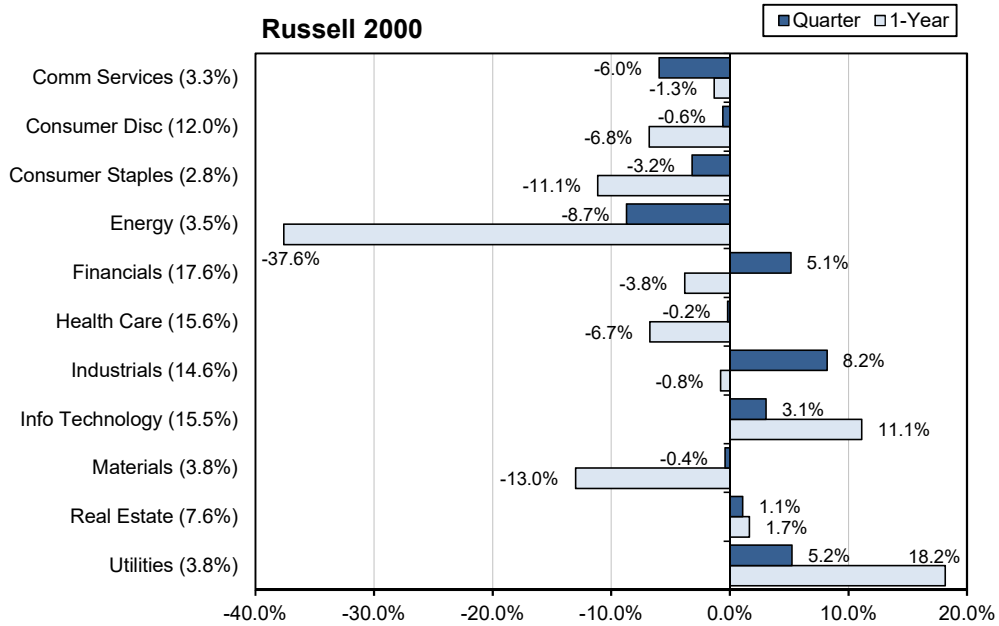


Source: Investment Metrics

- Sector performance was broadly positive across large cap sectors for the 2nd quarter. There were gains for ten out of eleven sectors within the Russell 1000 Index during the period with four sectors outpacing the return of the index. Cyclical sectors such as technology, industrials and consumer discretionary were some of the best performers through the quarter returning 5.8%, 4.2% and 5.1% respectively. Financials also outperformed, returning 7.9%, as investors weighed the benefits of continued economic expansion due to easing monetary policy against the effects of lower interest rates on bank earnings. More defensive higher yielding sectors such as consumer staples, real estate and utilities underperformed for the quarter returning 3.5%, 1.8% and 3.4% respectively. The energy sector was the only large cap sector to post a negative return during the quarter, falling -3.6%, as headwinds from weakening economic data and low oil and natural gas prices weighed on 1st quarter earnings. Health care stocks also lagged as continued discussions in Washington around the potential for increased regulation on drug pricing acted as a headwind. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Defensive sectors such as utilities, REITs and consumer staples performed well returning 19.5%, 13.9% and 15.5% respectively. Technology returns were also strong gaining 18.6%. Energy and materials were the only sectors to post negative results over the 1-year period with energy falling -14.9% and materials returning -0.1%.

- Quarterly results for small cap sectors were generally worse than their large capitalization counterparts with only two of eleven sectors (industrials and utilities) outperforming their corresponding large cap equivalents. Five of eleven sectors produced gains during the period with four of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Similar to large caps, cyclical sectors performed well on hopes that any Fed policy easing would counteract the recent weakness in economic growth. The industrials sector performed particularly well returning 8.2%, financials posted a 5.1% gain and technology returned 3.1%. Utilities also outperformed returning 5.2%. The largest detractors over the period were energy and communication services which returned -8.7% and -6.0% respectively. Over the trailing 1-year period, returns were broadly negative. Utilities and technology were relative bright spots returning 18.2% and 11.1%. The energy sector was an outlier in terms of negative returns losing -37.6% during the period. There were also notable losses in materials and consumer staples with materials losing -13.0% and consumer staples falling -11.1%.





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 Communicatio Services sector.

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

As of June 30, 2019

Top 10 Weighted Stocks				
Russell 1000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
Microsoft Corp	3.71%	14.0%	37.5%	Information Technology
Apple Inc	3.44%	4.6%	8.6%	Information Technology
Amazon.com Inc	2.85%	6.3%	11.4%	Consumer Discretionary
Facebook Inc A	1.68%	15.8%	-0.7%	Communication Services
Berkshire Hathaway Inc B	1.51%	6.1%	14.2%	Financials
Johnson & Johnson	1.37%	0.3%	17.9%	Health Care
JPMorgan Chase & Co	1.35%	11.3%	10.3%	Financials
Alphabet Inc Class C	1.20%	-7.9%	-3.1%	Communication Services
Exxon Mobil Corp	1.19%	-4.1%	-3.3%	Energy
Alphabet Inc A	1.18%	-8.0%	-4.1%	Communication Services

Top 10 Weighted Stocks				
Russell 2000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
Array BioPharma Inc	0.48%	90.0%	176.1%	Health Care
The Trade Desk Inc A	0.37%	15.1%	142.8%	Information Technology
Etsy Inc	0.36%	-8.7%	45.5%	Consumer Discretionary
Coupa Software Inc	0.35%	39.2%	103.4%	Information Technology
Five Below Inc	0.32%	-3.4%	22.8%	Consumer Discretionary
Planet Fitness Inc A	0.31%	5.4%	64.9%	Consumer Discretionary
HubSpot Inc	0.31%	2.6%	36.0%	Information Technology
Haemonetics Corp	0.30%	37.6%	34.2%	Health Care
Woodward Inc	0.30%	19.4%	48.0%	Industrials
Ciena Corp	0.29%	10.1%	55.1%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 1000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
Adient PLC	0.01%	87.3%	-50.0%	Consumer Discretionary
Anadarko Petroleum Corp	0.13%	55.8%	-1.6%	Energy
Cypress Semiconductor Corp	0.03%	49.8%	46.9%	Information Technology
Okta Inc A	0.04%	49.3%	145.2%	Information Technology
Erie Indemnity Co Class A	0.02%	43.2%	122.5%	Financials
Heico Corp	0.02%	41.1%	83.9%	Industrials
Legg Mason Inc-LeggMason RETAIL	0.01%	39.9%	14.4%	Financials
Exact Sciences Corp	0.05%	36.3%	97.4%	Health Care
Caesars Entertainment Corp	0.02%	36.0%	10.5%	Consumer Discretionary
Ardagh Group SA	0.00%	35.9%	9.6%	Materials

Top 10 Performing Stocks (by Quarter)				
Russell 2000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
Iovance Biotherapeutics Inc	0.13%	157.8%	91.6%	Health Care
Arqule Inc	0.06%	129.9%	99.1%	Health Care
Adverum Biotechnologies Inc	0.03%	126.9%	124.3%	Health Care
Chimerix Inc	0.01%	105.7%	-9.2%	Health Care
Enphase Energy Inc	0.08%	97.5%	170.9%	Information Technology
Maxar Technologies Inc	0.02%	94.8%	-84.0%	Industrials
Array BioPharma Inc	0.48%	90.0%	176.1%	Health Care
Melinta Therapeutics Inc	0.00%	87.3%	-79.1%	Health Care
G1 Therapeutics Inc	0.03%	84.7%	-29.5%	Health Care
Foundation Building Materials Inc	0.01%	80.7%	15.6%	Industrials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
2U Inc	0.01%	-46.9%	-55.0%	Information Technology
Alkermes PLC	0.01%	-38.2%	-45.2%	Health Care
Range Resources Corp	0.01%	-37.7%	-58.0%	Energy
Antero Resources Corp	0.00%	-37.4%	-74.1%	Energy
Chesapeake Energy Corp	0.01%	-37.1%	-62.8%	Energy
RPC Inc	0.00%	-36.5%	-48.8%	Energy
Realogy Holdings Corp	0.00%	-35.8%	-67.4%	Real Estate
The Chemours Co	0.02%	-34.7%	-44.2%	Materials
United Therapeutics Corp	0.01%	-33.5%	-31.0%	Health Care
Mylan NV	0.04%	-32.8%	-47.3%	Health Care

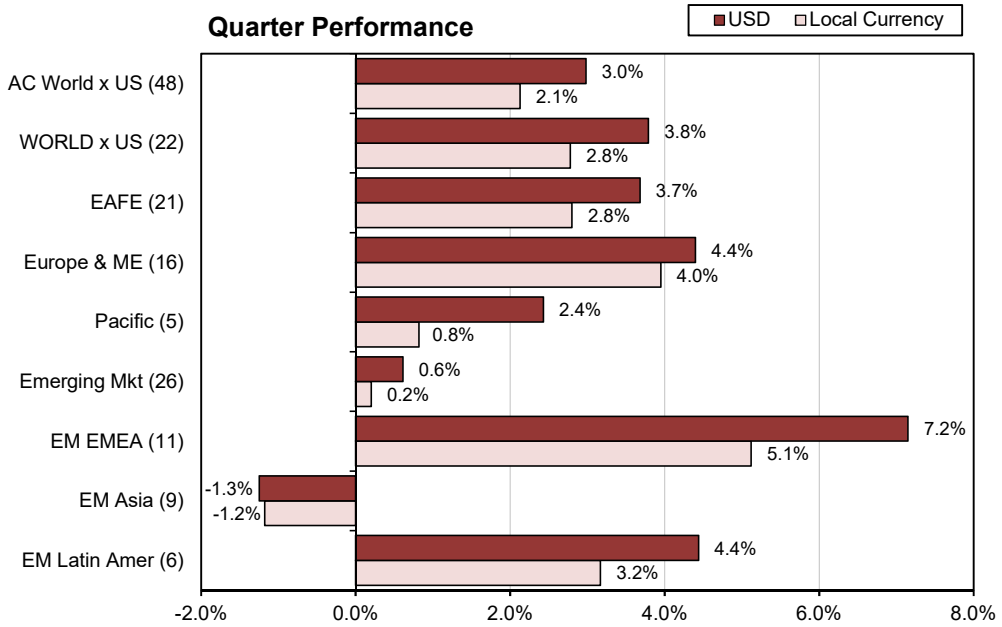
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	**Weight**	**1-Qtr Return**	**1-Year Return**	**Sector**
FuelCell Energy Inc	0.00%	-94.0%	-98.9%	Industrials
Halcon Resources Corp	0.00%	-86.9%	-96.0%	Energy
Pioneer Energy Services Corp	0.00%	-85.7%	-95.7%	Energy
Eros International PLC	0.00%	-85.2%	-89.6%	Communication Services
Superior Energy Services Inc	0.01%	-72.2%	-86.7%	Energy
electroCore Inc	0.00%	-71.4%	-87.9%	Health Care
Ultra Petroleum Corp	0.00%	-70.5%	-92.2%	Energy
Nuvectra Corp	0.00%	-69.6%	-83.7%	Health Care
Dean Foods Co	0.00%	-69.5%	-91.1%	Consumer Staples
Kirkland's Inc	0.00%	-67.9%	-80.6%	Consumer Discretionary

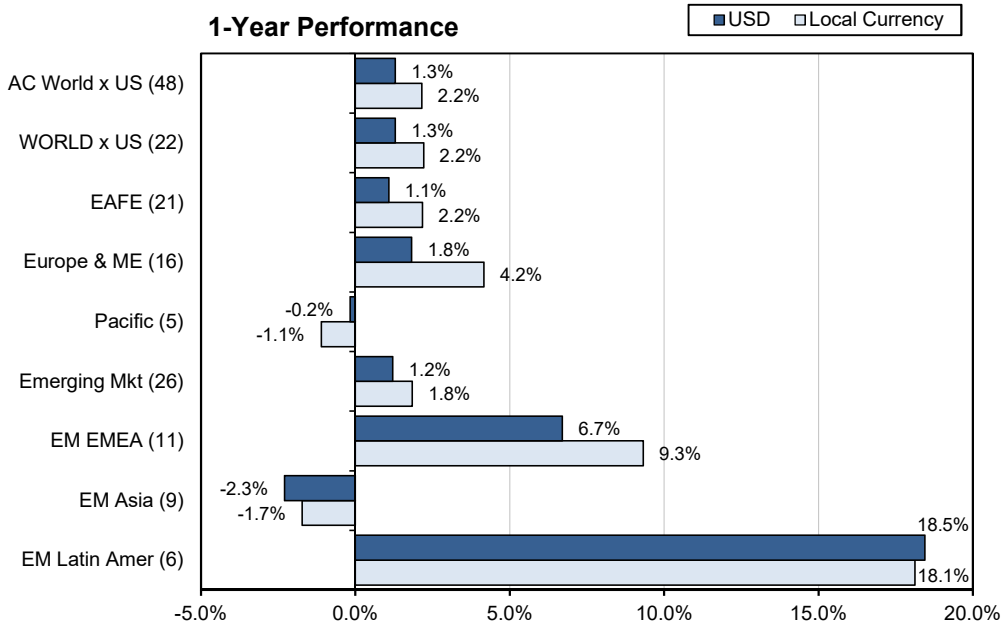
Source: Morningstar Direct

- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 2.1% in local currency terms and 3.0% in US dollar (USD) terms during the 2nd quarter. Similar to US markets, international equity investors balanced difficulties around global trade with central bank shifts toward more accommodative policies as a response to slowing global growth. Notably the ECB President Mario Draghi stated that further monetary policy action may need to be taken if inflation remains below target and the PBoC launched stimulus measures designed to encourage growth following the deterioration of trade negotiations with the US. Returns in USD largely outperformed those in local currency during the quarter as the USD depreciated against most major developed currencies following dovish Fed comments in June. However, the recent USD strength can still be seen over the 1-year period with USD returns trailing most local currency returns. Returns for the MSCI ACWI ex US Index were 2.2% in local currency terms and 1.3%in USD terms for the trailing year.

- Results for developed market international indices were positive in both local currency and USD terms during the 2nd quarter, with the MSCI EAFE Index returning 2.8% and 3.7% respectively. Outside of central bank policy and trade, there was notable news out of the UK with Prime Minister Theresa May resigning from her post after her Brexit withdrawal plan failed to gain parliamentary approval and a new vote for the office is currently underway. UK markets were pressured by continued uncertainty around Brexit with the UK having until October to strike an agreement with the European Union (EU) or withdraw with no agreement in place. Despite the growing uncertainty, the Bank of England (BoE) left monetary policy unchanged. Japan also underperformed as the yen appreciated due to its perceived safe haven status and trade headwinds were expected to affect its export driven economy. The MSCI EAFE Index returned 2.2% and 1.1% for the last twelve months in local currency and USD terms respectively.

- Emerging markets underperformed relative to developed markets for the 2nd quarter, slightly appreciating in both local currency and USD terms. The MSCI Emerging Markets Index gained 0.2% and 0.6% respectively. As expected, geopolitical tensions around trade put pressure on emerging market stocks, with Chinese equities underperforming relative to most countries. Latin American stocks performed well with Brazil and Argentina posting strong returns as commodity prices appreciated from recent lows at the end of 2018 and interest rates fell. Russian equities also performed well, benefiting from increasing commodity prices, but also had a tailwind from a decrease in the likelihood of future US sanctions. One year returns for the MSCI Emerging Market Index were 1.8% in local currency terms and 1.2% in USD terms.





Source: MSCI Global Index Monitor (Returns are Net)

US Dollar International Index Attribution & Country Detail

As of June 30, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	4.0%	4.3%
Consumer Discretionary	11.1%	5.9%	-2.6%
Consumer Staples	11.7%	1.9%	4.8%
Energy	5.6%	0.4%	-5.5%
Financials	18.9%	4.3%	-2.9%
Health Care	11.2%	2.0%	7.5%
Industrials	14.8%	5.9%	2.4%
Information Technology	6.7%	6.6%	2.7%
Materials	7.4%	3.9%	0.2%
Real Estate	3.6%	-2.2%	2.3%
Utilities	3.6%	1.5%	9.8%
Total	**100.0%**	**3.7%**	**1.1%**

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.9%	1.0%	5.6%
Consumer Discretionary	11.3%	3.8%	-3.6%
Consumer Staples	9.8%	2.2%	4.6%
Energy	7.2%	0.5%	-1.4%
Financials	21.9%	4.4%	2.0%
Health Care	8.3%	1.2%	4.2%
Industrials	11.9%	5.2%	2.9%
Information Technology	8.5%	4.0%	-0.7%
Materials	7.6%	2.9%	-0.5%
Real Estate	3.3%	-1.6%	4.3%
Utilities	3.3%	2.2%	10.1%
Total	**100.0%**	**3.0%**	**1.3%**

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	11.7%	-2.4%	4.5%
Consumer Discretionary	13.5%	-1.2%	-7.6%
Consumer Staples	6.6%	3.3%	0.9%
Energy	7.9%	1.2%	16.3%
Financials	25.2%	4.0%	11.9%
Health Care	2.6%	-6.6%	-24.7%
Industrials	5.3%	0.0%	4.1%
Information Technology	13.9%	-0.1%	-6.1%
Materials	7.6%	-1.2%	-1.9%
Real Estate	3.0%	-0.2%	10.1%
Utilities	2.7%	2.9%	9.0%
Total	**100.0%**	**0.6%**	**1.2%**

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	23.7%	15.8%	1.0%	-4.2%
United Kingdom	16.8%	11.2%	0.9%	-2.1%
France	11.4%	7.6%	6.5%	3.0%
Switzerland	9.3%	6.2%	8.4%	19.8%
Germany	8.8%	5.9%	7.1%	-3.8%
Australia	7.1%	4.8%	7.3%	6.6%
Hong Kong	4.0%	2.7%	1.0%	10.4%
Netherlands	3.6%	2.4%	5.8%	5.3%
Spain	3.0%	2.0%	2.6%	-2.1%
Sweden	2.7%	1.8%	4.9%	3.4%
Italy	2.3%	1.6%	2.9%	-0.7%
Denmark	1.7%	1.1%	1.6%	5.8%
Singapore	1.4%	0.9%	7.0%	8.3%
Finland	1.0%	0.7%	0.2%	-4.7%
Belgium	1.0%	0.7%	1.2%	-9.1%
Norway	0.7%	0.5%	2.4%	-4.3%
Israel	0.6%	0.4%	-3.6%	-4.5%
Ireland	0.5%	0.4%	4.7%	-9.2%
New Zealand	0.3%	0.2%	3.9%	16.0%
Austria	0.2%	0.2%	0.8%	-13.1%
Portugal	0.2%	0.1%	1.6%	-4.6%
Total EAFE Countries	**100.0%**	**66.8%**	**3.7%**	**1.1%**
Canada		6.8%	4.9%	3.3%
Total Developed Countries		**73.6%**	**3.8%**	**1.3%**
China		8.3%	-4.0%	-6.7%
Korea		3.3%	-1.0%	-9.1%
Taiwan		2.9%	0.9%	1.1%
India		2.4%	0.5%	7.9%
Brazil		2.0%	7.2%	39.4%
South Africa		1.6%	6.6%	-0.8%
Russia		1.1%	16.9%	27.1%
Thailand		0.8%	9.3%	19.8%
Saudi Arabia		0.8%	0.6%	11.0%
Mexico		0.7%	1.1%	-7.4%
Indonesia		0.6%	3.2%	20.3%
Malaysia		0.6%	1.2%	-0.8%
Philippines		0.3%	4.4%	19.7%
Poland		0.3%	3.5%	10.5%
Qatar		0.3%	0.6%	18.8%
Chile		0.2%	-5.6%	-12.1%
United Arab Emirates		0.2%	-2.7%	3.0%
Turkey		0.1%	2.8%	-17.1%
Colombia		0.1%	-2.4%	-3.7%
Peru		0.1%	-1.9%	3.5%
Argentina		0.1%	31.7%	15.8%
Greece		0.1%	16.2%	-9.2%
Hungary		0.1%	-4.1%	12.7%
Czech Republic		0.0%	2.6%	1.1%
Egypt		0.0%	7.8%	5.4%
Pakistan		0.0%	-20.8%	-36.7%
Total Emerging Countries		**26.4%**	**0.6%**	**1.2%**
Total ACWIxUS Countries		**100.0%**	**3.0%**	**1.3%**

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 Communicatio Services sector.

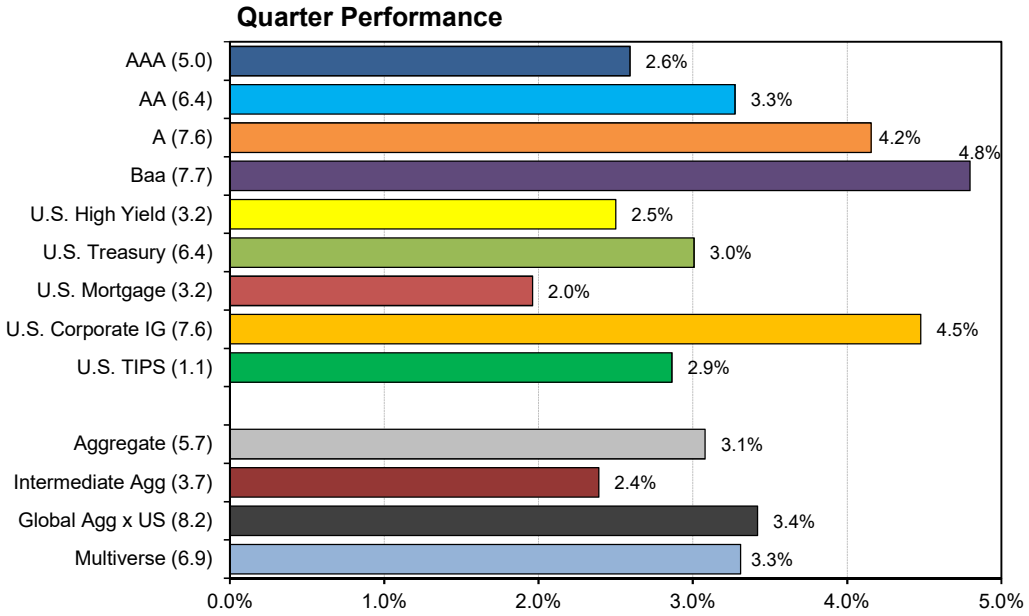
Domestic Bond Sector & Broad/Global Bond Market Performance (Duration)

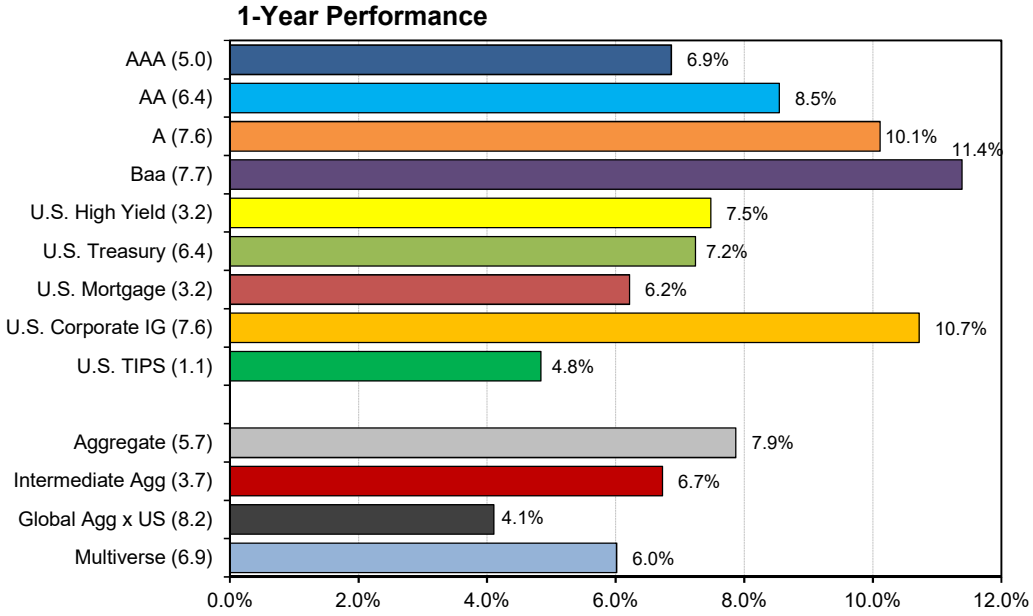
As of June 30, 2019

- Broad fixed income benchmarks built on their early 2019 gains during the 2nd quarter. During the 1st quarter, the Federal Open Market Committee (FOMC) reacted to a difficult end to 2018 by issuing guidance that the FOMC is no longer projecting any further interest rate increases through 2019. Federal Reserve Chair Jerome Powell also stated that the Fed would begin tapering the roll off from the planned 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. The Fed took an increasingly dovish stance during the 2nd quarter reacting to softening economic data, tepid inflation and increased risks around global trade. While the committee left interest rates unchanged, the minutes from the June FOMC meeting indicate that the committee felt "downside risks to the outlook for economic activity had risen materially" during the quarter with several participants noting that a "near-term cut in the target range for the Federal Funds Rate could help cushion the effects of possible future adverse shocks to the economy". These comments led market participants to forecast greater odds of an interest rate cut this year, pushing markets higher. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. The curve remains inverted with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 3.1% and 7.9% 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 4.8% for the quarter, while AAA was the worst performing, returning 2.6%. High yield issues returned 2.5% for the quarter as these issues did not commensurately benefit from the drop in interest rates due to their lower durations. Returns over the 1-year period generally show lower quality securities outperforming higher quality issues.

- Investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors during the 2nd quarter. Investment grade corporate credit returned 4.5%, as falling interest rates benefitted these securities to a greater degree and credit spreads have continued to tighten since the end of 2018. When viewed over the 1-year period, corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 10.7% versus a 6.2% return for mortgages and 7.2% gain on Treasury securities.



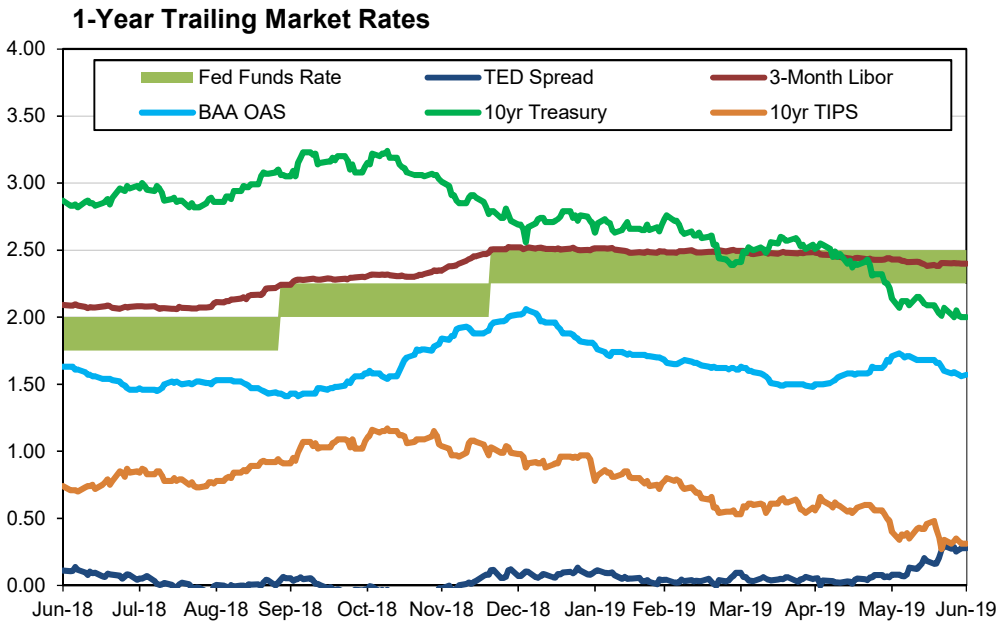


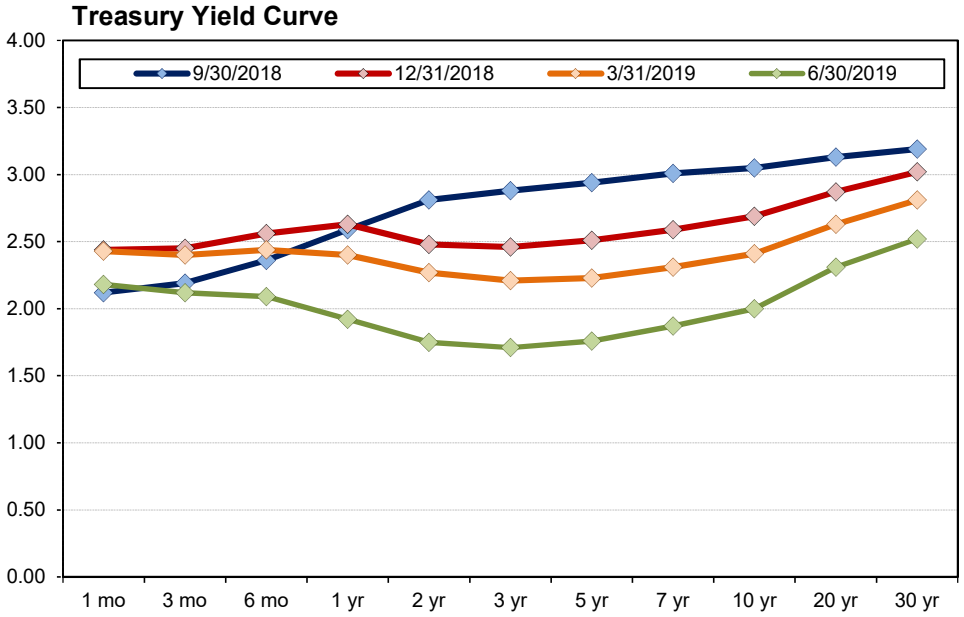
Source: Bloomberg

- Global fixed income returns were in line with their domestic counterparts, slightly outperforming during the 2nd quarter. These indices have lower, or in some cases (Germany, Japan), negative yields, but have higher durations. The returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD depreciated against most other developed currencies, acting as a tailwind to global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 3.4%. Global bonds still trail over the 1-year period with the Global Aggregate ex US Index returning 4.1% versus a 7.9% return on the domestically focused Barclays Aggregate Index. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. The ECB and the PBoC have moved toward an easing of monetary policy and implemented various stimulus programs designed to support their respective economies. 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 2.0% to end the 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 an abrupt increase in credit spreads during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads dropped steadily until they rose again in May and then later declined in June. 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 6 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. There have been no changes to the Federal Funds Rate 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 in interest rates as well as a general steepening 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.





