

Investment Performance Review
Period Ending June 30, 2019

Delray Beach Firefighters' Retirement System

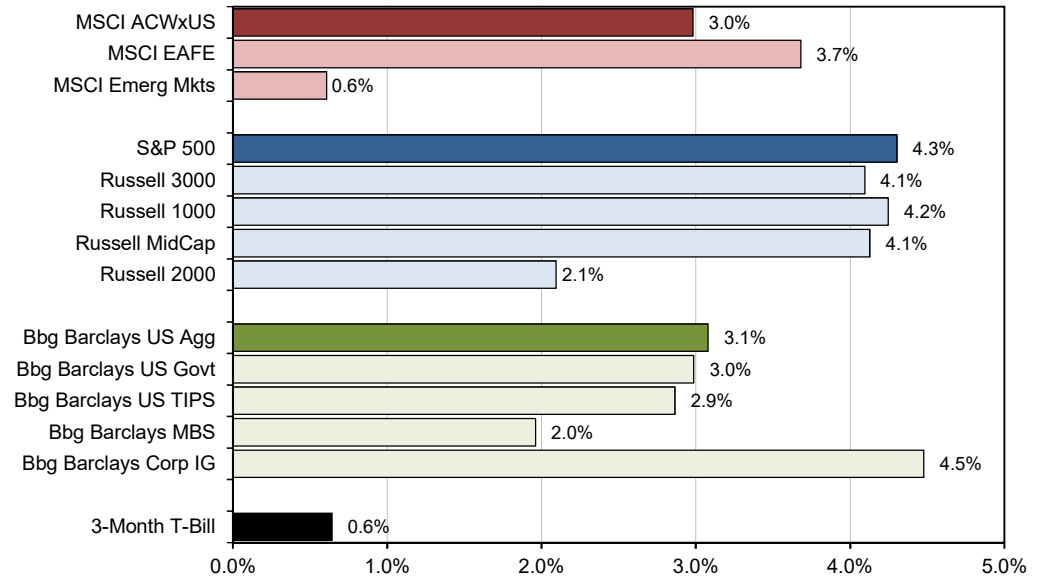


2nd Quarter 2019 Market Environment