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.	●	

Intercontinental	Yes	No
The return equaled or exceed the benchmark over the trailing three year period. (One Year)	●	
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. (One Year)		●
The five year return ranks in the top 40% of its peers. (Inception)		●

"Net returns" used when available.

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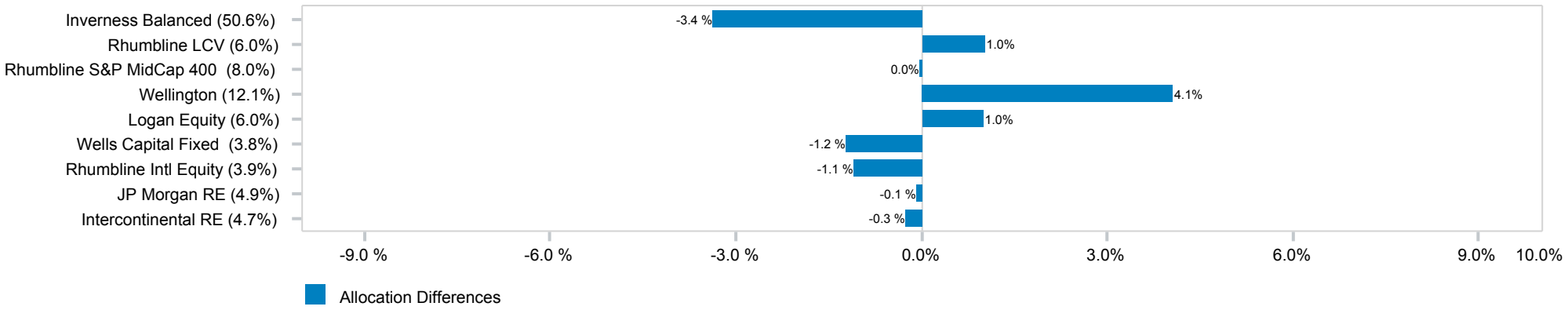
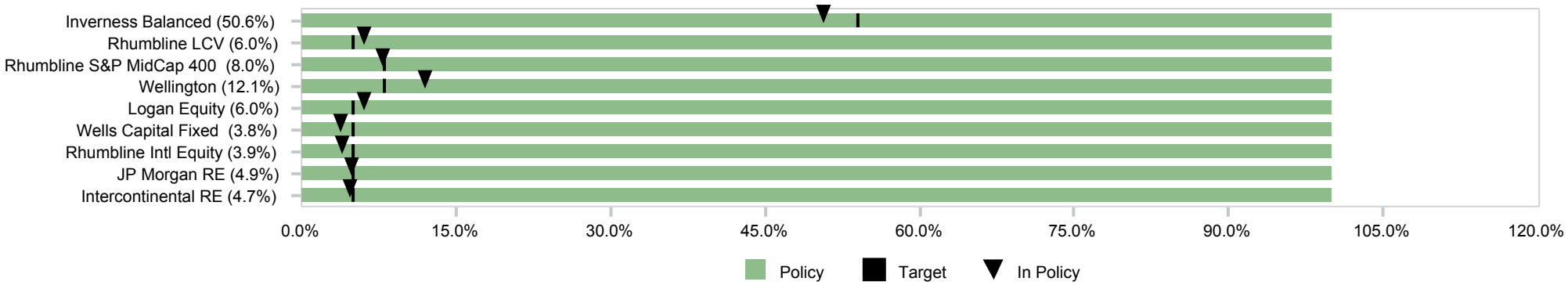
Asset Allocation Compliance

	Asset Allocation $	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. ($000)
Total Fund Composite	926,657,220	100.0	100.0	0.0	-
Inverness Balanced	469,196,091	50.6	54.0	-3.4	31,198,808
Rhumbline LCV	55,756,647	6.0	5.0	1.0	-9,423,786
Rhumbline S&P MidCap 400	73,751,742	8.0	8.0	0.0	380,836
Wellington	111,707,044	12.1	8.0	4.1	-37,574,466
Logan Equity	55,660,530	6.0	5.0	1.0	-9,327,669
Wells Capital Fixed	35,054,531	3.8	5.0	-1.2	11,278,330
Rhumbline Intl Equity	36,110,307	3.9	5.0	-1.1	10,222,554
JP Morgan RE	45,552,797	4.9	5.0	-0.1	780,064
Intercontinental RE	43,867,531	4.7	5.0	-0.3	2,465,330

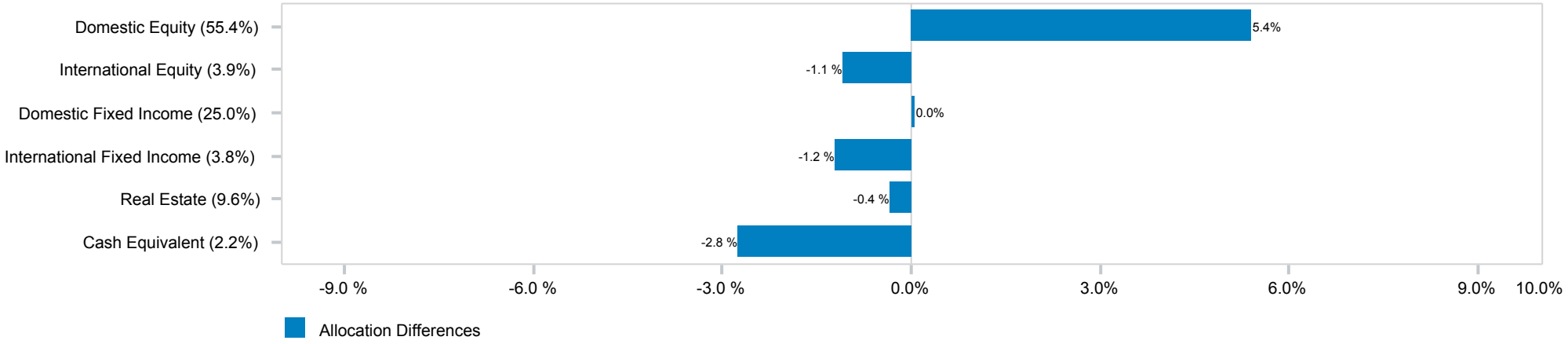


Executive Summary

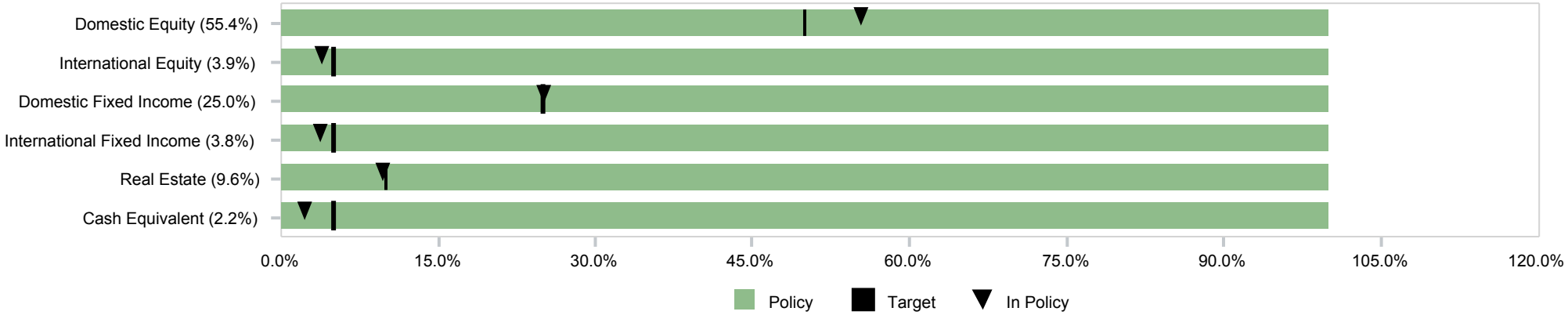


Asset Allocation Compliance

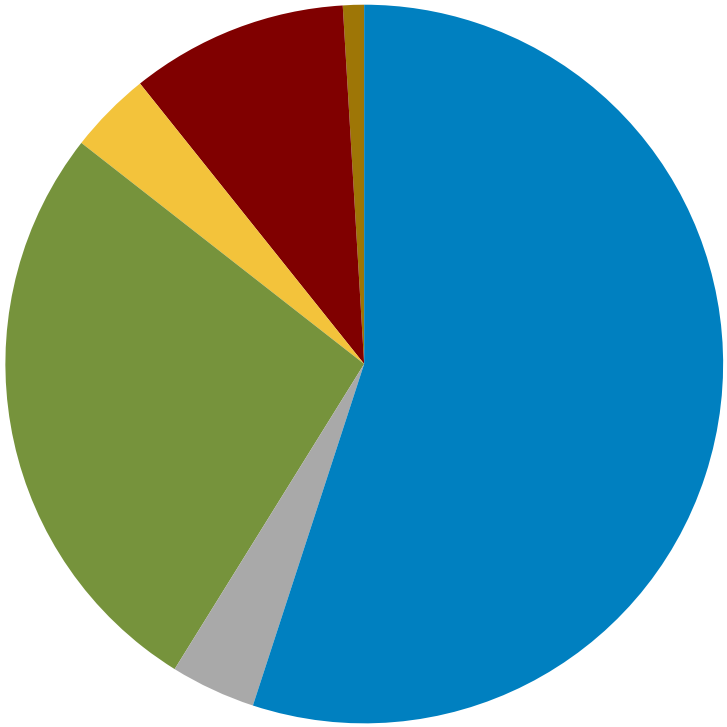
	Asset Allocation $	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. ($000)
Domestic Equity	513,260,665	55.4	50.0	5.4	-49,932,055
International Equity	36,110,307	3.9	5.0	-1.1	10,222,554
Domestic Fixed Income	232,118,979	25.0	25.0	0.0	-454,674
International Fixed Income	35,054,076	3.8	5.0	-1.2	11,278,785
Real Estate	89,420,328	9.6	10.0	-0.4	3,245,394
Cash Equivalent	20,692,865	2.2	5.0	-2.8	25,639,996
Total Fund	926,657,220	100.0	100.0	0.0	-



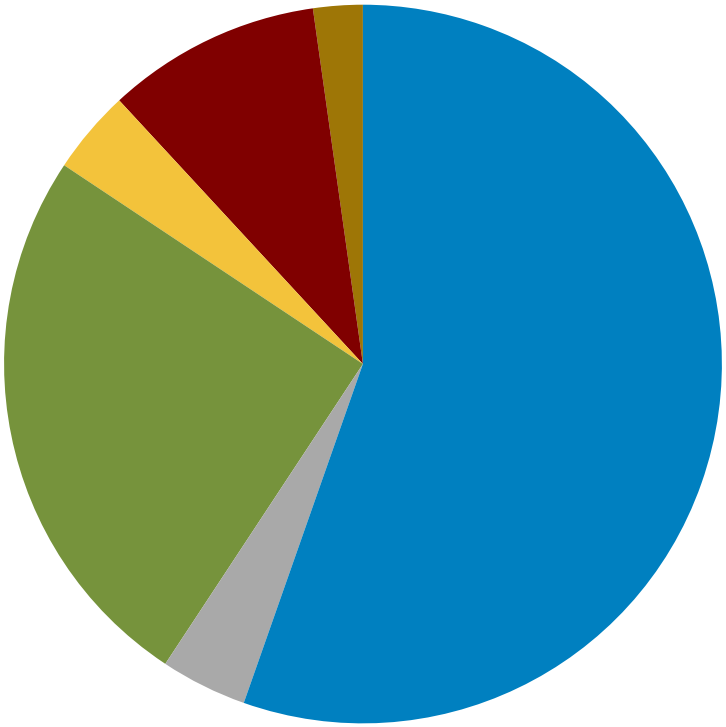
Executive Summary



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



Asset Allocation By Segment as of June 30, 2019 : $926,657,220



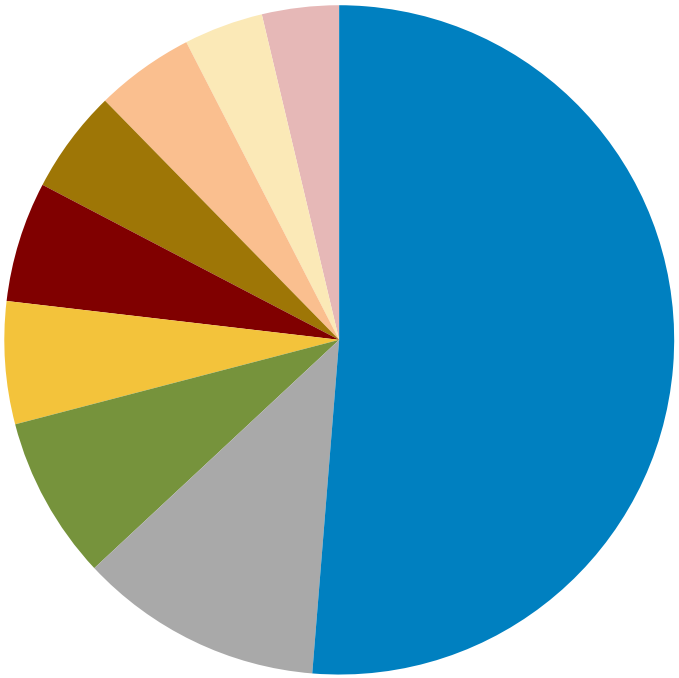
Allocation

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

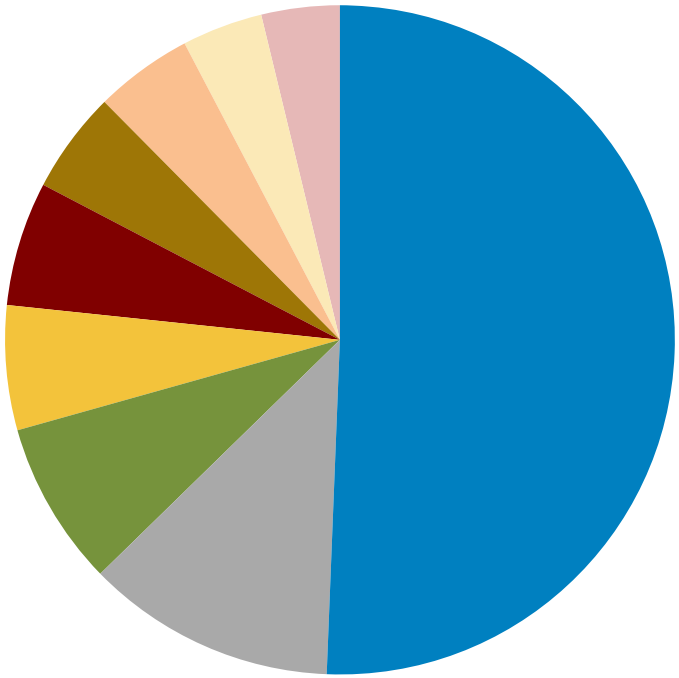
Allocation

Segments	Market Value	Allocation
Domestic Equity	513,260,665	55.4
International Equity	36,110,307	3.9
Domestic Fixed Income	232,118,979	25.0
International Fixed Income	35,054,076	3.8
Real Estate	89,420,328	9.6
Cash Equivalent	20,692,865	2.2

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



Asset Allocation By Manager as of June 30, 2019 : $926,657,220



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

Allocation

	Market Value	Allocation
Inverness Balanced	469,196,091	50.6
Wellington	111,707,044	12.1
Rhumbline S&P MidCap 400	73,751,742	8.0
Rhumbline LCV	55,756,647	6.0
Logan Equity	55,660,530	6.0
JP Morgan RE	45,552,797	4.9
Intercontinental RE	43,867,531	4.7
Rhumbline Intl Equity	36,110,307	3.9
Wells Capital Fixed	35,054,531	3.8

Financial Reconciliation Quarter to Date

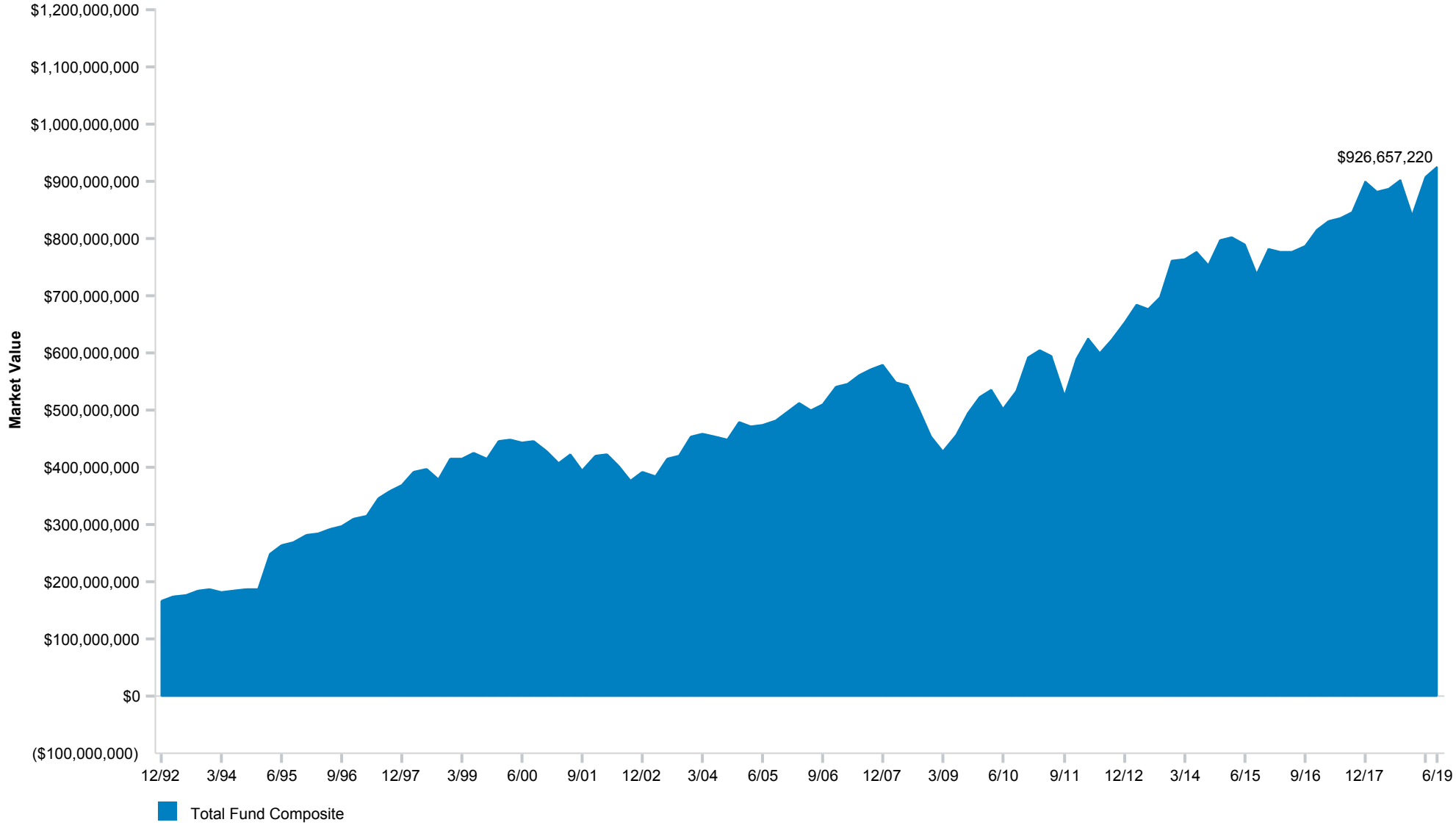
	Market Value 04/01/2019	Apprec./ Deprec.	Income	Net Flows	Management Fees	Market Value 06/30/2019
Inverness Balanced	465,362,860	17,286,799	2,897,128	-13,453,568	-403,604	469,196,091
Logan Equity	52,756,995	2,794,556	108,979	108,979	-	55,660,530
Rhumbline LCV	53,690,833	2,065,814	-	-	-6,615	55,756,647
Wellington	106,787,921	4,919,123	-	-	-157,533	111,707,044
Rhumbline S&P MidCap 400	71,569,006	1,861,258	321,478	321,478	-8,857	73,751,742
Rhumbline Intl Equity	34,787,764	1,322,543	-	-	-4,291	36,110,307
Wells Capital Fixed	33,689,649	1,364,475	-	406	-29,967	35,054,531
JP Morgan RE	45,453,652	518,028	-	-418,883	-113,634	45,552,797
Intercontinental RE	43,341,246	311,972	316,939	214,313	-102,626	43,867,531
Total Fund Composite	**907,439,926**	**32,444,569**	**3,644,524**	**-13,227,275**	**-827,127**	**926,657,220**

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	217,020,883	46.25	-	-	232,118,979	49.47	-	-	-	-	20,056,229	4.27	469,196,091	50.63
Logan Equity	55,155,717	99.09	-	-	-	-	-	-	-	-	504,813	0.91	55,660,530	6.01
Rhumbline LCV	55,756,647	100.00	-	-	-	-	-	-	-	-	-	-	55,756,647	6.02
Wellington	111,707,044	100.00	-	-	-	-	-	-	-	-	-	-	111,707,044	12.05
Rhumbline S&P MidCap 400	73,620,374	99.82	-	-	-	-	-	-	-	-	131,368	0.18	73,751,742	7.96
Rhumbline Intl Equity	-	-	36,110,307	100.00	-	-	-	-	-	-	-	-	36,110,307	3.90
Wells Capital Fixed	-	-	-	-	-	-	35,054,076	100.00	-	-	455	0.00	35,054,531	3.78
JP Morgan RE	-	-	-	-	-	-	-	-	45,552,797	100.00	-	-	45,552,797	4.92
Intercontinental RE	-	-	-	-	-	-	-	-	43,867,531	100.00	-	-	43,867,531	4.73
Total Fund Composite	**513,260,665**	**55.39**	**36,110,307**	**3.90**	**232,118,979**	**25.05**	**35,054,076**	**3.78**	**89,420,328**	**9.65**	**20,692,865**	**2.23**	**926,657,220**	**100.00**

Schedule of Investable Assets



Schedule of Investable Assets

Periods Ending	Beginning Market Value $	Ending Market Value $	%Return
Inception	161,588,000	926,657,220	8.00

Asset Allocation & Performance

	Allocation		Performance(%)														
	Market Value $	%	QTD		FYTD		1 YR		3 YR		5 YR		Inception		Inception Date
Total Fund Composite (Gross)	**926,657,220**	**100.0**	**4.02**	**(3)**	**4.16**	**(25)**	**7.96**	**(10)**	**9.51**	**(23)**	**6.90**	**(11)**	**8.28**	**(24)**	**10/01/1992**
Total Policy Index			3.21	(53)	3.43	(51)	6.93	(31)	8.47	(67)	6.48	(28)	7.67	(59)	
Difference			0.81		0.73		1.03		1.04		0.42		0.61		
All Public Plans-Total Fund Median			3.23		3.45		6.37		8.90		5.99		7.79		
Total Fund Composite (Net)	926,657,220	100.0	3.92		3.83		7.52		9.09		6.48		8.00		10/01/1992
Total Policy Index			3.21		3.43		6.93		8.47		6.48		7.67		
Difference			0.71		0.40		0.59		0.62		0.00		0.33		
Balanced Fund															
Inverness Balanced (Gross)	469,196,091	50.6	4.40	(5)	6.00	(13)	10.10	(13)	7.70	(69)	6.19	(41)	5.90	(73)	01/01/2000
Inverness Balanced Policy			3.48	(48)	5.37	(19)	8.78	(30)	7.09	(71)	5.97	(49)	5.10	(96)	
Difference			0.92		0.63		1.32		0.61		0.22		0.80		
IM U.S. Balanced (SA+CF) Median			3.45		2.46		6.92		9.09		5.87		7.08		
Inverness Balanced (Net)	469,196,091	50.6	4.32		5.74		9.73		7.34		5.83		5.55		01/01/2000
Inverness Balanced Policy			3.48		5.37		8.78		7.09		5.97		5.10		
Difference			0.84		0.37		0.95		0.25		-0.14		0.45		
Total Equity Composite (Gross)	**513,260,665**	**55.4**	**5.03**		**1.81**		**7.97**		**15.00**		**9.71**		**11.09**		**10/01/1990**
Total Equity Policy			3.76		0.26		6.21		13.10		9.09		10.33		
Difference			1.27		1.55		1.76		1.90		0.62		0.76		
Inverness Equity (Gross)	217,020,883	23.4	6.08	(12)	2.91	(33)	11.03	(32)	15.84	(27)	10.83	(37)	6.72	(54)	01/01/2000
S&P 500 Index			4.30	(47)	2.51	(39)	10.42	(36)	14.19	(43)	10.71	(40)	5.65	(89)	
Difference			1.78		0.40		0.61		1.65		0.12		1.07		
IM U.S. Large Cap Equity (SA+CF) Median			4.24		1.95		9.00		13.79		10.22		6.81		
Rhumbline LCV (Net)	55,756,647	6.0	3.84	(39)	2.57	(24)	8.41	(31)	N/A		N/A		7.94	(55)	01/01/2017
Russell 1000 Value Index			3.84	(38)	2.61	(23)	8.46	(31)	10.19	(61)	7.46	(33)	7.99	(54)	
Difference			0.00		-0.04		-0.05		N/A		N/A		-0.05		
IM U.S. Large Cap Value Equity (MF) Median			3.47		0.47		6.39		10.52		6.90		8.14		
Logan Equity (Net)	55,660,530	6.0	5.50	(30)	4.51	(29)	11.00	(46)	20.16	(19)	13.52	(27)	9.93	(47)	04/01/2007
Russell 1000 Growth Index			4.64	(56)	2.19	(59)	11.56	(36)	18.07	(45)	13.39	(30)	10.58	(25)	
Difference			0.86		2.32		-0.56		2.09		0.13		-0.65		
IM U.S. Large Cap Growth Equity (MF) Median			4.77		2.83		10.56		17.71		12.53		9.80		

	Allocation		Performance(%)														
	Market Value $	%	QTD		FYTD		1 YR		3 YR		5 YR		Inception		Inception Date
Rhumbline S&P MidCap 400 (Net)	73,751,742	8.0	3.04	(70)	-2.43	(70)	1.33	(69)	10.81	(38)	7.96	(22)	10.60	(3)	07/01/1997
S&P MidCap 400 Index			3.05	(69)	-2.41	(70)	1.36	(69)	10.90	(36)	8.02	(22)	10.60	(3)	
Difference			-0.01		-0.02		-0.03		-0.09		-0.06		0.00		
IM U.S. Mid Cap Core Equity (MF) Median			4.08		0.28		4.25		9.70		6.04		8.30		
Wellington (Net)	111,707,044	12.1	4.45	(8)	0.27	(1)	4.11	(2)	15.51	(4)	10.16	(2)	11.49	(1)	07/01/1999
Russell 2000 Index			2.10	(30)	-6.65	(22)	-3.31	(15)	12.30	(12)	7.06	(39)	7.77	(87)	
Difference			2.35		6.92		7.42		3.21		3.10		3.72		
IM U.S. Small Cap Core Equity (MF) Median			1.67		-9.22		-6.11		10.05		6.35		8.97		
International Equity															
Rhumbline Intl Equity (Net)	36,110,307	3.9	3.79	(28)	-0.06	(54)	1.29	(35)	9.20	(37)	N/A		6.57	(54)	01/01/2016
MSCI EAFE Index			3.97	(25)	0.18	(52)	1.60	(32)	9.65	(31)	2.74	(38)	6.95	(50)	
Difference			-0.18		-0.24		-0.31		-0.45		N/A		-0.38		
IM International Equity (MF) Median			2.58		0.31		-0.27		8.44		2.22		6.86		
Total Fixed Income Composite (Gross)	**267,173,055**	**28.8**	**3.31**		**8.07**		**8.37**		**2.01**		**2.72**		**5.57**		**07/01/1994**
Total Fixed Income Index			3.21		7.47		7.19		1.94		2.36		5.15		
Difference			0.10		0.60		1.18		0.07		0.36		0.42		
Inverness Fixed Income (Gross)	232,118,979	25.0	3.20	(1)	8.02	(2)	8.61	(2)	2.19	(66)	3.13	(15)	6.14	(13)	10/01/1990
Inverness Fixed Income Index			3.06	(3)	7.58	(3)	7.73	(5)	2.20	(65)	2.75	(40)	5.72	(78)	
Difference			0.14		0.44		0.88		-0.01		0.38		0.42		
IM U.S. Intermediate Duration (SA+CF) Median			2.51		6.48		6.88		2.33		2.67		5.81		
Wells Capital Fixed Income (Net)	35,054,531	3.8	3.96	(47)	8.18	(63)	6.30	(81)	0.49	(96)	-0.66	(80)	0.65	(84)	10/01/2011
FTSE Non-U.S. World Government Bond			3.93	(48)	6.89	(79)	4.54	(90)	0.83	(94)	0.19	(67)	0.40	(88)	
Difference			0.03		1.29		1.76		-0.34		-0.85		0.25		
IM International Fixed Income All (MF) Median			3.88		8.73		9.40		4.45		1.94		2.97		
Total Real Estate															
JP Morgan RE (Net)	45,552,797	4.9	0.90	(90)	2.68	(96)	4.29	(96)	5.99	(96)	8.27	(95)	5.51	(50)	10/01/2007
NCREIF Property Index			1.51	(37)	4.76	(84)	6.51	(90)	6.89	(84)	8.83	(91)	6.32	(18)	
Difference			-0.61		-2.08		-2.22		-0.90		-0.56		-0.81		
IM U.S. Open End Private Real Estate (SA+CF) Median			1.47		5.28		7.59		8.43		10.69		5.50		
Intercontinental RE (Net)	43,867,531	4.7	1.21	(74)	4.40	(89)	6.73	(90)	N/A		N/A		7.66	(71)	04/01/2018
NCREIF Fund Index-Open End Diversified Core (EW)			1.35	(67)	4.73	(84)	6.91	(84)	7.88	(74)	10.03	(61)	7.29	(81)	
Difference			-0.14		-0.33		-0.18		N/A		N/A		0.37		
IM U.S. Open End Private Real Estate (SA+CF) Median			1.47		5.28		7.59		8.43		10.69		8.35		

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 (10)**	**11.09 (65)**	**9.94 (44)**	**0.88 (17)**	**10.42 (43)**	**13.25 (31)**	**19.91 (13)**	**-0.64 (79)**	**11.10 (23)**	**2.32 (44)**
Total Policy Index		8.59 (24)	10.41 (75)	10.53 (28)	0.85 (17)	9.50 (60)	12.02 (51)	18.03 (43)	2.49 (20)	9.76 (54)	1.10 (56)
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		7.11	11.84	9.74	-0.78	9.93	12.05	17.55	0.68	9.90	1.43
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)	50.6	8.11 (45)	6.74 (90)	7.90 (83)	1.78 (12)	9.62 (69)	8.91 (76)	17.14 (73)	0.13 (61)	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	9.72	-2.04	11.18	12.61	19.52	0.73	9.69	1.13
Inverness Balanced (Net)	50.6	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)	**55.4**	**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)	23.4	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	21.13	29.11	0.76	10.13	-5.49
Rhumbline LCV (Net)	6.0	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)	6.0	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)	8.0	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)	12.1	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)	3.9	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)	**28.8**	**-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)	25.0	-0.50 (61)	-0.89 (100)	6.33 (4)	3.03 (26)	3.36 (30)	-0.84 (83)	6.45 (27)	3.67 (48)	9.02 (25)	13.97 (15)
Inverness Fixed Income Index		-1.16 (98)	0.11 (93)	4.68 (17)	2.71 (49)	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	3.61	8.25	11.53
Wells Capital Fixed Income (Net)	3.8	-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)	4.9	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)	4.7	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
06/30/2019	4.02	7.96	9.51	6.90	8.28
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

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
06/30/2019	3.21	6.93	8.47	6.48	7.67
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

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

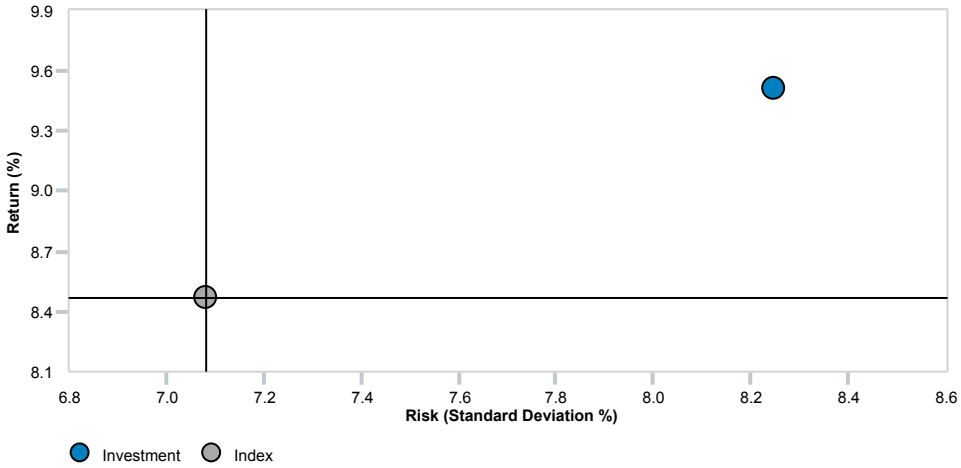
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.51	8.25	0.99	112.41	10	111.84	2
Index	8.47	7.08	1.00	100.00	10	100.00	2

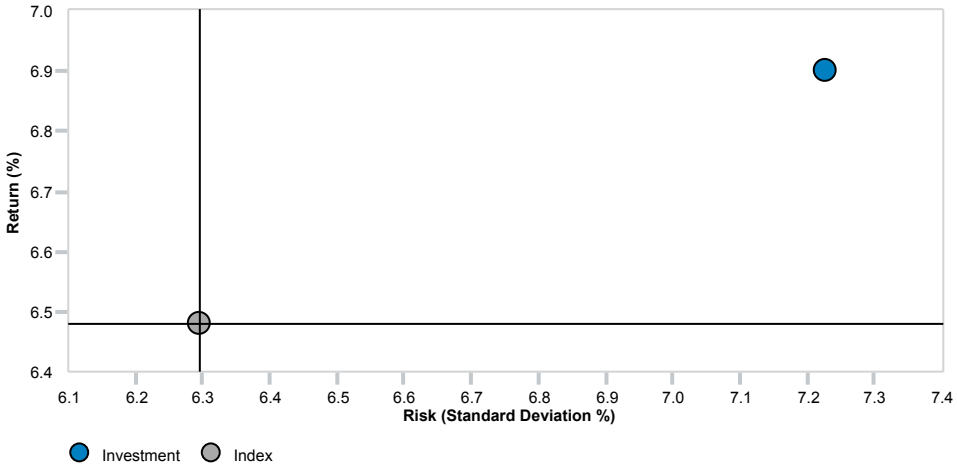
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.90	7.23	0.86	107.81	16	109.43	4
Index	6.48	6.30	0.91	100.00	15	100.00	5

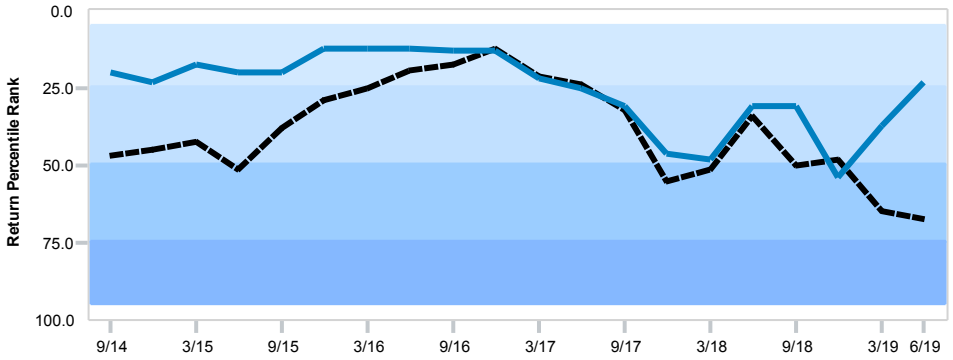
Risk and Return 3 Years



Risk and Return 5 Years

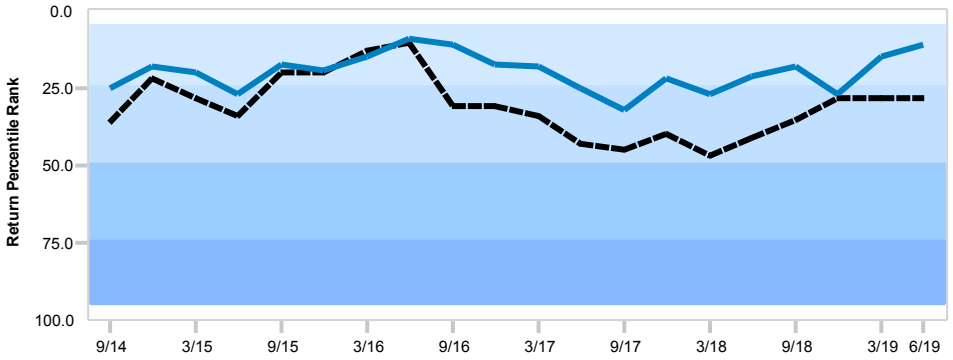


3 Year Rolling Percentile Rank All Public Plans-Total Fund



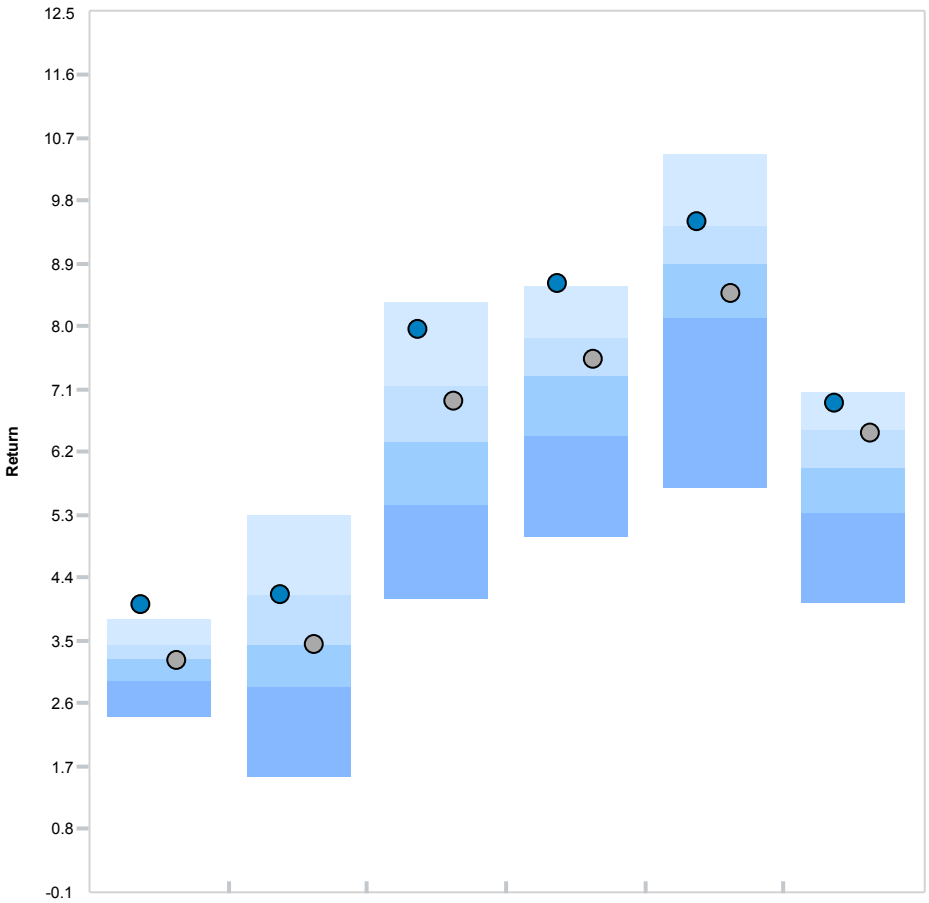
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)
Index	20	6 (30%)	9 (45%)	5 (25%)	0 (0%)

5 Year Rolling Percentile Rank All Public Plans-Total Fund



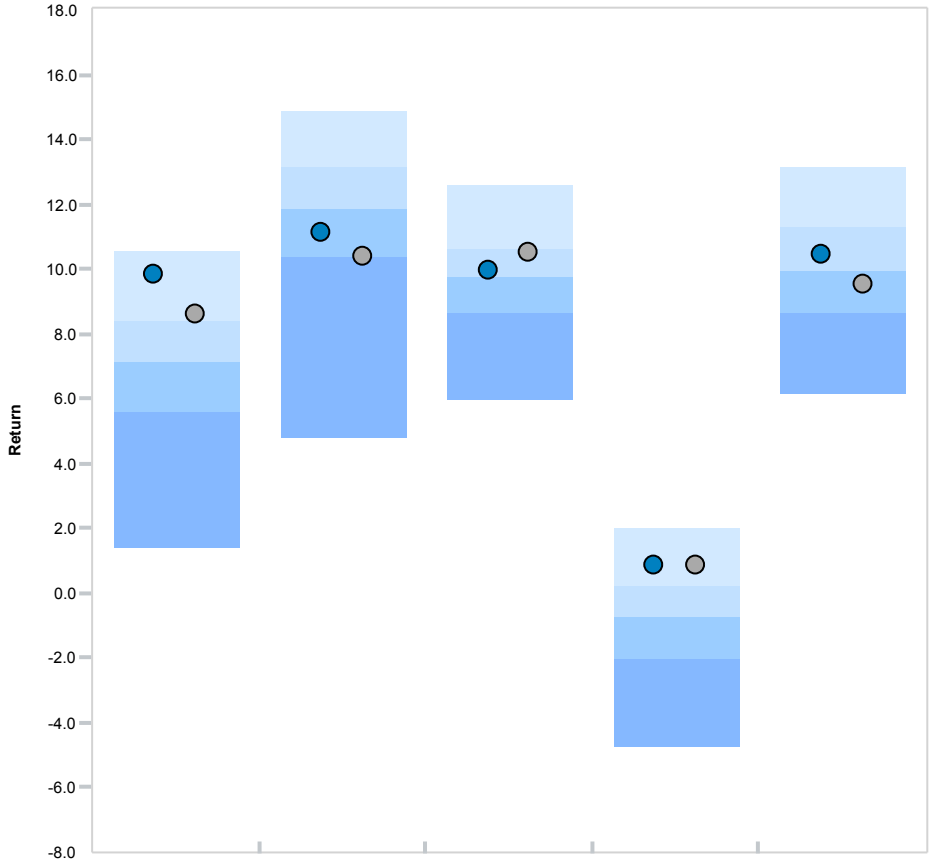
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)
Index	20	5 (25%)	15 (75%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	5 YR
Investment	4.02 (3)	4.16 (25)	7.96 (10)	8.63 (5)	9.51 (23)	6.90 (11)
Index	3.21 (53)	3.43 (51)	6.93 (31)	7.53 (39)	8.47 (67)	6.48 (28)
Median	3.23	3.45	6.37	7.30	8.90	5.99

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

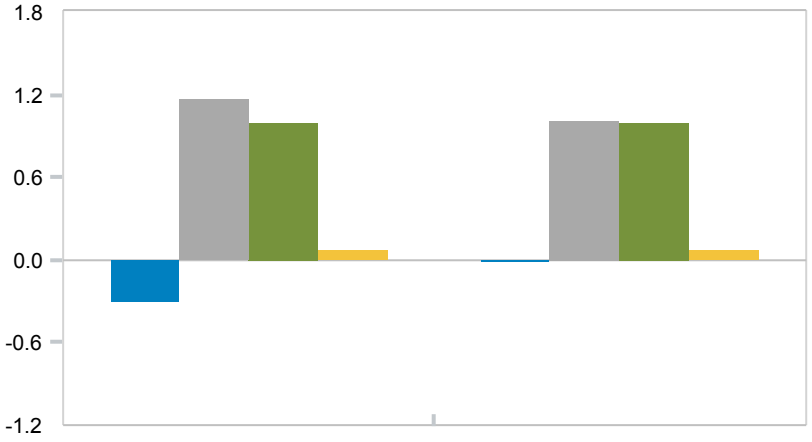


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
Investment	9.81 (10)	11.09 (65)	9.94 (44)	0.88 (17)	10.42 (43)
Index	8.59 (24)	10.41 (75)	10.53 (28)	0.85 (17)	9.50 (60)
Median	7.11	11.84	9.74	-0.78	9.93

Comparative Performance

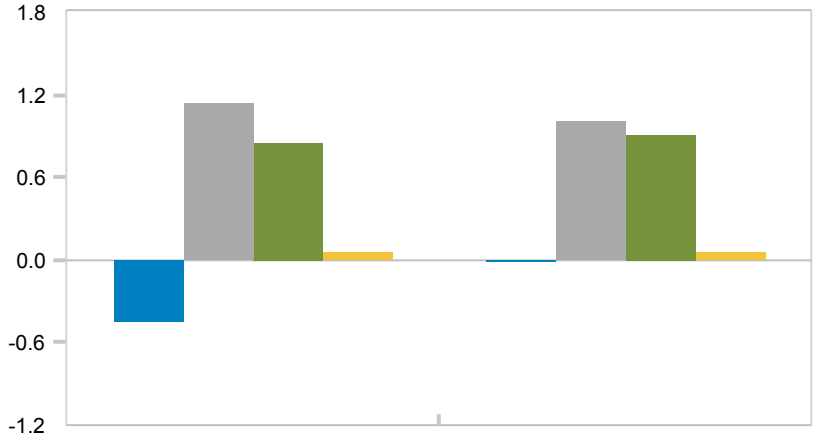
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	9.99 (8)	-8.96 (84)	3.65 (10)	2.30 (6)	-0.08 (37)	3.64 (49)
Index	8.49 (49)	-7.63 (51)	3.38 (16)	1.99 (13)	-0.45 (59)	3.46 (60)
Median	8.40	-7.55	2.58	1.03	-0.32	3.61

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



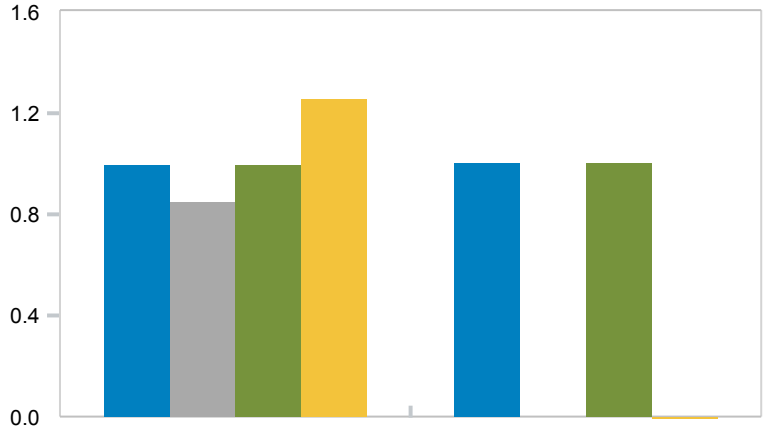
	Total Fund Composite	Total Policy Index
Alpha	-0.31	0.00
Beta	1.16	1.00
Sharpe Ratio	0.99	1.00
Treynor Ratio	0.07	0.07

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



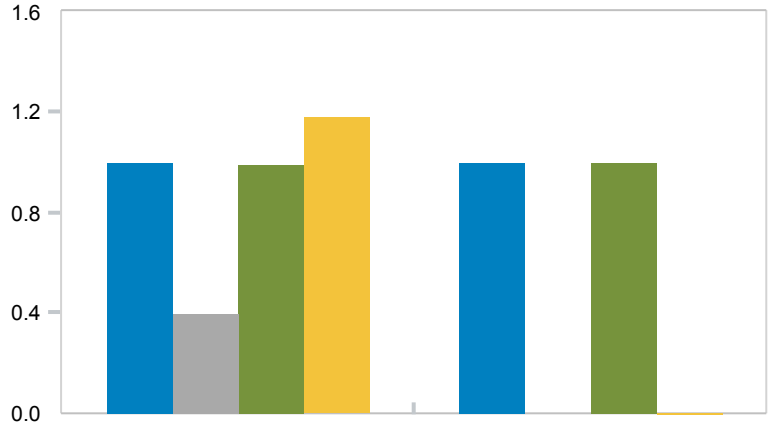
	Total Fund Composite	Total Policy Index
Alpha	-0.46	0.00
Beta	1.14	1.00
Sharpe Ratio	0.86	0.91
Treynor Ratio	0.05	0.06

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Total Fund Composite	Total Policy Index
Actual Correlation	1.00	1.00
Information Ratio	0.85	N/A
R-Squared	1.00	1.00
Tracking Error	1.26	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Total Fund Composite	Total Policy Index
Actual Correlation	0.99	1.00
Information Ratio	0.39	N/A
R-Squared	0.99	1.00
Tracking Error	1.18	0.00

Benchmark: Total Policy Index

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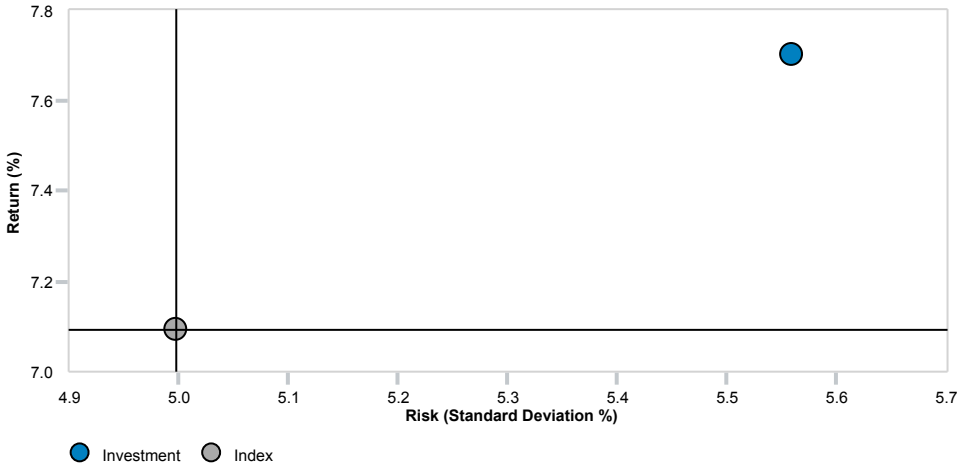
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.70	5.56	1.13	104.69	9	97.79	3
Index	7.09	5.00	1.13	100.00	10	100.00	2

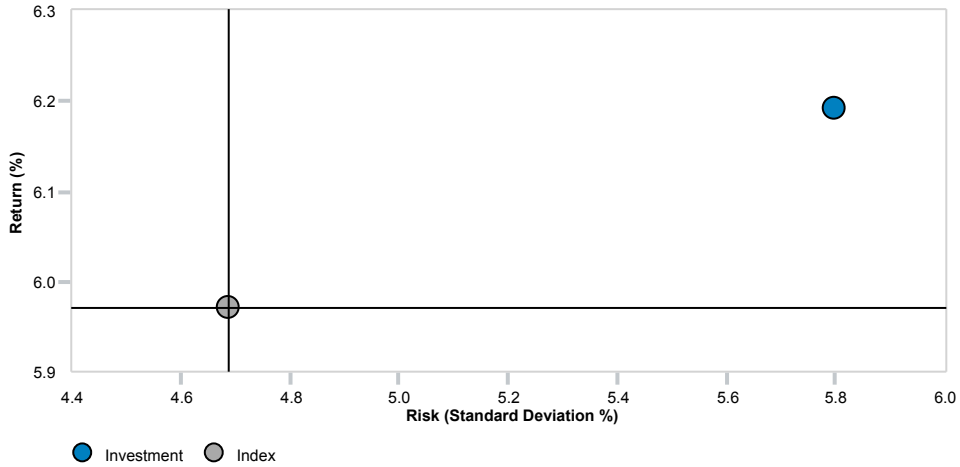
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.19	5.80	0.94	107.57	16	118.43	4
Index	5.97	4.69	1.10	100.00	16	100.00	4

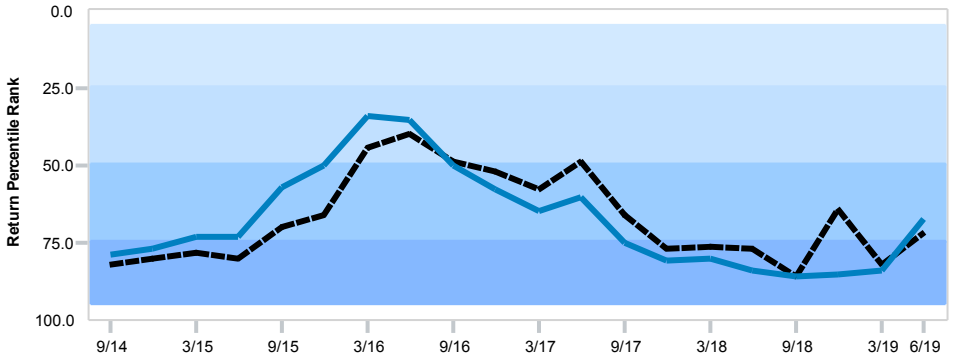
Risk and Return 3 Years



Risk and Return 5 Years

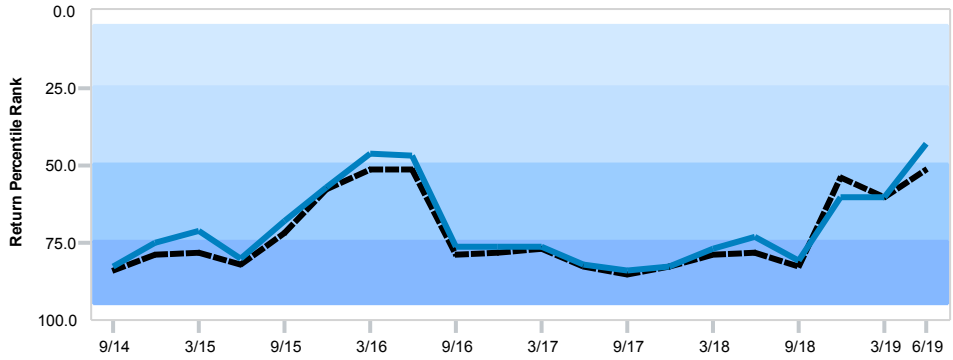


3 Year Rolling Percentile Rank IM U.S. Balanced (SA+CF)



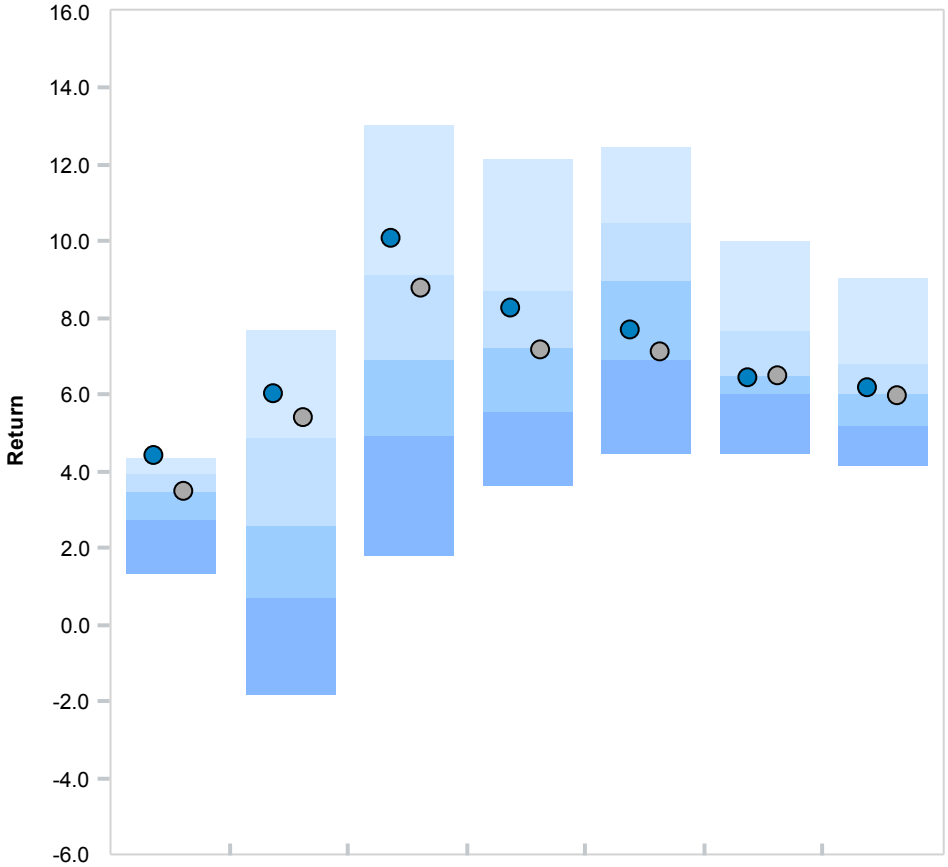
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	4 (20%)	8 (40%)	8 (40%)
Index	20	0 (0%)	4 (20%)	7 (35%)	9 (45%)

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



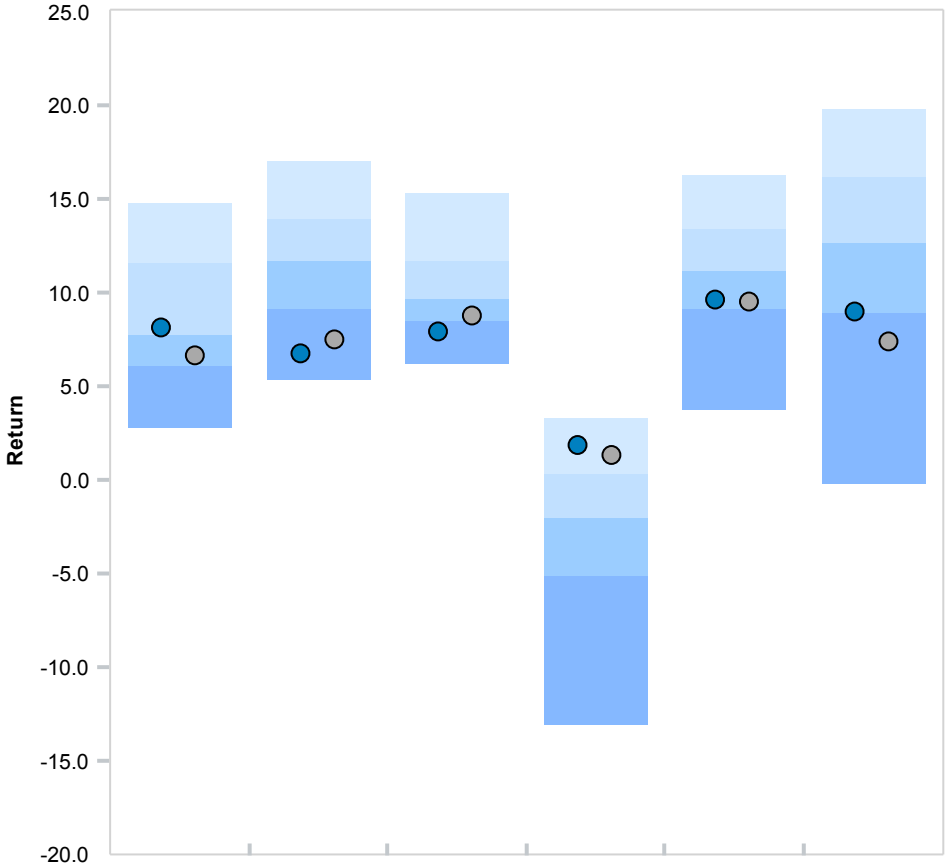
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	3 (15%)	7 (35%)	10 (50%)
Index	20	0 (0%)	0 (0%)	7 (35%)	13 (65%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	4.40 (5)	6.00 (12)	10.10 (13)	8.27 (29)	7.70 (67)	6.43 (53)	6.19 (43)
Index	3.48 (48)	5.37 (18)	8.78 (31)	7.17 (53)	7.09 (72)	6.48 (51)	5.97 (51)
Median	3.45	2.59	6.92	7.23	8.97	6.48	6.00

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

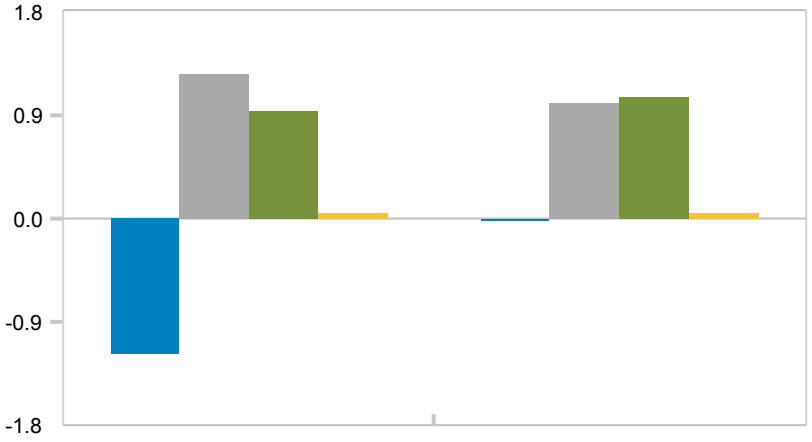


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	8.11 (45)	6.74 (90)	7.90 (83)	1.78 (12)	9.62 (69)	8.91 (76)
Index	6.65 (67)	7.45 (87)	8.74 (71)	1.25 (15)	9.46 (70)	7.38 (83)
Median	7.80	11.73	9.72	-2.04	11.18	12.61

Comparative Performance

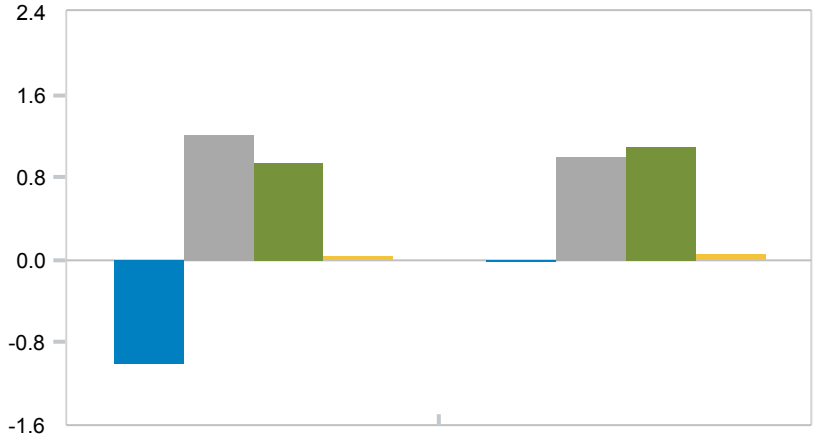
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	8.68 (67)	-6.58 (23)	3.86 (44)	1.81 (49)	-0.53 (27)	2.78 (83)
Index	6.98 (94)	-4.81 (11)	3.24 (66)	1.36 (65)	-0.85 (44)	2.79 (83)
Median	9.34	-8.62	3.74	1.72	-0.98	3.77

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



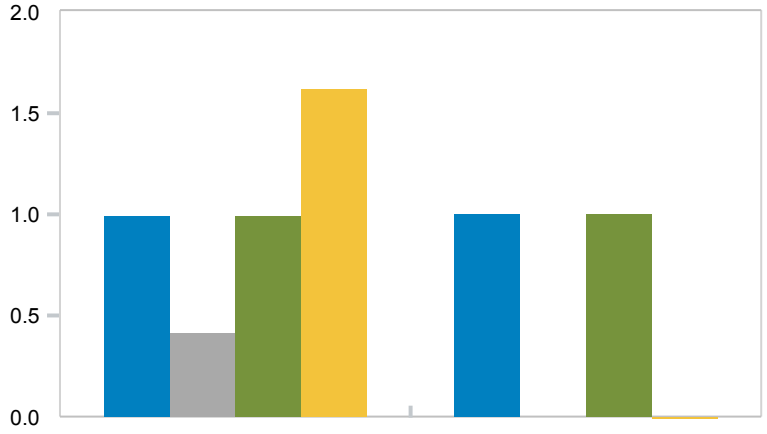
	Inverness Balanced	Inverness Balanced Policy
Alpha	-1.18	0.00
Beta	1.26	1.00
Sharpe Ratio	0.93	1.06
Treynor Ratio	0.05	0.06

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



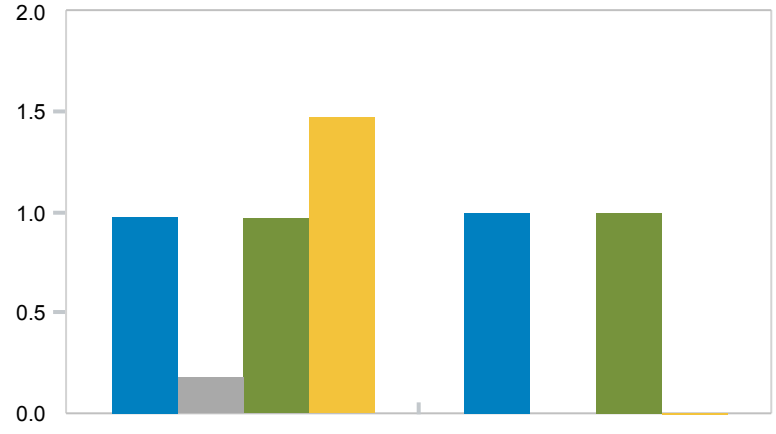
	Inverness Balanced	Inverness Balanced Policy
Alpha	-1.01	0.00
Beta	1.21	1.00
Sharpe Ratio	0.94	1.10
Treynor Ratio	0.04	0.05

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Inverness Balanced	Inverness Balanced Policy
Actual Correlation	0.99	1.00
Information Ratio	0.41	N/A
R-Squared	0.99	1.00
Tracking Error	1.62	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Inverness Balanced	Inverness Balanced Policy
Actual Correlation	0.98	1.00
Information Ratio	0.18	N/A
R-Squared	0.97	1.00
Tracking Error	1.48	0.00

Benchmark: Inverness Balanced Policy

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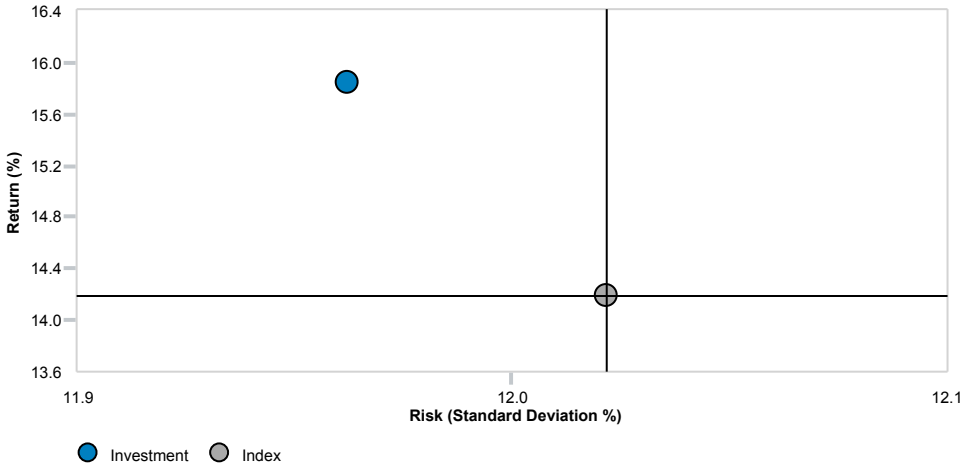
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.84	11.96	1.18	102.34	11	91.26	1
Index	14.19	12.02	1.06	100.00	10	100.00	2

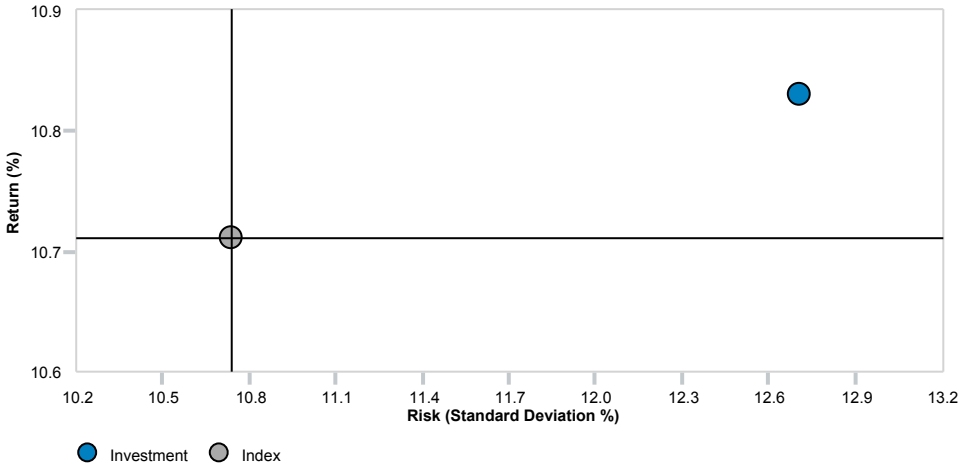
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.83	12.71	0.82	107.43	16	118.42	4
Index	10.71	10.74	0.94	100.00	17	100.00	3

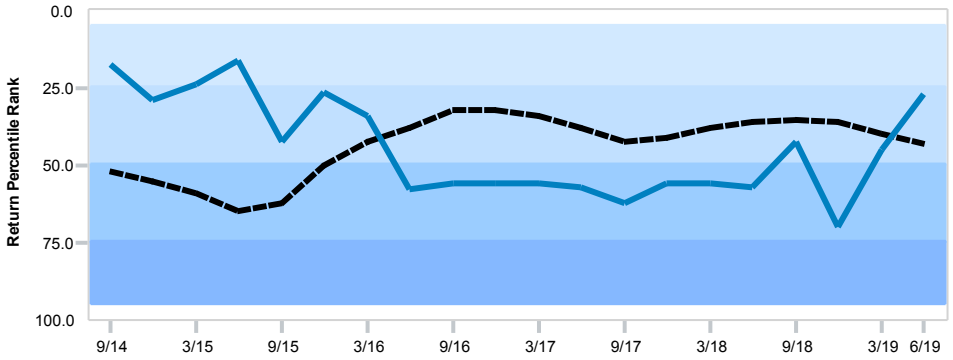
Risk and Return 3 Years



Risk and Return 5 Years

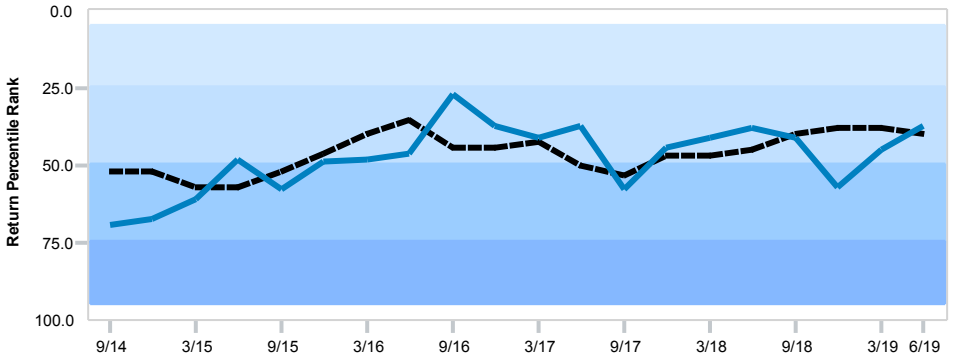


3 Year Rolling Percentile Rank IM U.S. Large Cap Equity (SA+CF)



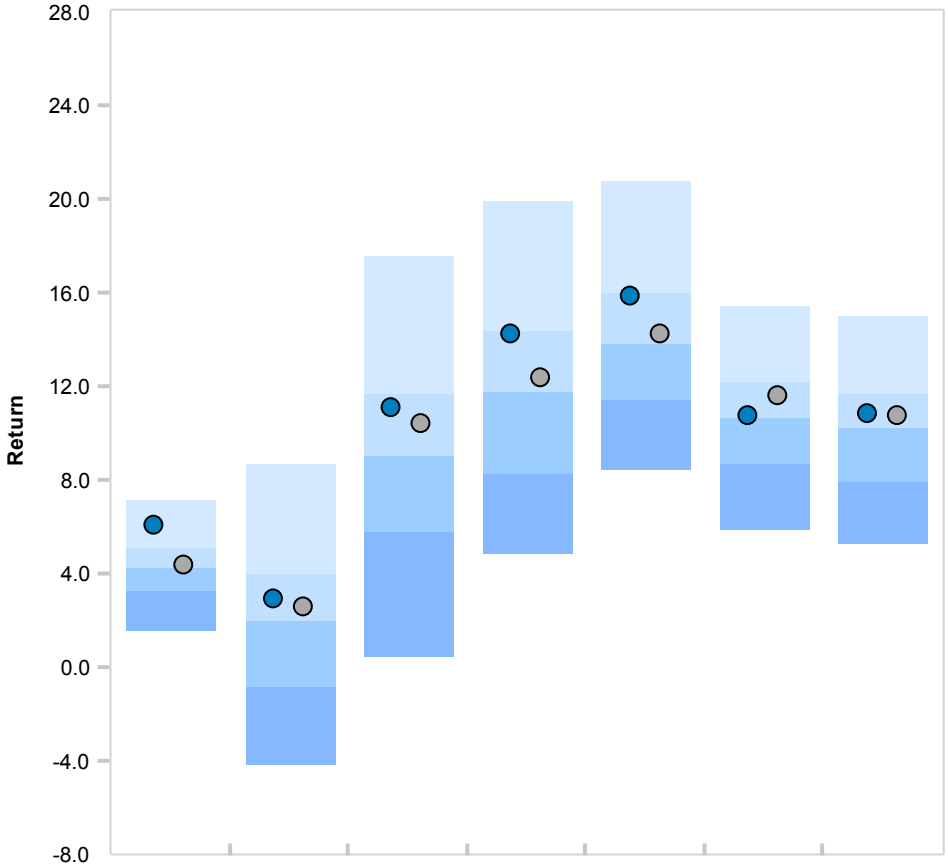
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	7 (35%)	10 (50%)	0 (0%)
Index	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)

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



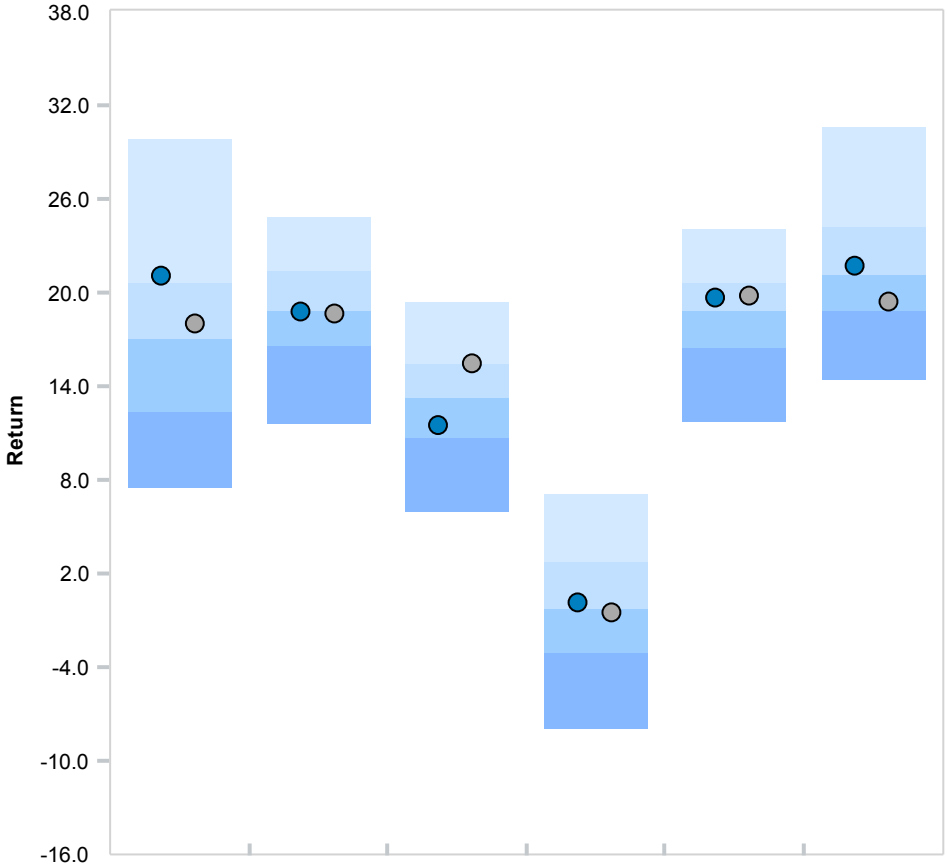
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	14 (70%)	6 (30%)	0 (0%)
Index	20	0 (0%)	14 (70%)	6 (30%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	6.08 (12)	2.91 (33)	11.03 (31)	14.18 (26)	15.84 (27)	10.75 (49)	10.83 (37)
Index	4.30 (47)	2.51 (39)	10.42 (36)	12.38 (41)	14.19 (43)	11.55 (34)	10.71 (40)
Median	4.24	1.93	9.00	11.77	13.79	10.63	10.22

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

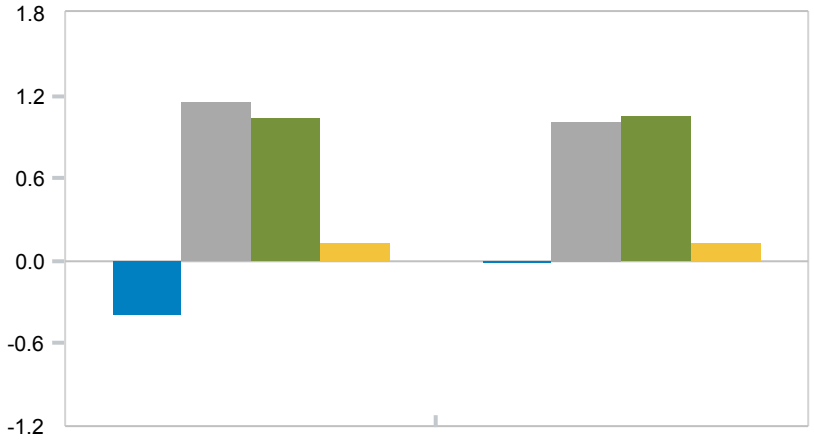


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	21.05 (24)	18.70 (53)	11.47 (68)	0.06 (45)	19.67 (39)	21.68 (44)
Index	17.91 (40)	18.61 (55)	15.43 (24)	-0.61 (57)	19.73 (37)	19.34 (70)
Median	17.02	18.83	13.22	-0.32	18.79	21.13

Comparative Performance

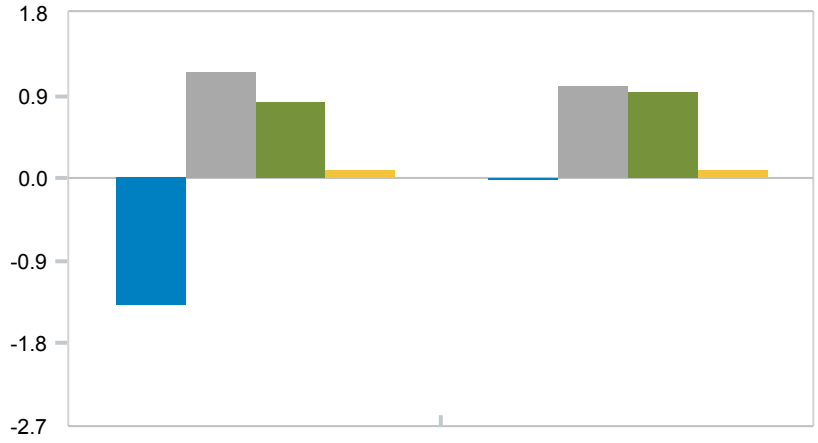
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	15.84 (18)	-16.26 (84)	7.88 (29)	4.17 (26)	0.46 (32)	7.21 (32)
Index	13.65 (44)	-13.52 (42)	7.71 (34)	3.43 (41)	-0.76 (55)	6.64 (50)
Median	13.30	-13.93	7.11	3.00	-0.69	6.64

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



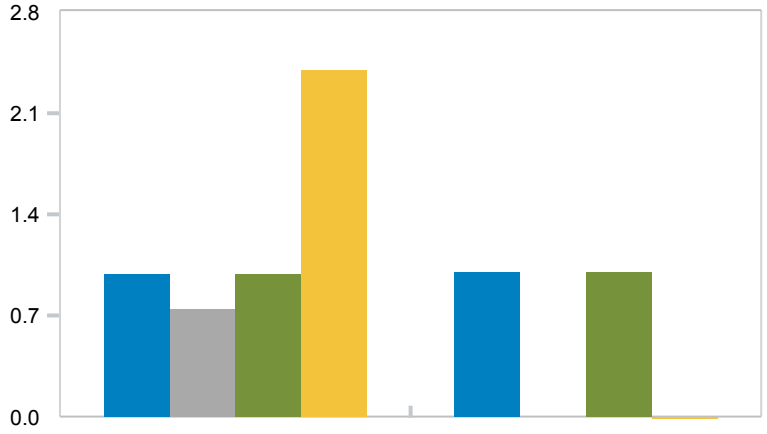
	Inverness Equity	S&P 500 Index
Alpha	-0.39	0.00
Beta	1.15	1.00
Sharpe Ratio	1.03	1.05
Treynor Ratio	0.13	0.13

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



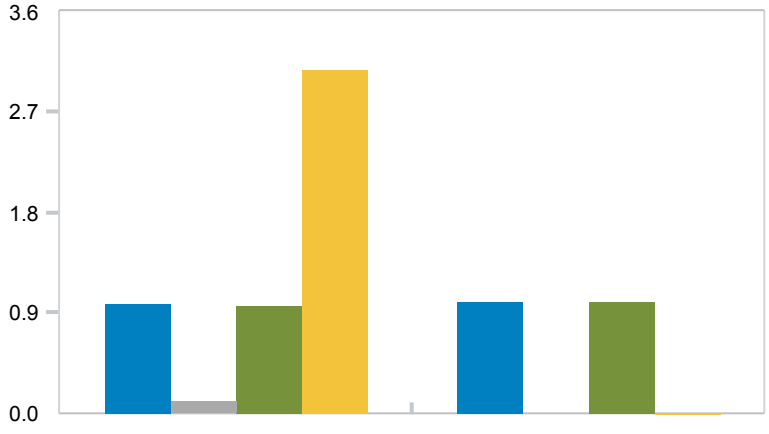
	Inverness Equity	S&P 500 Index
Alpha	-1.37	0.00
Beta	1.16	1.00
Sharpe Ratio	0.82	0.94
Treynor Ratio	0.09	0.10

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Inverness Equity	S&P 500 Index
Actual Correlation	0.99	1.00
Information Ratio	0.74	N/A
R-Squared	0.99	1.00
Tracking Error	2.40	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Inverness Equity	S&P 500 Index
Actual Correlation	0.98	1.00
Information Ratio	0.11	N/A
R-Squared	0.96	1.00
Tracking Error	3.08	0.00

Benchmark: S&P 500 Index

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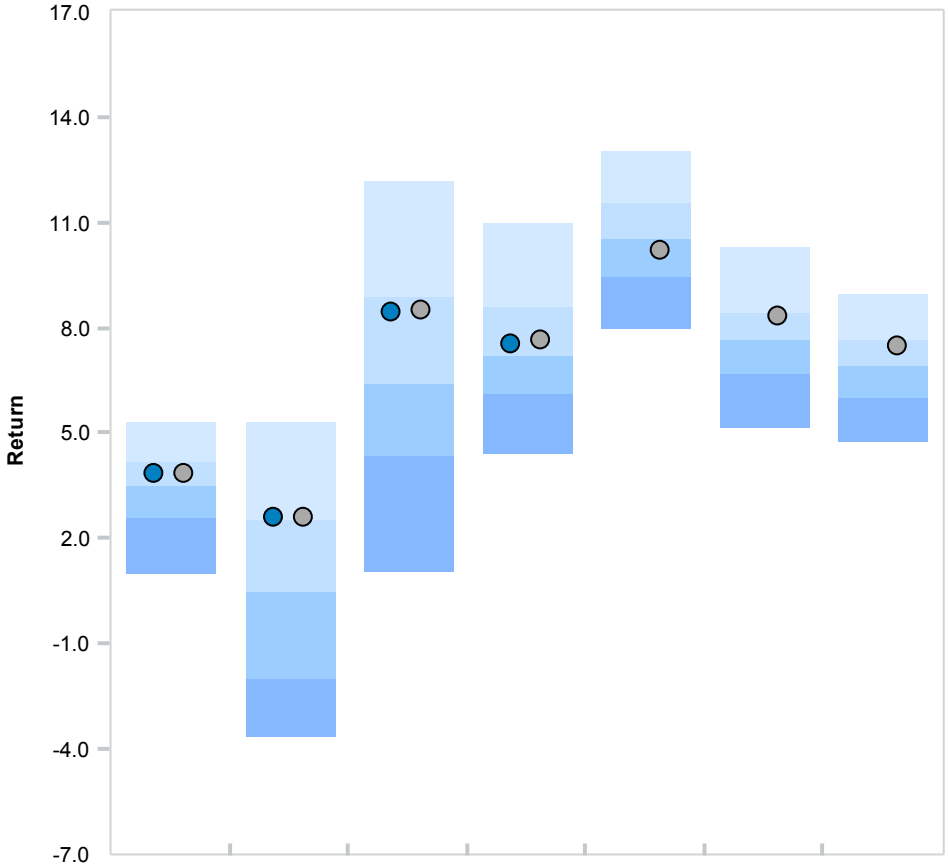
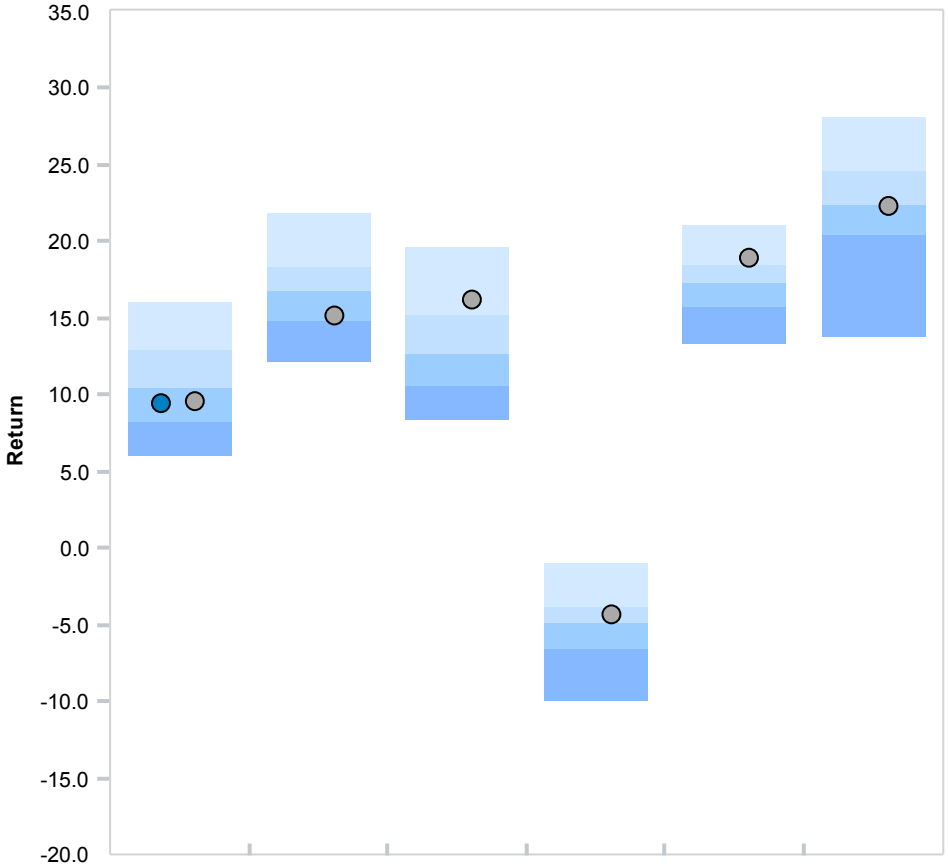
Peer Group Analysis - IM U.S. Large Cap Value Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.84 (39)	2.57 (24)	8.41 (31)	7.55 (42)	N/A	N/A	N/A
Index	3.84 (38)	2.61 (23)	8.46 (31)	7.61 (40)	10.19 (61)	8.31 (30)	7.46 (33)
Median	3.47	0.47	6.39	7.18	10.52	7.62	6.90

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 Mar-2019	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
Investment	11.86 (42)	-11.69 (29)	5.69 (57)	1.15 (59)	-2.84 (58)	5.30 (64)
Index	11.93 (40)	-11.72 (29)	5.70 (57)	1.18 (58)	-2.83 (58)	5.33 (63)
Median	11.56	-12.94	5.93	1.37	-2.59	5.77

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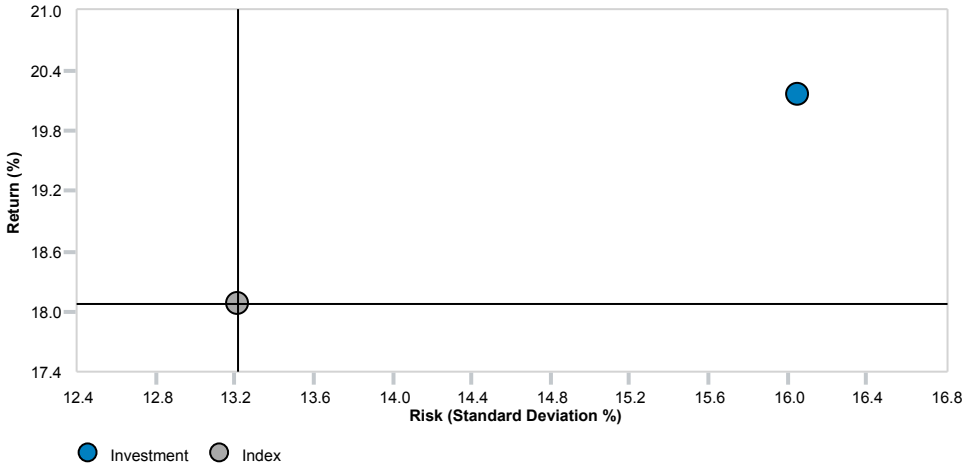
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	20.16	16.05	1.15	109.43	10	104.38	2
Index	18.07	13.21	1.23	100.00	11	100.00	1

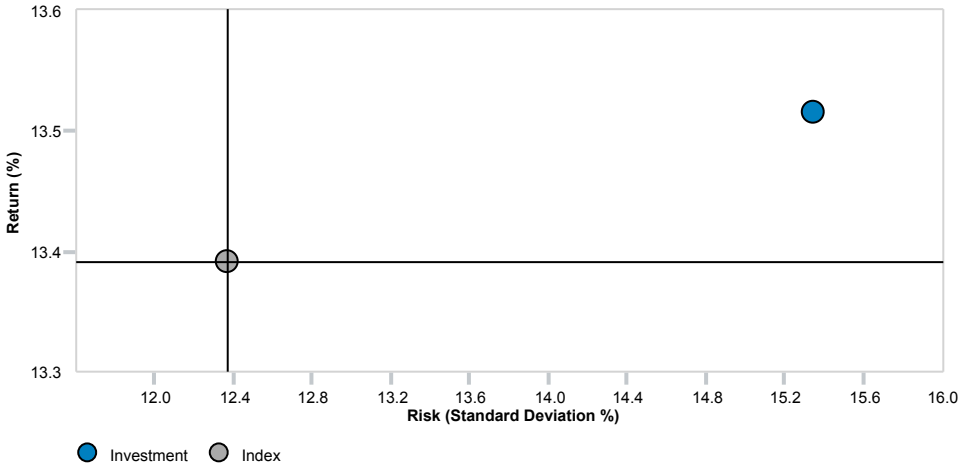
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.52	15.35	0.86	106.69	15	115.80	5
Index	13.39	12.37	1.03	100.00	18	100.00	2

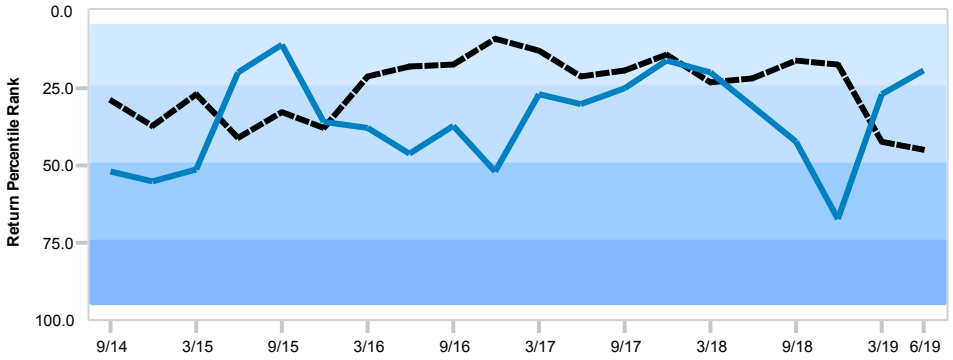
Risk and Return 3 Years



Risk and Return 5 Years

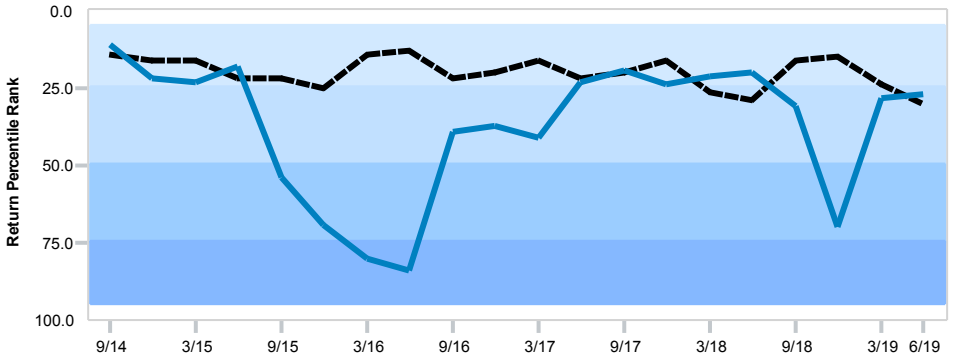


3 Year Rolling Percentile Rank IM U.S. Large Cap Growth Equity (MF)



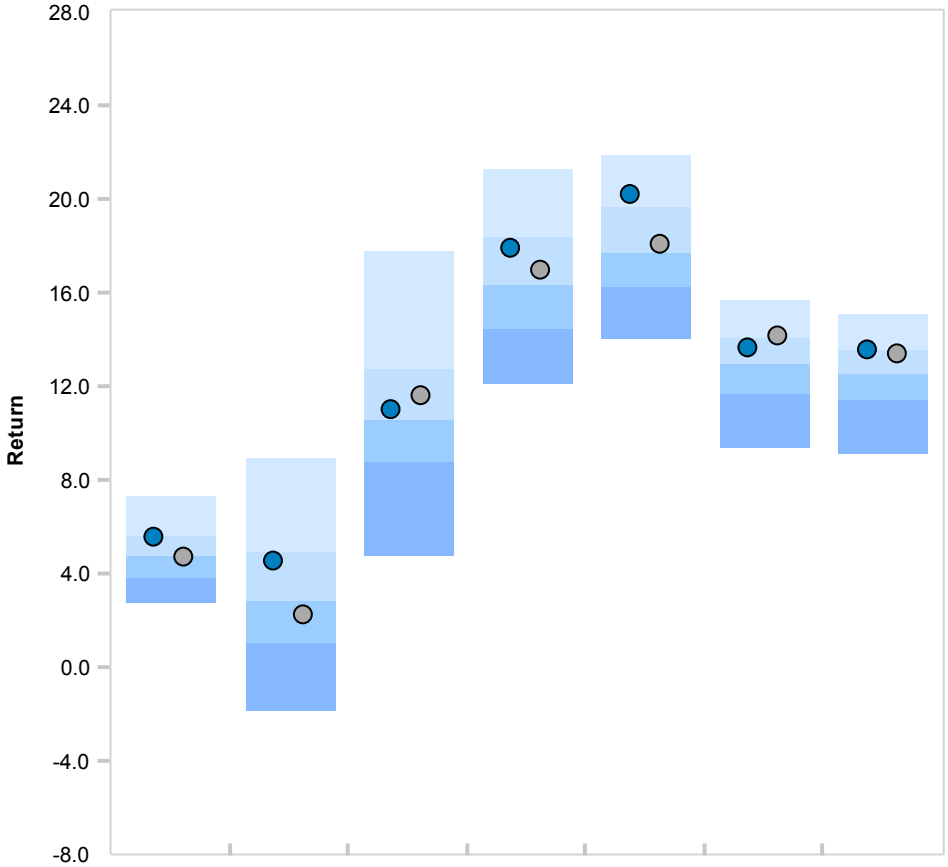
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	9 (45%)	5 (25%)	0 (0%)
Index	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)

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



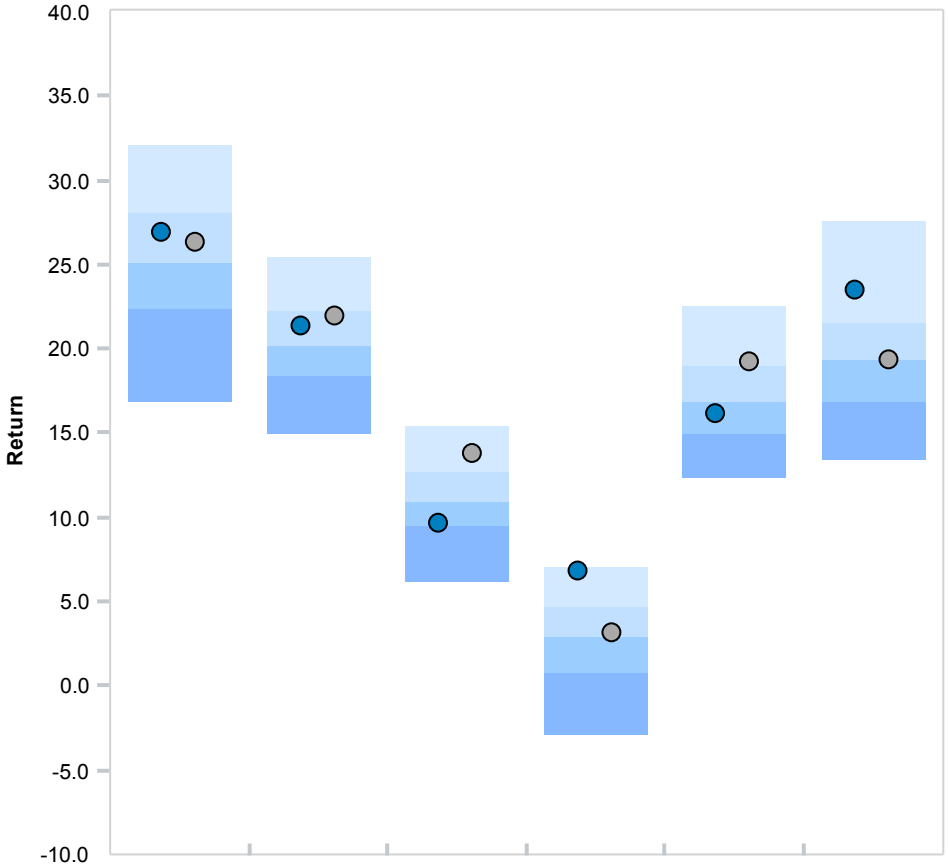
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	6 (30%)	3 (15%)	2 (10%)
Index	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	5.50 (30)	4.51 (29)	11.00 (46)	17.90 (31)	20.16 (19)	13.64 (35)	13.52 (27)
Index	4.64 (56)	2.19 (59)	11.56 (36)	16.91 (43)	18.07 (45)	14.11 (25)	13.39 (30)
Median	4.77	2.83	10.56	16.37	17.71	12.94	12.53

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

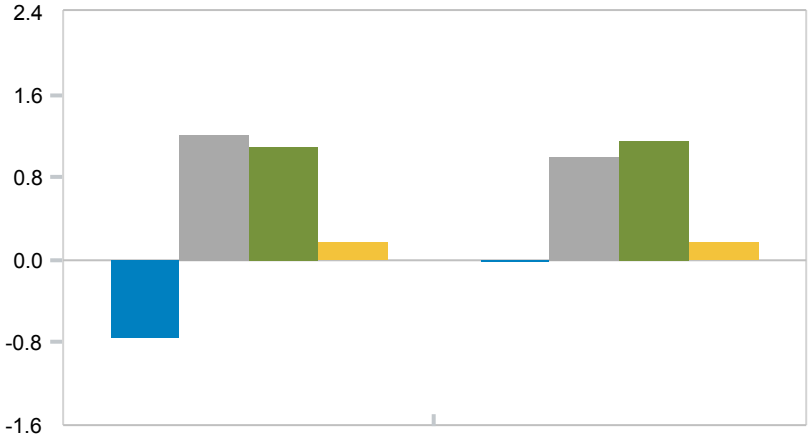


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	26.84 (34)	21.34 (36)	9.59 (72)	6.79 (6)	16.18 (62)	23.47 (16)
Index	26.30 (39)	21.94 (28)	13.76 (18)	3.17 (45)	19.15 (23)	19.27 (52)
Median	25.08	20.13	10.96	2.85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

Comparative Performance

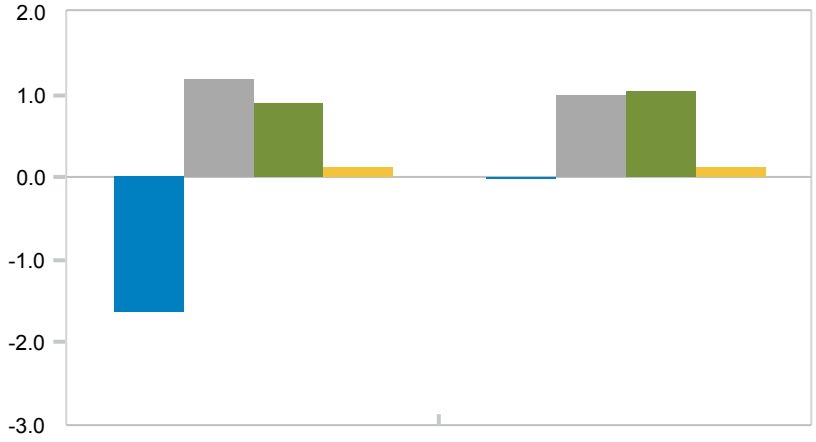
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	22.52 (1)	-19.14 (99)	6.21 (86)	5.67 (55)	4.96 (19)	7.68 (14)
Index	16.10 (55)	-15.89 (53)	9.17 (11)	5.76 (51)	1.42 (78)	7.86 (10)
Median	16.26	-15.76	7.78	5.77	2.82	6.66

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



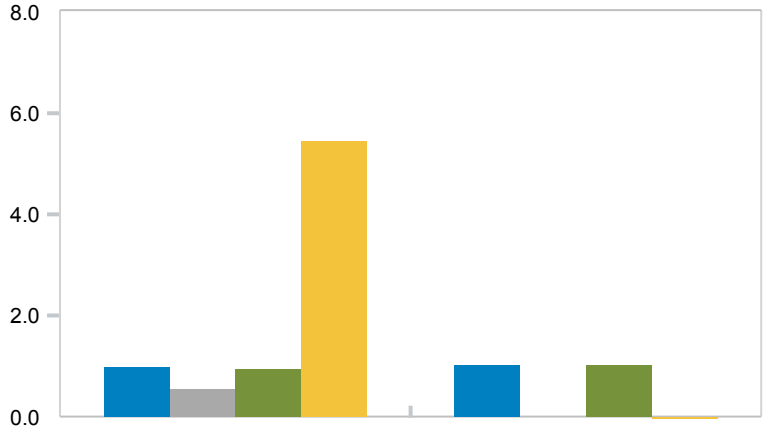
	Logan Equity	Russell 1000 Growth Index
Alpha	-0.74	0.00
Beta	1.21	1.00
Sharpe Ratio	1.09	1.15
Treynor Ratio	0.16	0.17

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



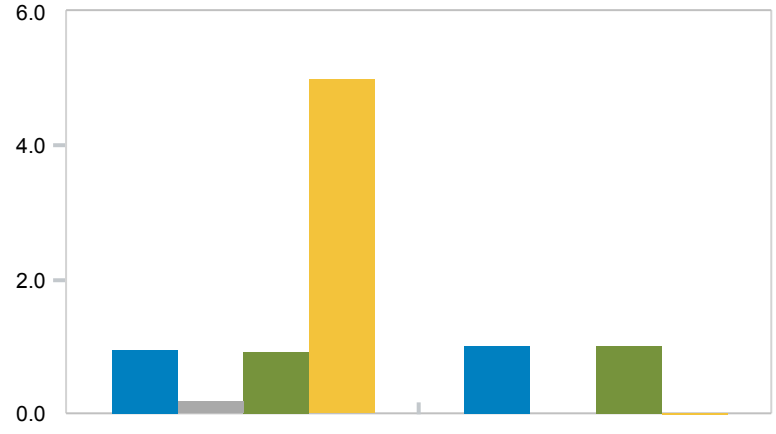
	Logan Equity	Russell 1000 Growth Index
Alpha	-1.62	0.00
Beta	1.19	1.00
Sharpe Ratio	0.89	1.03
Treynor Ratio	0.11	0.13

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Logan Equity	Russell 1000 Growth Index
Actual Correlation	0.97	1.00
Information Ratio	0.55	N/A
R-Squared	0.94	1.00
Tracking Error	5.46	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Logan Equity	Russell 1000 Growth Index
Actual Correlation	0.96	1.00
Information Ratio	0.19	N/A
R-Squared	0.92	1.00
Tracking Error	4.98	0.00

Benchmark: Russell 1000 Growth Index

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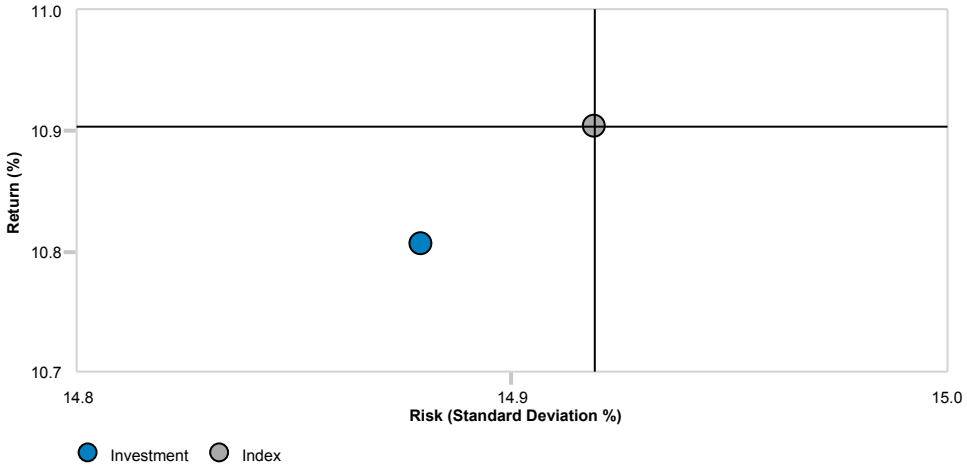
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.81	14.88	0.68	99.53	10	99.84	2
Index	10.90	14.92	0.68	100.00	10	100.00	2

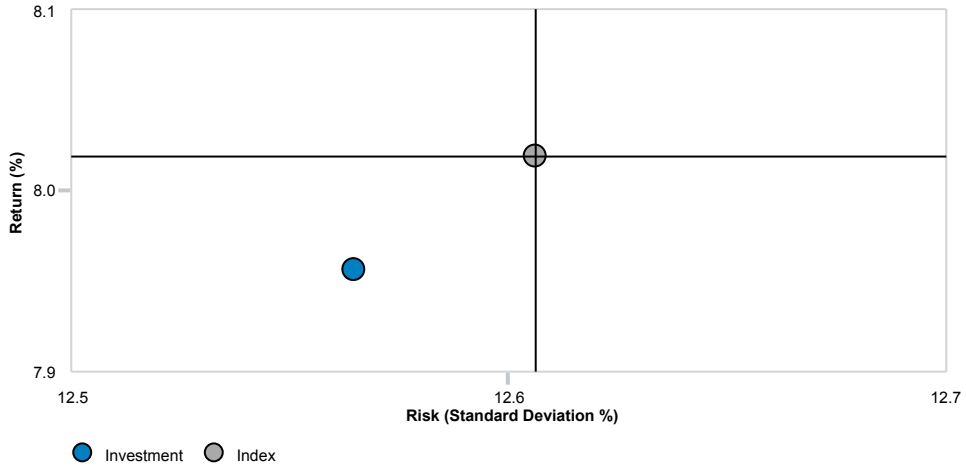
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.96	12.56	0.61	99.54	15	99.95	5
Index	8.02	12.61	0.62	100.00	15	100.00	5

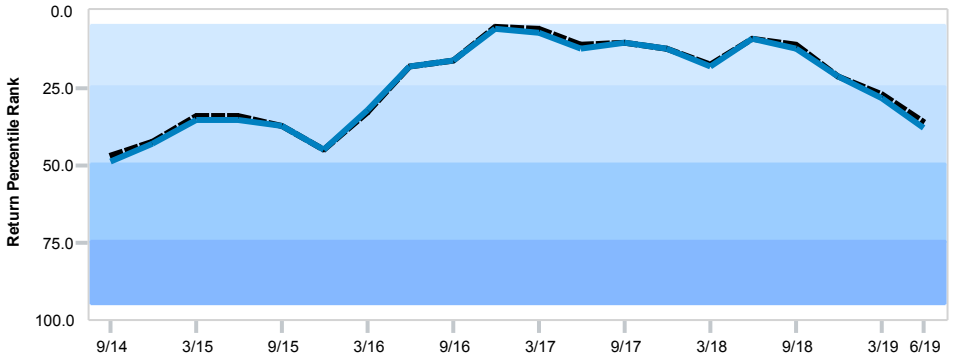
Risk and Return 3 Years



Risk and Return 5 Years

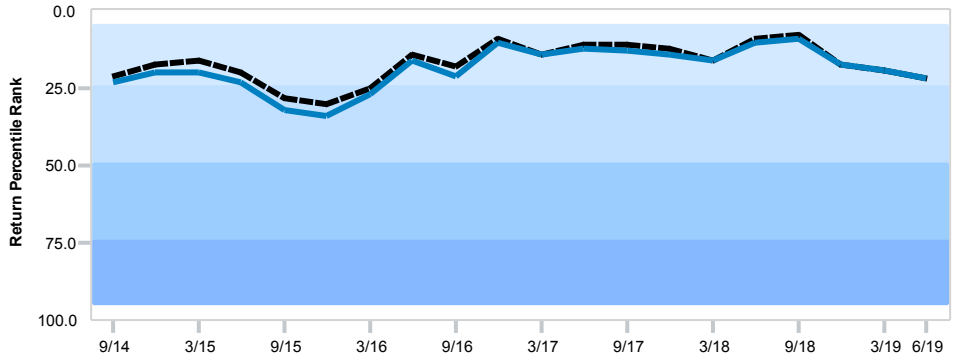


3 Year Rolling Percentile Rank IM U.S. Mid Cap Core Equity (MF)



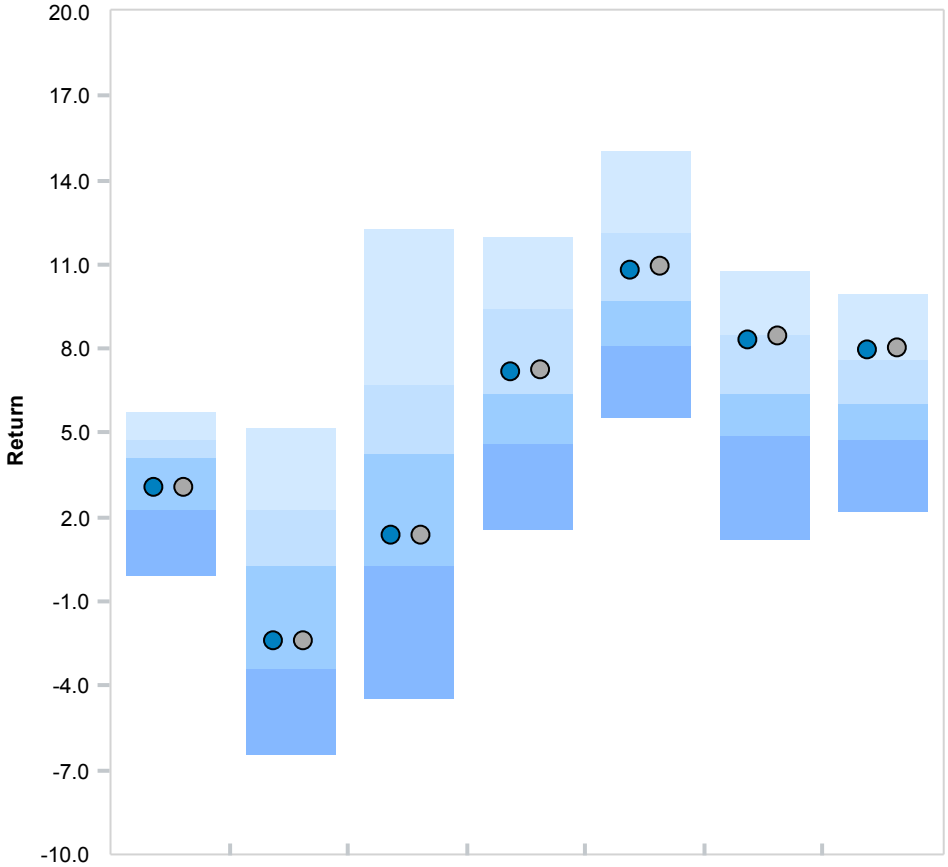
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)
Index	20	11 (55%)	9 (45%)	0 (0%)	0 (0%)

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



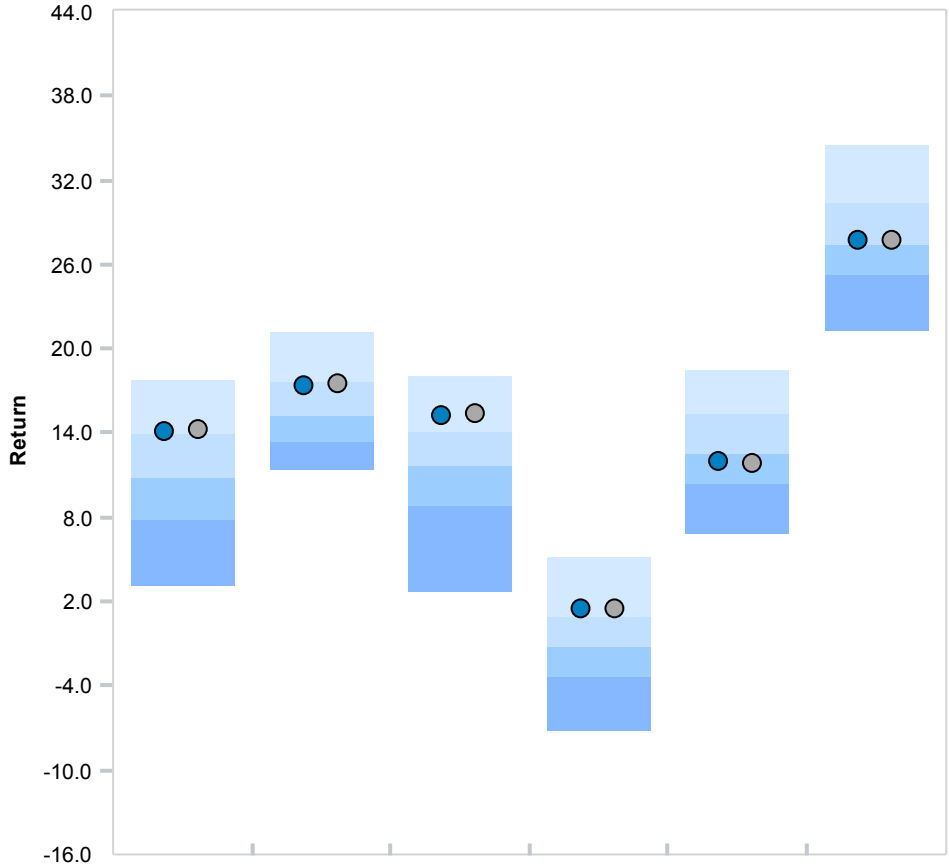
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.04 (70)	-2.43 (70)	1.33 (69)	7.15 (42)	10.81 (38)	8.33 (28)	7.96 (22)
Index	3.05 (69)	-2.41 (70)	1.36 (69)	7.26 (41)	10.90 (36)	8.43 (26)	8.02 (22)
Median	4.08	0.28	4.25	6.41	9.70	6.37	6.04

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

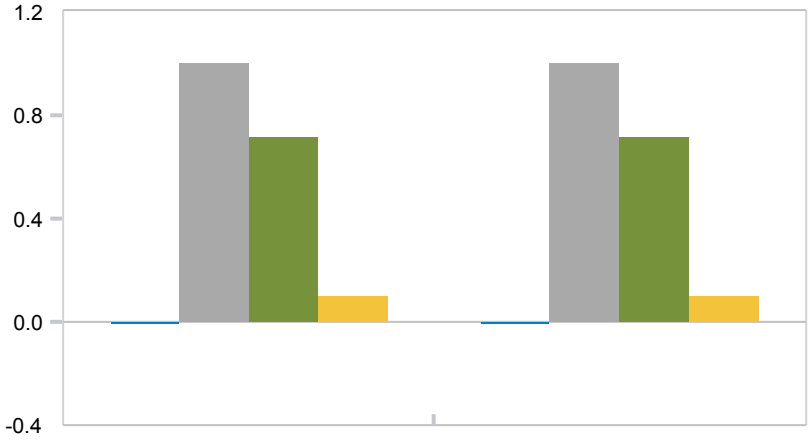


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	14.03 (25)	17.38 (28)	15.20 (20)	1.46 (24)	11.89 (56)	27.63 (47)
Index	14.21 (24)	17.52 (26)	15.33 (20)	1.40 (24)	11.82 (56)	27.68 (46)
Median	10.82	15.25	11.65	-1.26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

Comparative Performance

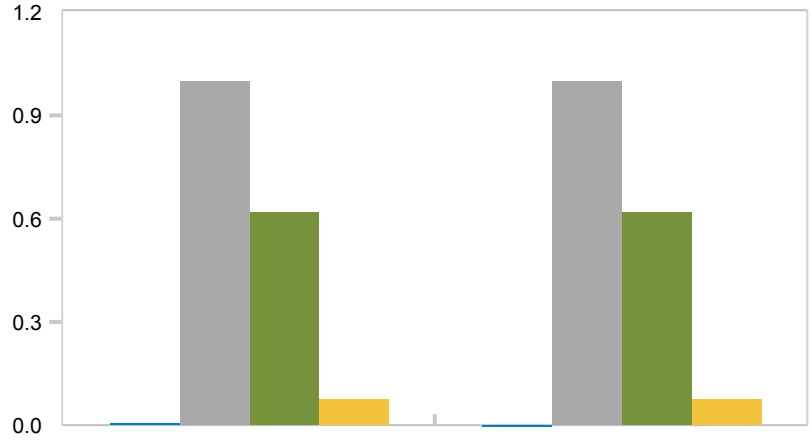
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	14.41 (57)	-17.23 (72)	3.85 (55)	4.28 (17)	-0.89 (40)	6.24 (25)
Index	14.49 (54)	-17.28 (73)	3.86 (55)	4.29 (17)	-0.77 (36)	6.25 (25)
Median	14.58	-15.76	4.11	2.31	-1.27	5.43

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



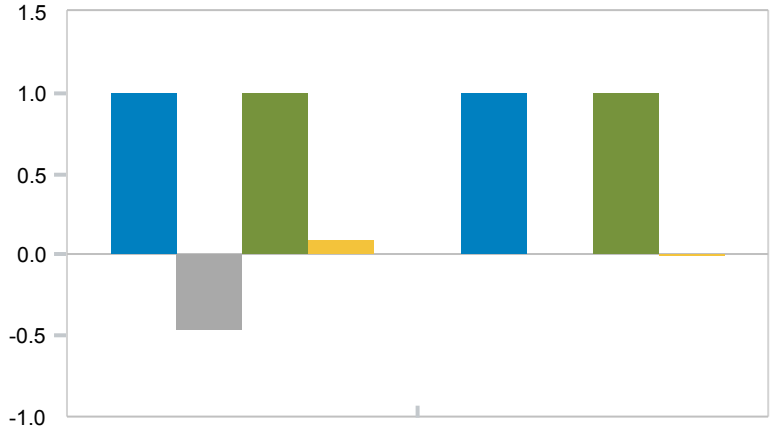
	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Alpha	-0.01	0.00
Beta	1.00	1.00
Sharpe Ratio	0.72	0.72
Treynor Ratio	0.10	0.10

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



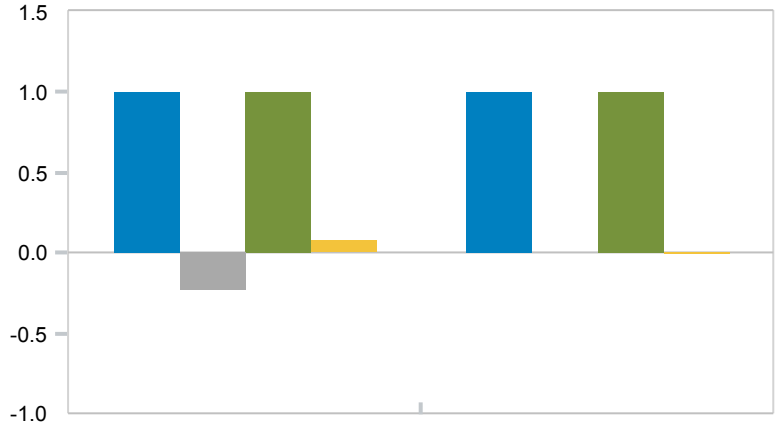
	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Alpha	0.01	0.00
Beta	1.00	1.00
Sharpe Ratio	0.62	0.62
Treynor Ratio	0.08	0.08

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-0.46	N/A
R-Squared	1.00	1.00
Tracking Error	0.09	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Rhumbline S&P MidCap 400	S&P MidCap 400 Index
Actual Correlation	1.00	1.00
Information Ratio	-0.23	N/A
R-Squared	1.00	1.00
Tracking Error	0.08	0.00

Benchmark: S&P MidCap 400 Index

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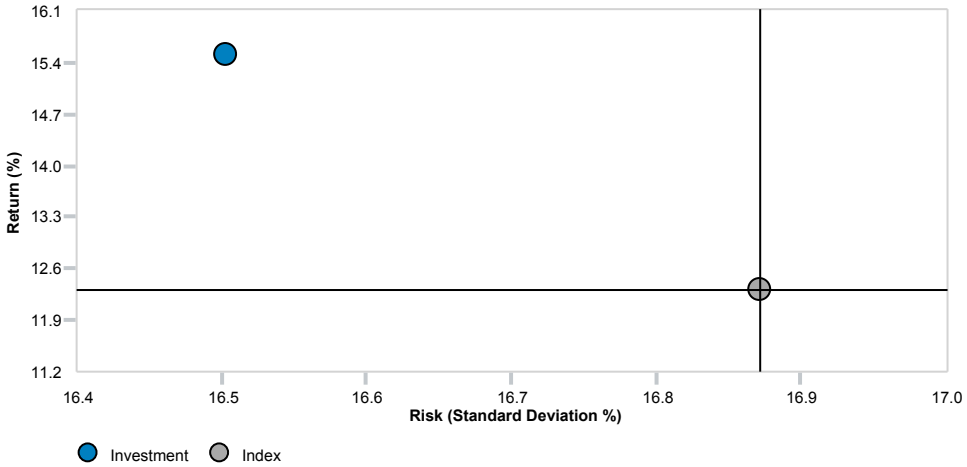
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.51	16.50	0.88	102.16	10	86.38	2
Index	12.30	16.87	0.69	100.00	10	100.00	2

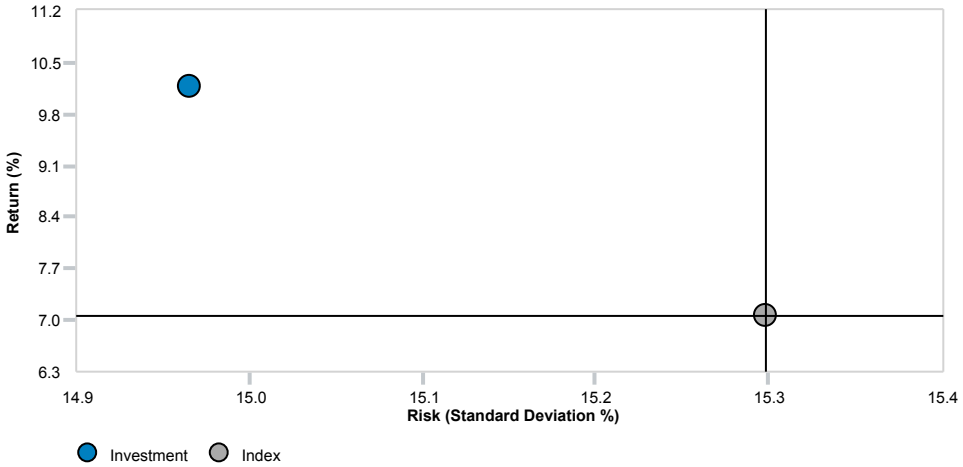
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.16	14.97	0.68	113.40	15	92.17	5
Index	7.06	15.30	0.47	100.00	15	100.00	5

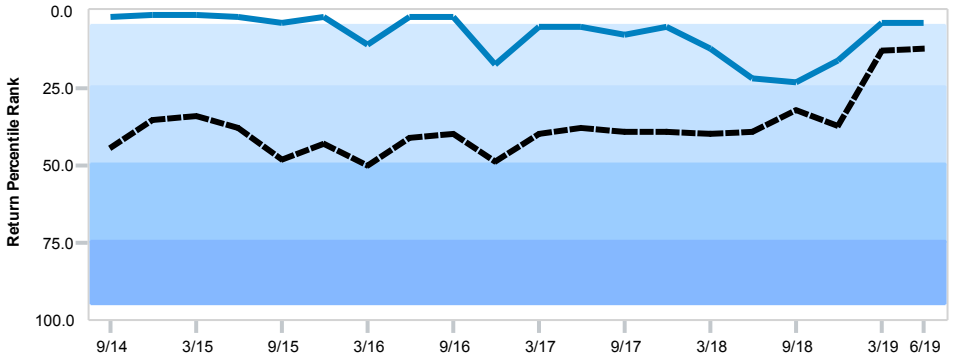
Risk and Return 3 Years



Risk and Return 5 Years

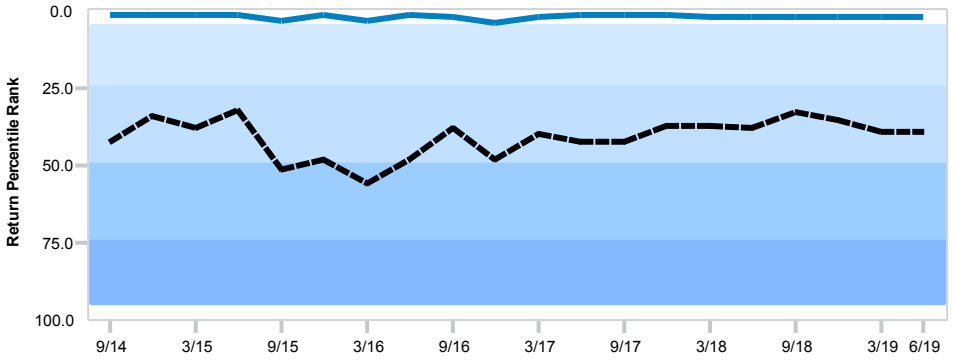


3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (MF)



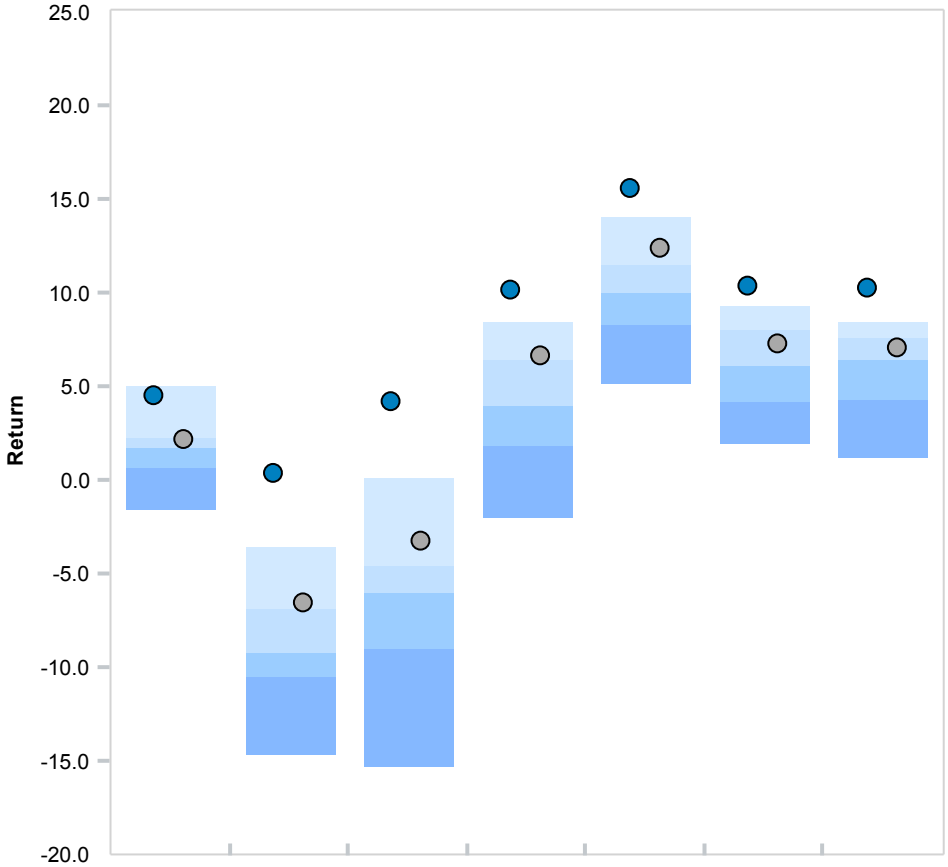
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	2 (10%)	18 (90%)	0 (0%)	0 (0%)

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



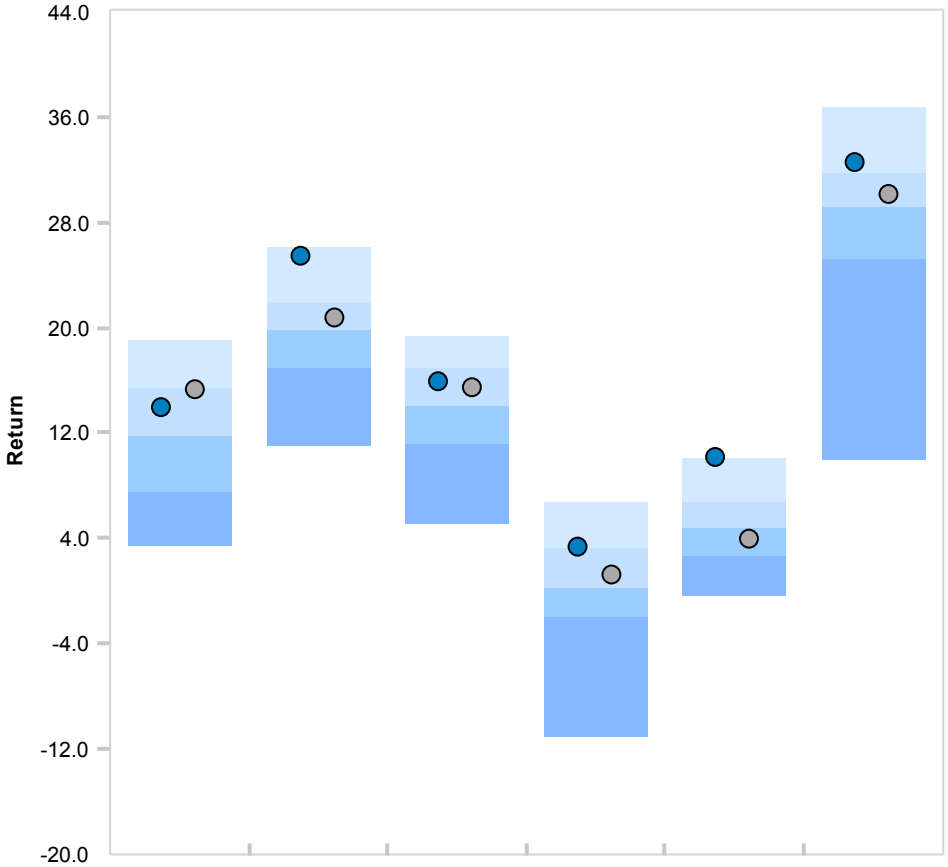
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	18 (90%)	2 (10%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	4.45 (8)	0.27 (1)	4.11 (2)	10.06 (4)	15.51 (4)	10.37 (3)	10.16 (2)
Index	2.10 (30)	-6.65 (22)	-3.31 (15)	6.62 (19)	12.30 (12)	7.21 (40)	7.06 (39)
Median	1.67	-9.22	-6.11	3.99	10.05	6.02	6.35

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

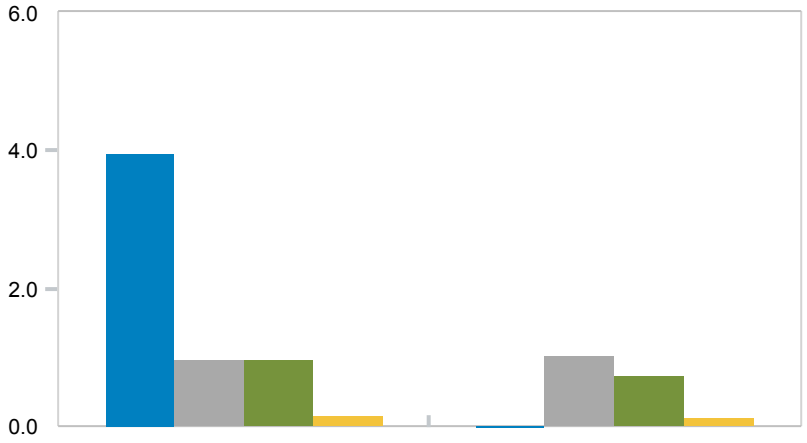


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	13.92 (36)	25.41 (11)	15.81 (34)	3.35 (23)	10.15 (6)	32.43 (19)
Index	15.24 (27)	20.74 (34)	15.47 (36)	1.25 (43)	3.93 (64)	30.06 (44)
Median	11.73	19.78	14.04	0.31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

Comparative Performance

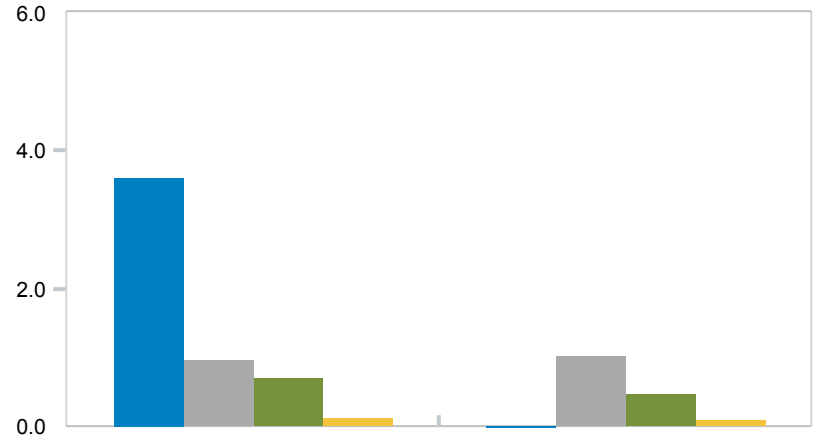
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	17.60 (3)	-18.37 (21)	3.83 (27)	6.65 (55)	-0.93 (58)	3.84 (24)
Index	14.58 (14)	-20.20 (53)	3.58 (30)	7.75 (45)	-0.08 (30)	3.34 (38)
Median	11.60	-20.17	2.78	7.57	-0.57	3.01

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



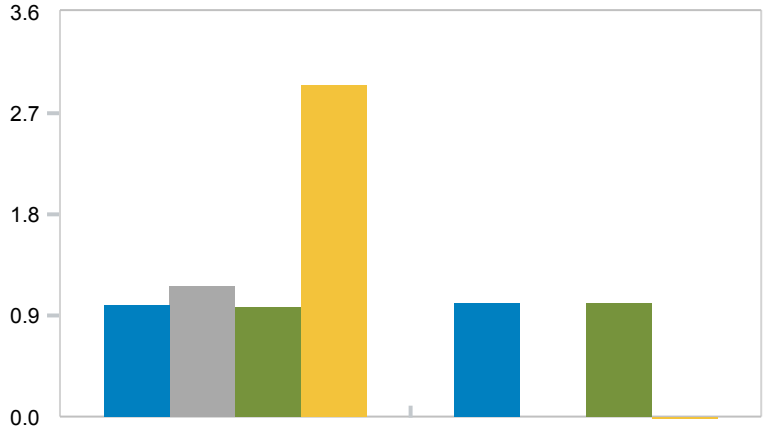
	Wellington	Russell 2000 Index
Alpha	3.95	0.00
Beta	0.96	1.00
Sharpe Ratio	0.96	0.73
Treynor Ratio	0.16	0.12

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



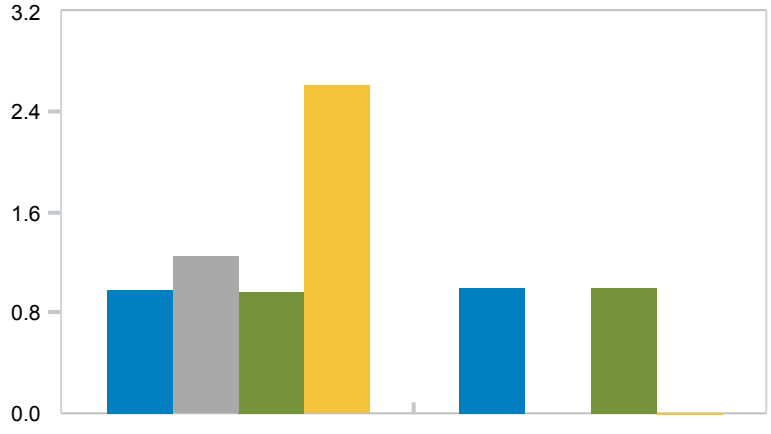
	Wellington	Russell 2000 Index
Alpha	3.61	0.00
Beta	0.97	1.00
Sharpe Ratio	0.70	0.47
Treynor Ratio	0.11	0.07

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Wellington	Russell 2000 Index
Actual Correlation	0.98	1.00
Information Ratio	1.16	N/A
R-Squared	0.97	1.00
Tracking Error	2.96	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Wellington	Russell 2000 Index
Actual Correlation	0.99	1.00
Information Ratio	1.26	N/A
R-Squared	0.97	1.00
Tracking Error	2.62	0.00

Benchmark: Russell 2000 Index

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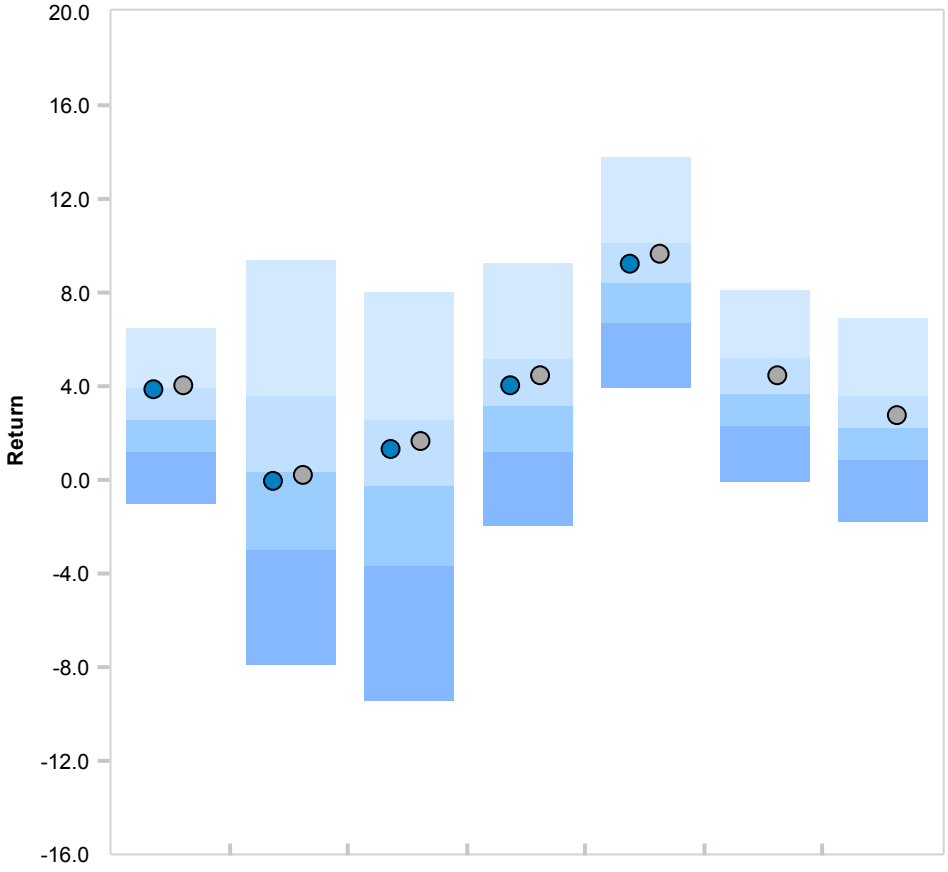
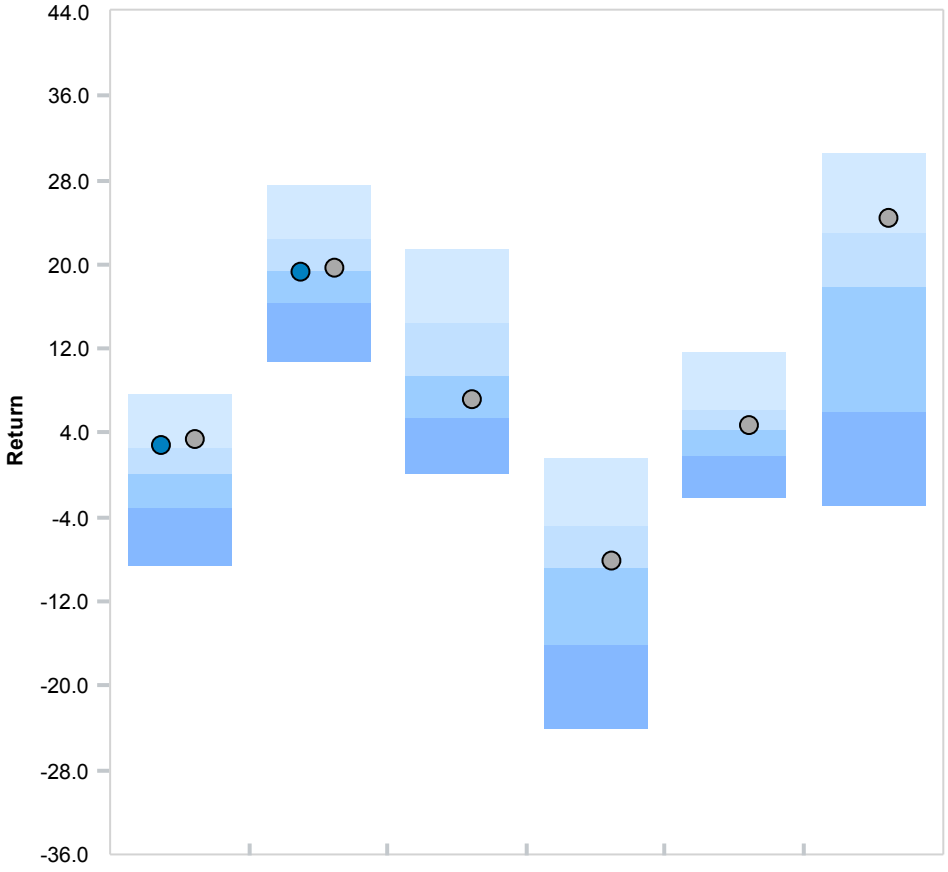
Peer Group Analysis - IM International Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.79 (28)	-0.06 (54)	1.29 (35)	4.03 (39)	9.20 (37)	N/A	N/A
Index	3.97 (25)	0.18 (52)	1.60 (32)	4.45 (33)	9.65 (31)	4.45 (35)	2.74 (38)
Median	2.58	0.31	-0.27	3.19	8.44	3.69	2.22

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 Mar-2019	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
Investment	10.08 (60)	-12.52 (53)	1.36 (19)	-0.94 (18)	-1.60 (83)	3.94 (65)
Index	10.13 (59)	-12.50 (53)	1.42 (17)	-0.97 (18)	-1.41 (81)	4.27 (58)
Median	10.53	-12.23	-0.27	-3.33	-0.07	4.67

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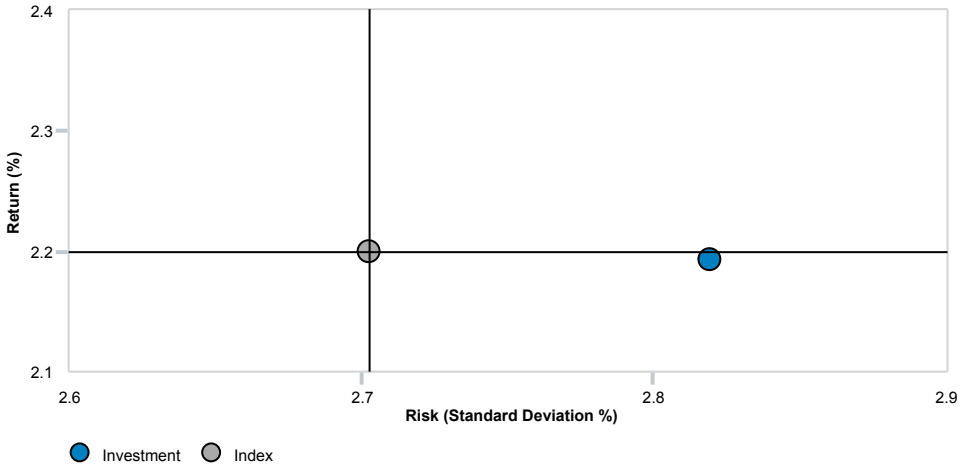
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.19	2.82	0.31	99.26	9	98.77	3
Index	2.20	2.70	0.33	100.00	9	100.00	3

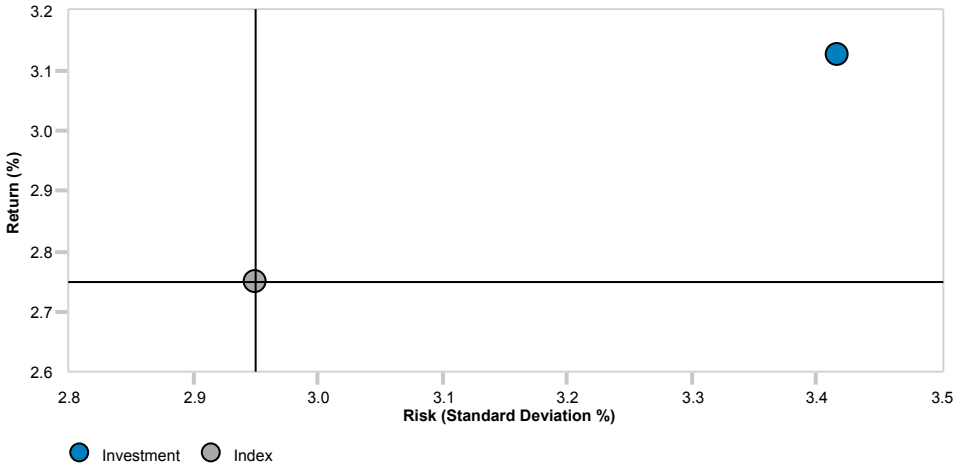
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.13	3.42	0.69	110.33	14	102.58	6
Index	2.75	2.95	0.67	100.00	15	100.00	5

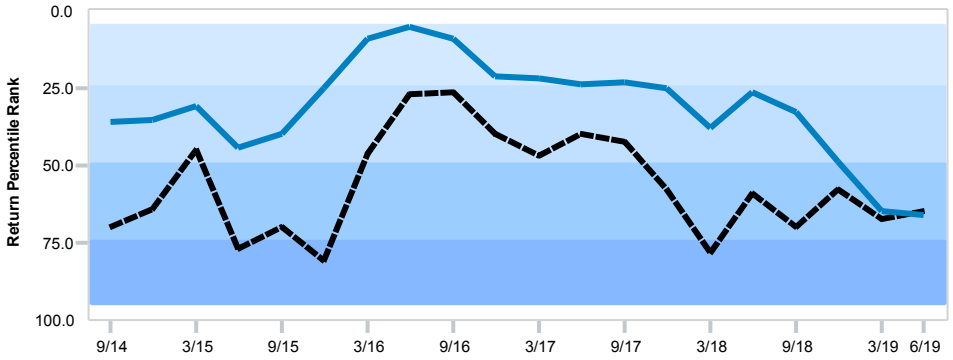
Risk and Return 3 Years



Risk and Return 5 Years

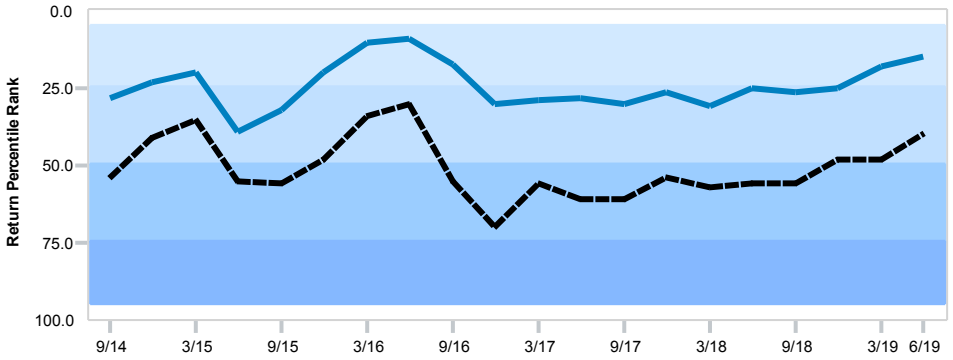


3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



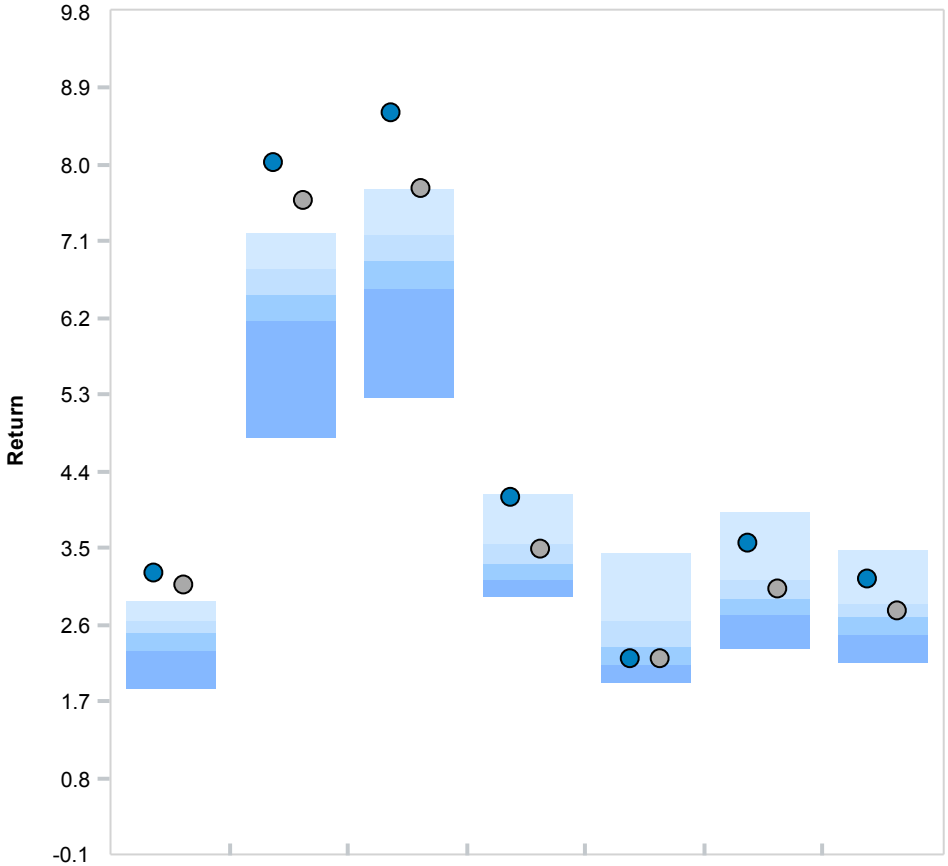
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	9 (45%)	2 (10%)	0 (0%)
Index	20	0 (0%)	8 (40%)	9 (45%)	3 (15%)

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



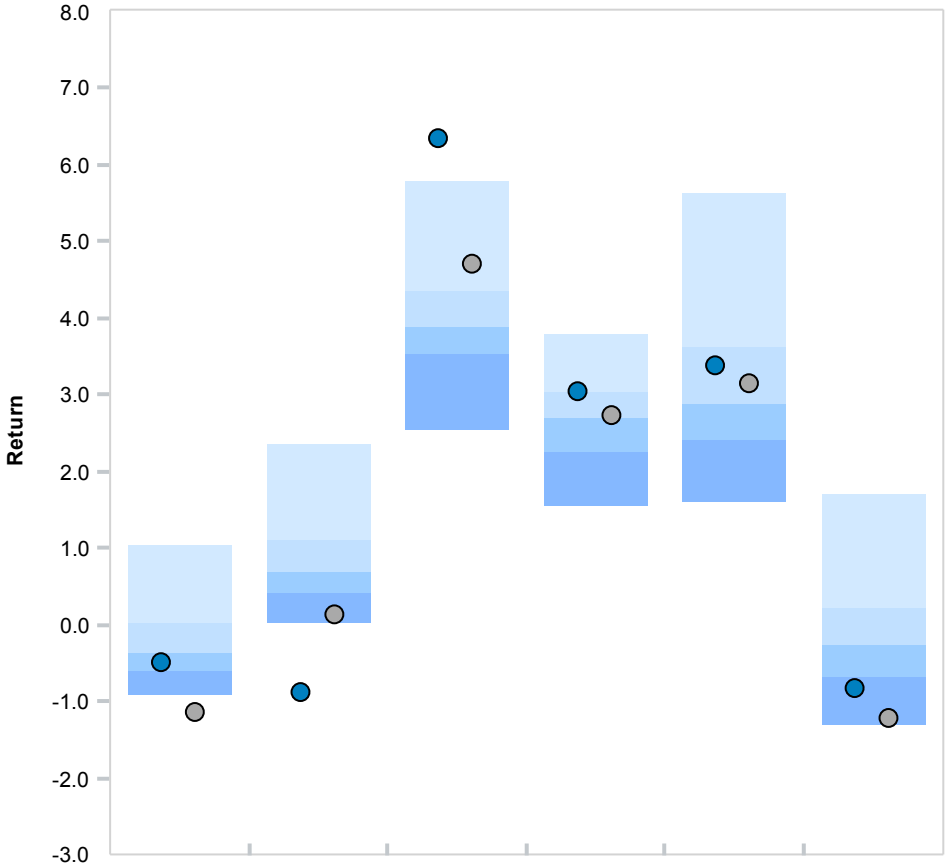
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)
Index	20	0 (0%)	8 (40%)	12 (60%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.20 (1)	8.02 (2)	8.61 (2)	4.09 (6)	2.19 (66)	3.54 (7)	3.13 (15)
Index	3.06 (3)	7.58 (3)	7.73 (5)	3.48 (31)	2.20 (65)	3.02 (33)	2.75 (40)
Median	2.51	6.48	6.88	3.33	2.33	2.89	2.67

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

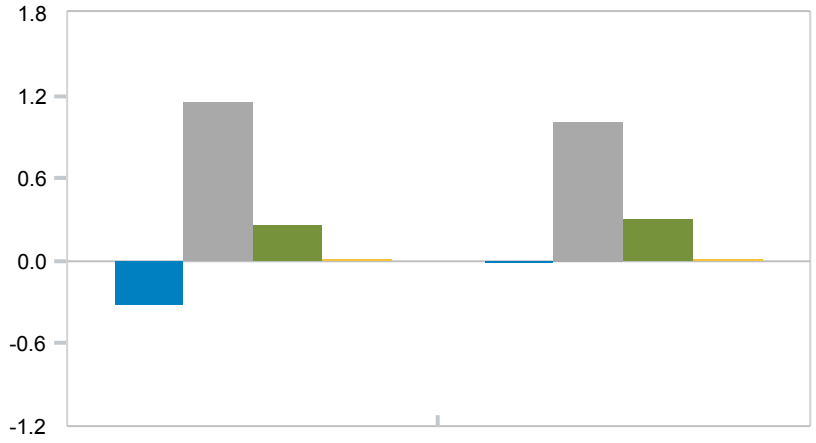


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	-0.50 (61)	-0.89 (100)	6.33 (4)	3.03 (26)	3.36 (30)	-0.84 (83)
Index	-1.16 (98)	0.11 (93)	4.68 (17)	2.71 (49)	3.13 (38)	-1.23 (93)
Median	-0.38	0.69	3.90	2.70	2.88	-0.27

Comparative Performance

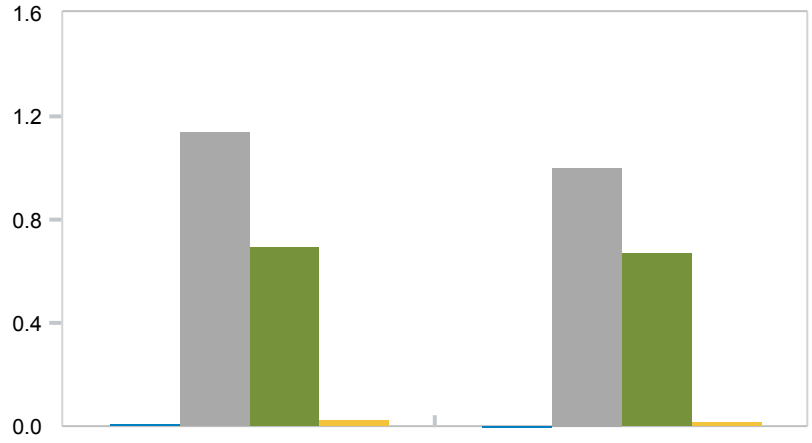
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	3.52 (1)	1.11 (72)	0.55 (15)	-0.01 (88)	-1.19 (95)	0.16 (25)
Index	2.79 (15)	1.56 (28)	0.14 (94)	-0.16 (98)	-1.28 (98)	0.14 (27)
Median	2.45	1.38	0.37	0.12	-0.90	0.02

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



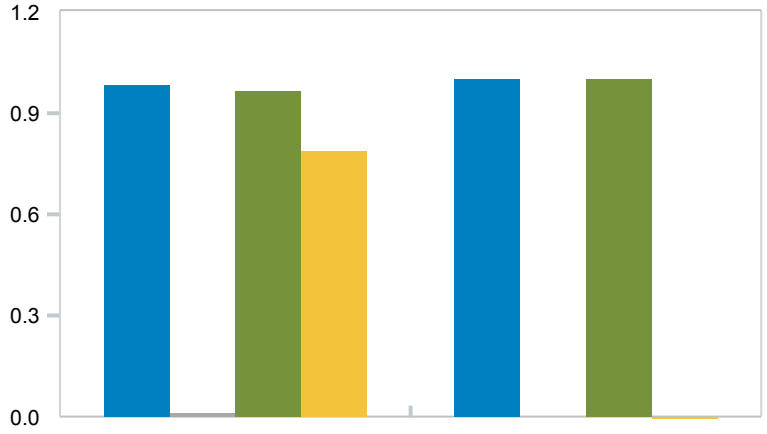
	Inverness Balanced	Inverness Fixed Income Index
Alpha	-0.32	0.00
Beta	1.15	1.00
Sharpe Ratio	0.26	0.31
Treynor Ratio	0.01	0.01

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



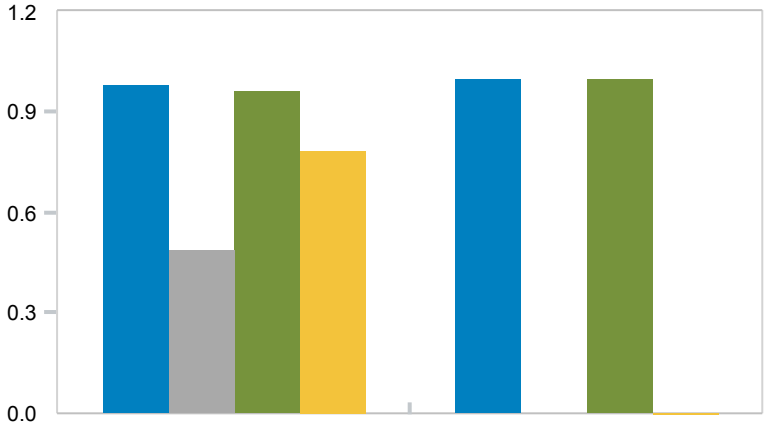
	Inverness Balanced	Inverness Fixed Income Index
Alpha	0.01	0.00
Beta	1.14	1.00
Sharpe Ratio	0.69	0.67
Treynor Ratio	0.02	0.02

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Inverness Balanced	Inverness Fixed Income Index
Actual Correlation	0.98	1.00
Information Ratio	0.01	N/A
R-Squared	0.97	1.00
Tracking Error	0.79	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Inverness Balanced	Inverness Fixed Income Index
Actual Correlation	0.98	1.00
Information Ratio	0.49	N/A
R-Squared	0.96	1.00
Tracking Error	0.78	0.00

Benchmark: Inverness Fixed Income Index

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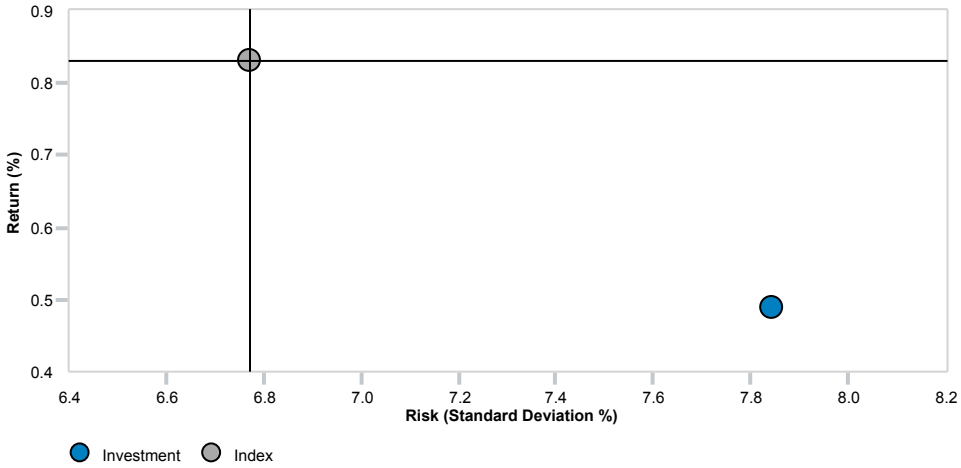
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.49	7.84	-0.07	111.57	9	115.98	3
Index	0.83	6.77	-0.05	100.00	9	100.00	3

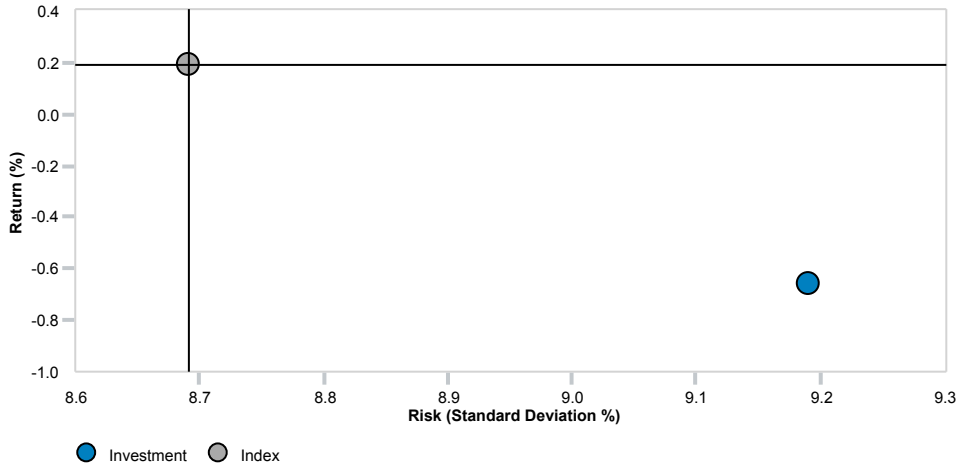
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.66	9.19	-0.12	99.37	12	111.25	8
Index	0.19	8.69	-0.03	100.00	12	100.00	8

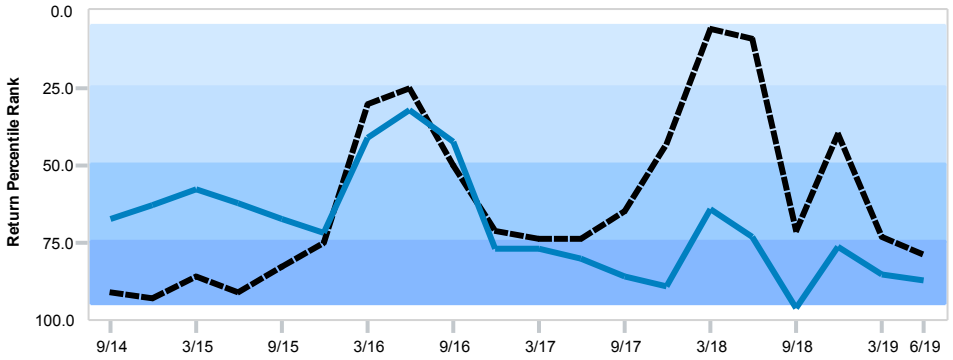
Risk and Return 3 Years



Risk and Return 5 Years

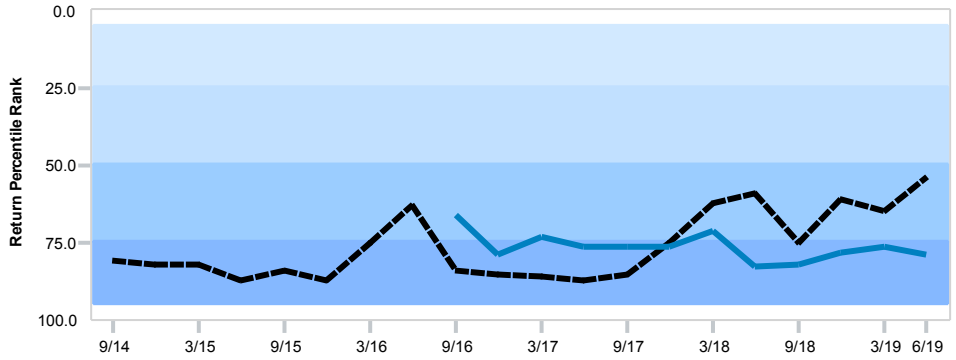


3 Year Rolling Percentile Rank IM International Fixed Income (MF)



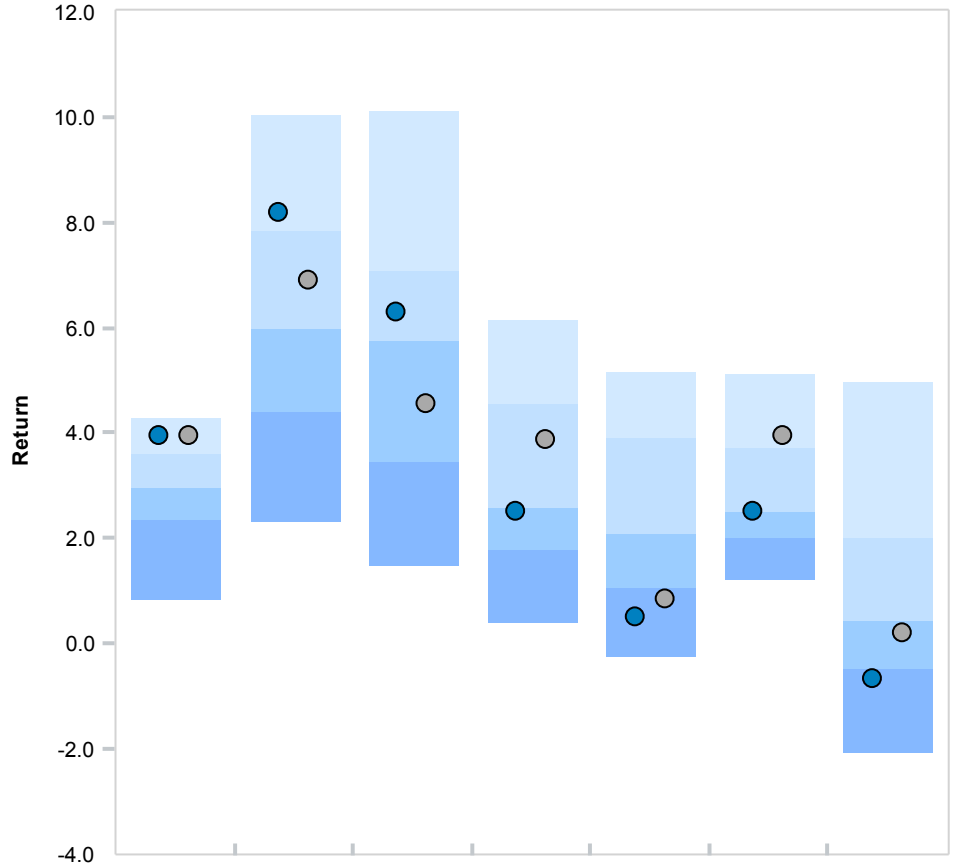
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	3 (15%)	8 (40%)	9 (45%)
Index	20	3 (15%)	4 (20%)	7 (35%)	6 (30%)

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



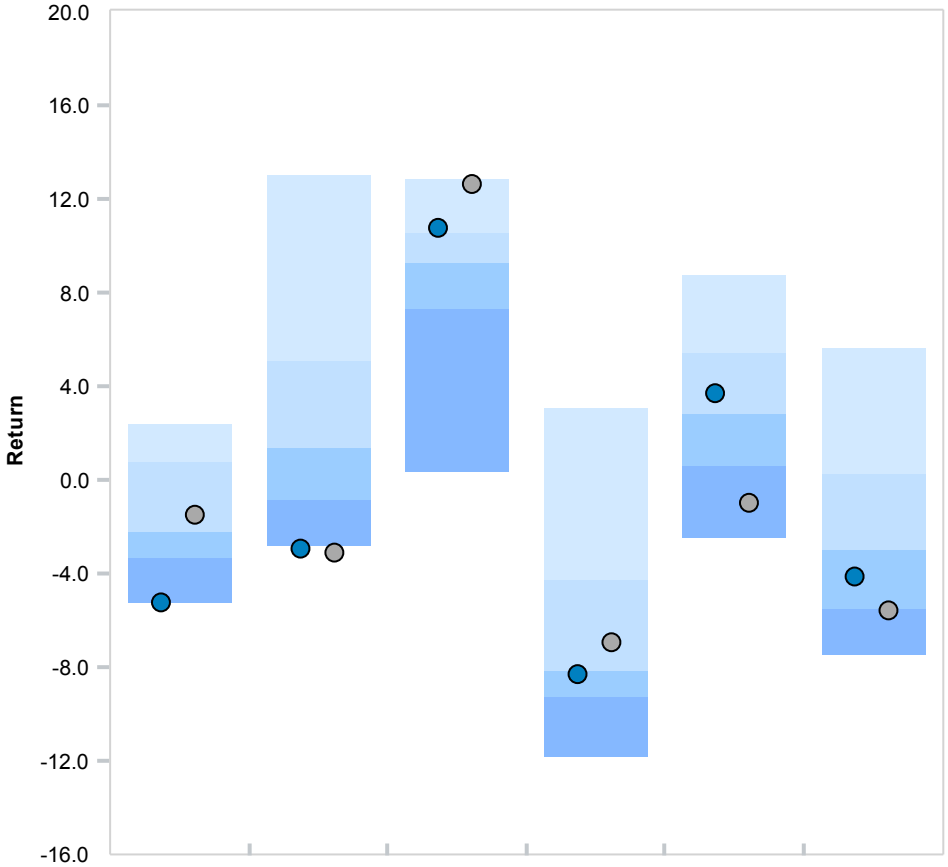
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	0 (0%)	0 (0%)	3 (25%)	9 (75%)
Index	20	0 (0%)	0 (0%)	9 (45%)	11 (55%)

Peer Group Analysis - IM International Fixed Income (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	3.96 (14)	8.18 (18)	6.30 (45)	2.50 (54)	0.49 (87)	2.52 (50)	-0.66 (79)
Index	3.93 (14)	6.89 (35)	4.54 (67)	3.88 (32)	0.83 (79)	3.94 (22)	0.19 (54)
Median	2.96	6.00	5.75	2.57	2.08	2.51	0.42

Peer Group Analysis - IM International Fixed Income (MF)

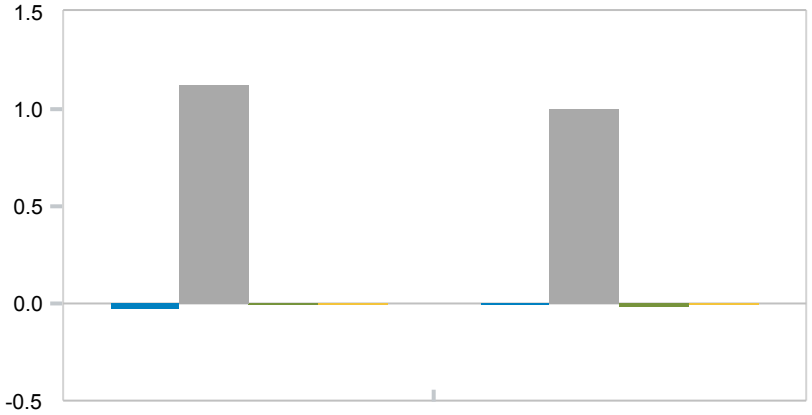


	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Investment	-5.24 (95)	-3.01 (97)	10.71 (24)	-8.35 (55)	3.67 (41)	-4.20 (58)
Index	-1.57 (34)	-3.14 (98)	12.61 (8)	-7.01 (38)	-0.99 (85)	-5.63 (77)
Median	-2.20	1.37	9.26	-8.21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

Comparative Performance

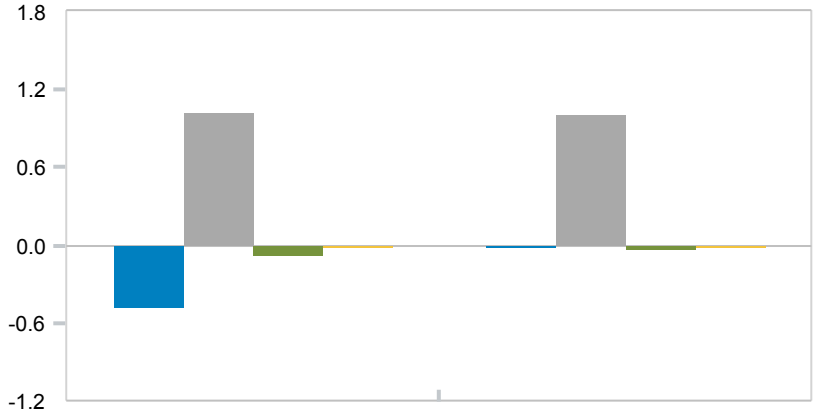
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Investment	2.13 (52)	1.89 (19)	-1.74 (84)	-7.15 (87)	3.63 (17)	0.22 (74)
Index	1.52 (94)	1.31 (38)	-2.19 (96)	-5.11 (59)	4.42 (2)	1.57 (16)
Median	2.16	0.78	-0.63	-4.61	1.55	1.06

Risk / Reward Historical Statistics 3 Years Ending June 30, 2019



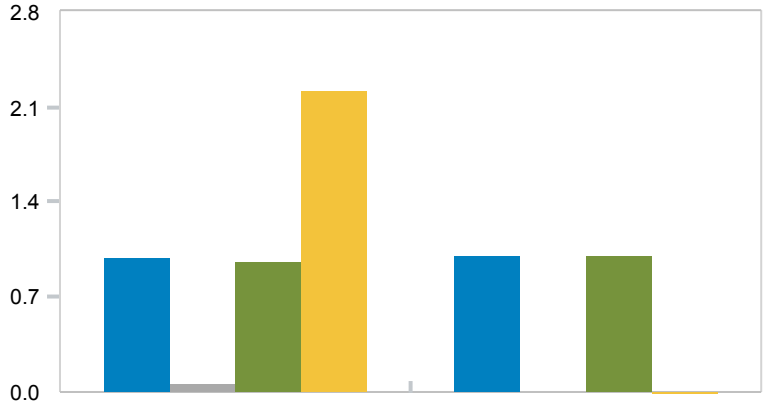
	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Alpha	-0.04	0.00
Beta	1.13	1.00
Sharpe Ratio	-0.01	-0.02
Treynor Ratio	0.00	0.00

Risk / Reward Historical Statistics 5 Years Ending June 30, 2019



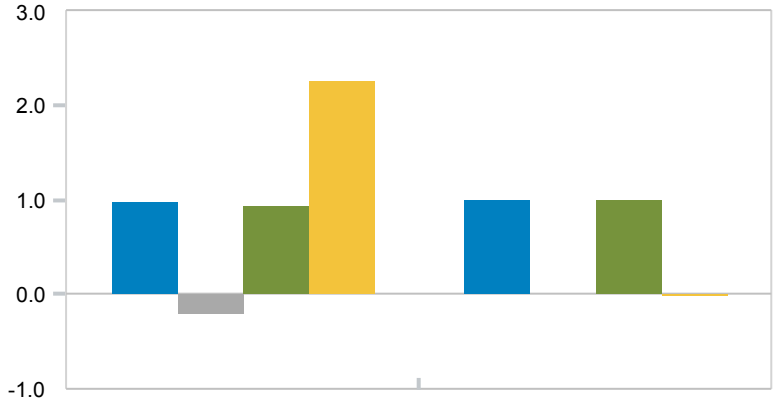
	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Alpha	-0.47	0.00
Beta	1.03	1.00
Sharpe Ratio	-0.08	-0.03
Treynor Ratio	-0.01	0.00

Benchmark Relative Historical Statistics 3 Years Ending June 30, 2019



	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Actual Correlation	0.98	1.00
Information Ratio	0.05	N/A
R-Squared	0.96	1.00
Tracking Error	2.21	0.00

Benchmark Relative Historical Statistics 5 Years Ending June 30, 2019



	Wells Capital Fixed	FTSE Non-U.S. World Government Bond
Actual Correlation	0.97	1.00
Information Ratio	-0.20	N/A
R-Squared	0.94	1.00
Tracking Error	2.26	0.00

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

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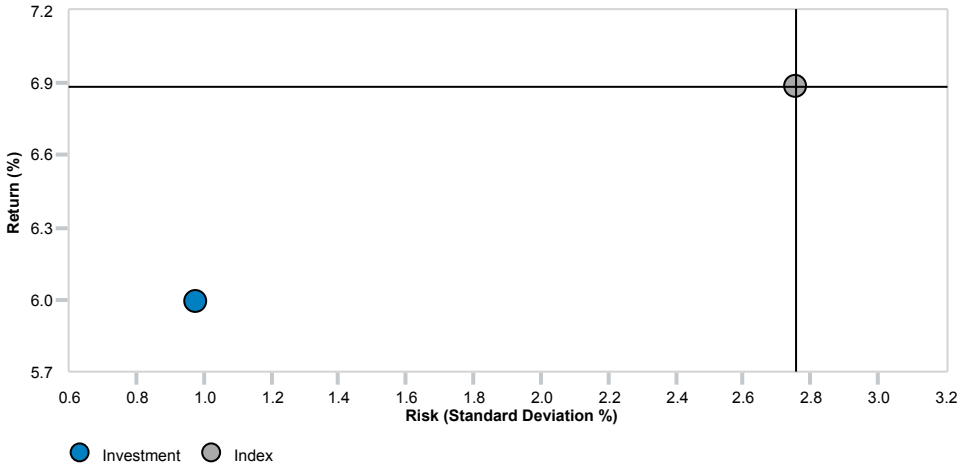
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.99	0.98	4.14	86.87	12	N/A	N/A
Index	6.89	2.75	1.95	100.00	12	N/A	N/A

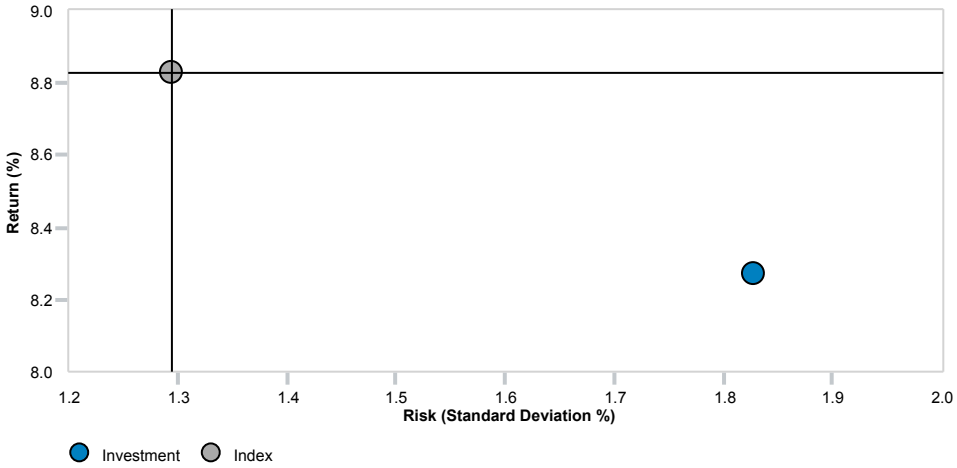
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.27	1.83	3.32	93.97	20	N/A	N/A
Index	8.83	1.29	4.74	100.00	20	N/A	N/A

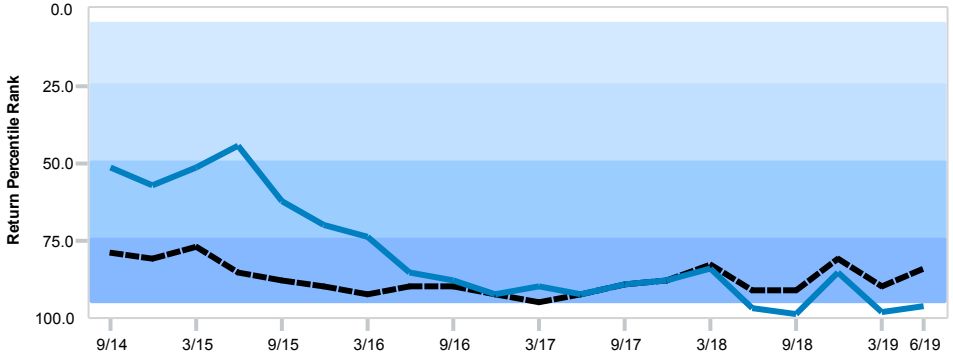
Risk and Return 3 Years



Risk and Return 5 Years

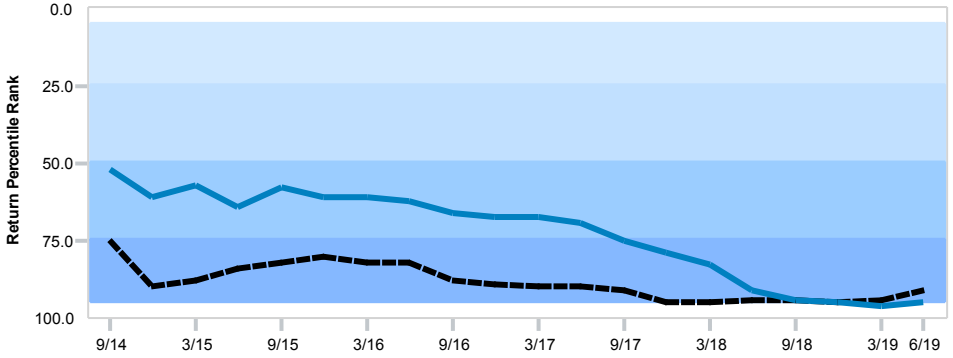


3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



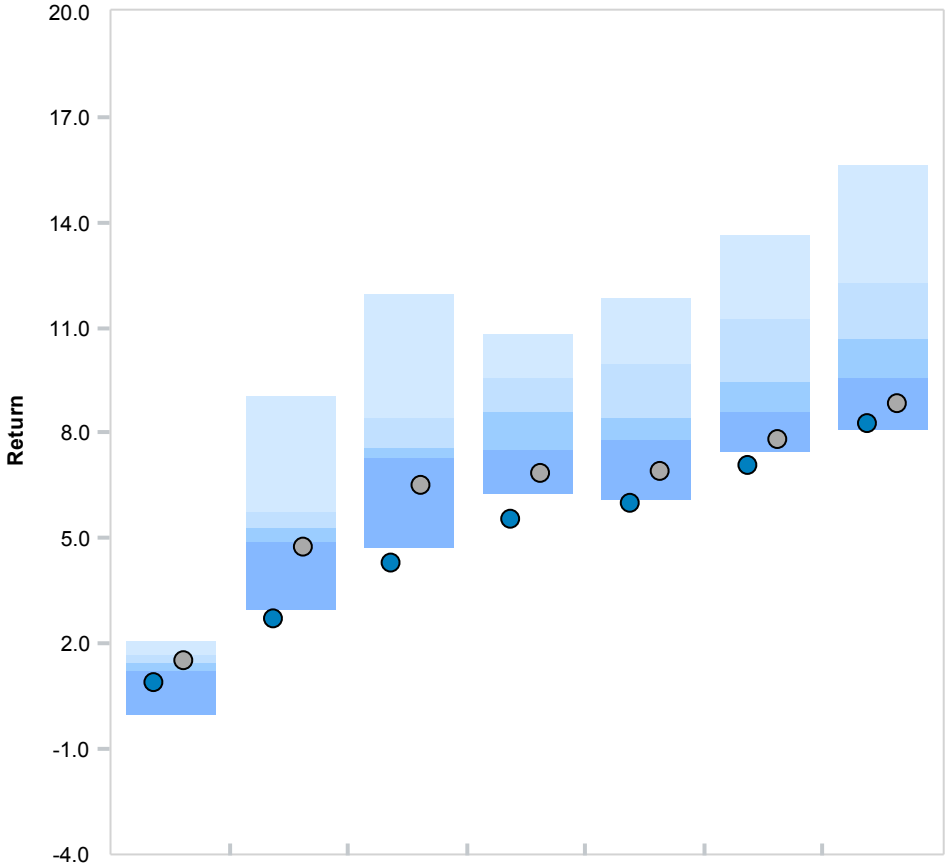
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	1 (5%)	6 (30%)	13 (65%)
Index	20	0 (0%)	0 (0%)	0 (0%)	20 (100%)

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



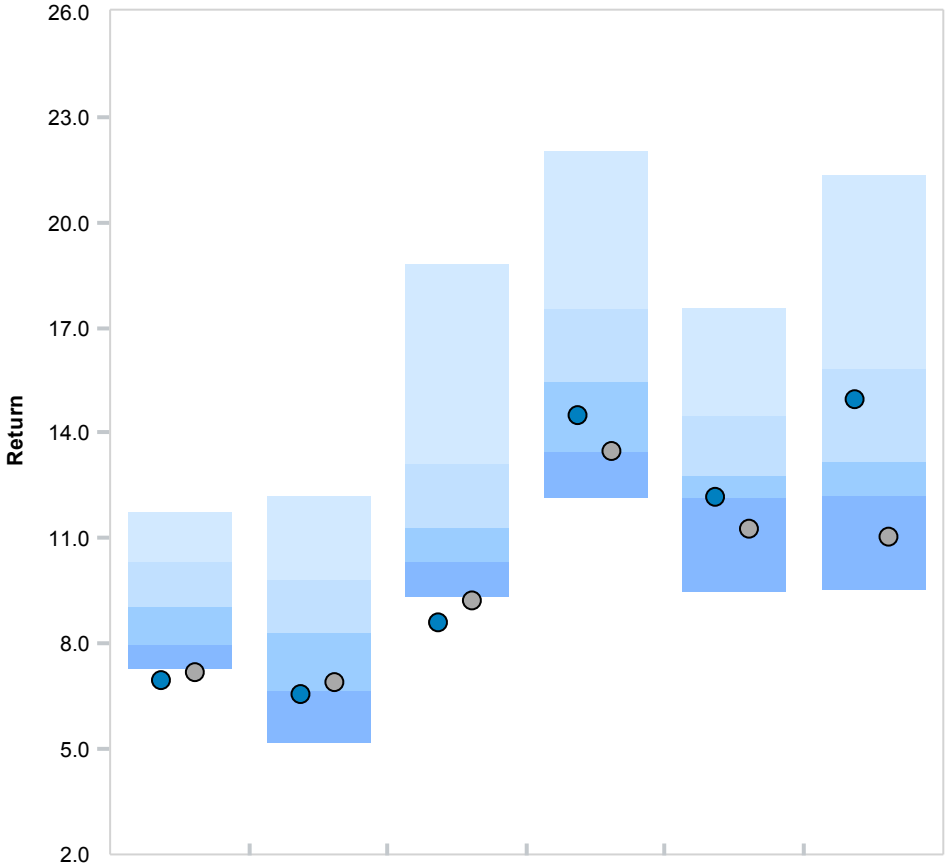
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	13 (65%)	7 (35%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

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	0.90 (90)	2.68 (96)	4.29 (96)	5.56 (97)	5.99 (96)	7.04 (97)	8.27 (95)
Index	1.51 (37)	4.76 (84)	6.51 (90)	6.85 (87)	6.89 (84)	7.81 (93)	8.83 (91)
Median	1.47	5.28	7.59	8.60	8.43	9.45	10.69

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 Mar-2019	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
Investment	0.20 (100)	1.57 (64)	1.57 (91)	1.70 (100)	1.95 (71)	1.55 (100)
Index	1.80 (73)	1.37 (76)	1.67 (80)	1.81 (87)	1.70 (87)	1.80 (81)
Median	1.99	1.76	2.10	2.22	2.21	2.25

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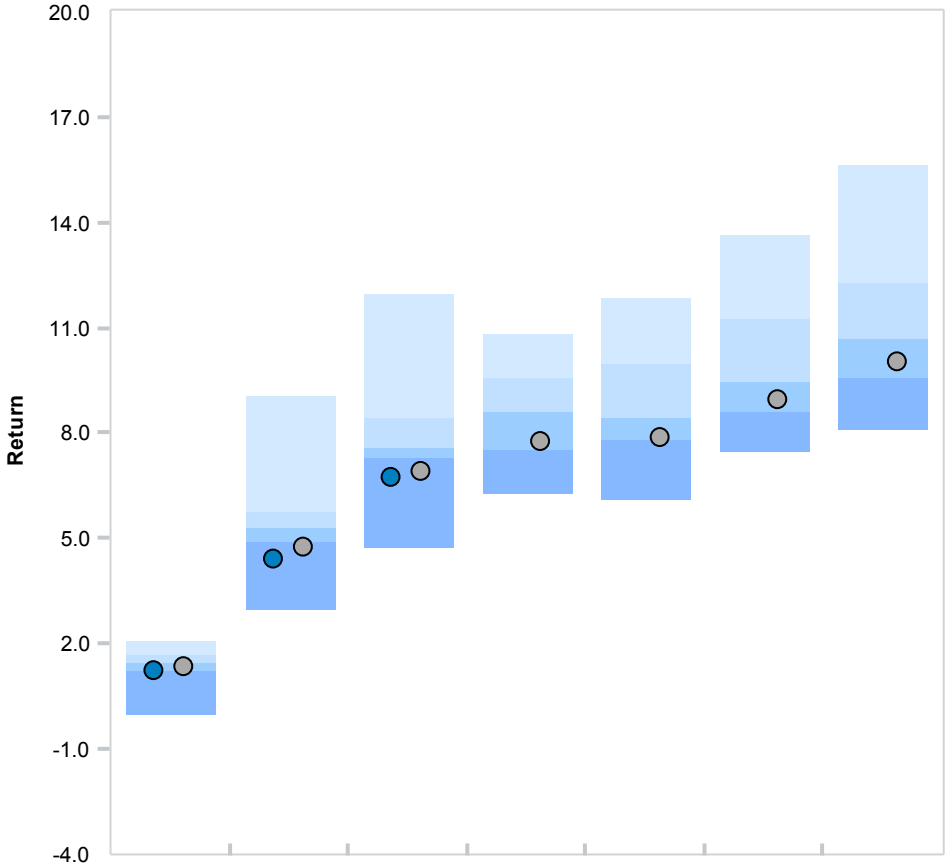
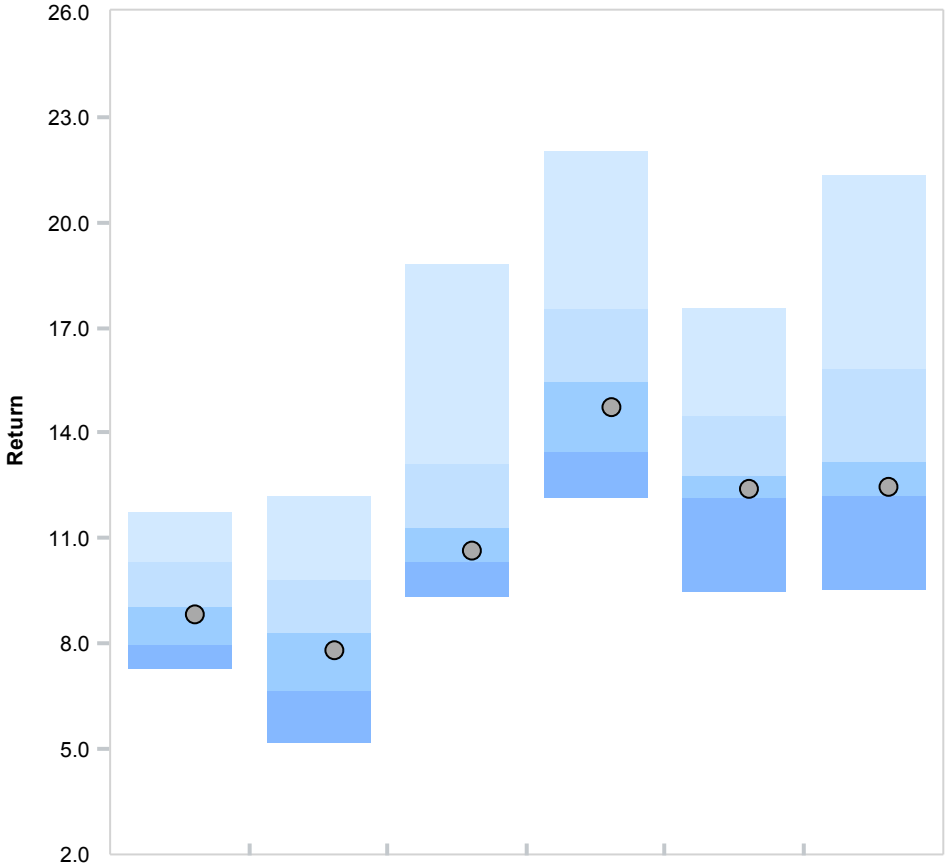
Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	1.21 (74)	4.40 (89)	6.73 (90)	N/A	N/A	N/A	N/A
Index	1.35 (67)	4.73 (84)	6.91 (84)	7.76 (73)	7.88 (74)	8.94 (73)	10.03 (61)
Median	1.47	5.28	7.59	8.60	8.43	9.45	10.69

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 Mar-2019	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
Investment	1.74 (76)	1.38 (76)	2.24 (45)	2.75 (30)	N/A	N/A
Index	1.69 (81)	1.62 (62)	2.09 (54)	2.13 (61)	2.17 (55)	2.15 (57)
Median	1.99	1.76	2.10	2.22	2.21	2.25

	Estimated Annual Fee (%)	Market Value ($)	Estimated Annual Fee ($)	Fee Schedule
Rhumbline LCV	0.05	55,756,647	27,878	0.05 % of Assets
Inverness Balanced	0.35	469,196,091	1,642,186	0.35 % of Assets
Logan Equity	0.60	55,660,530	333,963	0.60 % of Assets
Rhumbline S&P MidCap 400	0.05	73,751,742	36,876	0.05 % of Assets
Wellington	0.60	111,707,044	670,242	0.60 % of Assets
Wells Capital Fixed	0.36	35,054,531	126,196	0.36 % of Assets
Rhumbline Intl Equity	0.05	36,110,307	18,055	0.05 % of Assets
JP Morgan RE	1.00	45,552,797	455,528	1.00 % of Assets
Intercontinental RE	1.00	43,867,531	438,675	1.00 % of Assets
Total Fund Composite	**0.40**	**926,657,220**	**3,749,601**	

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

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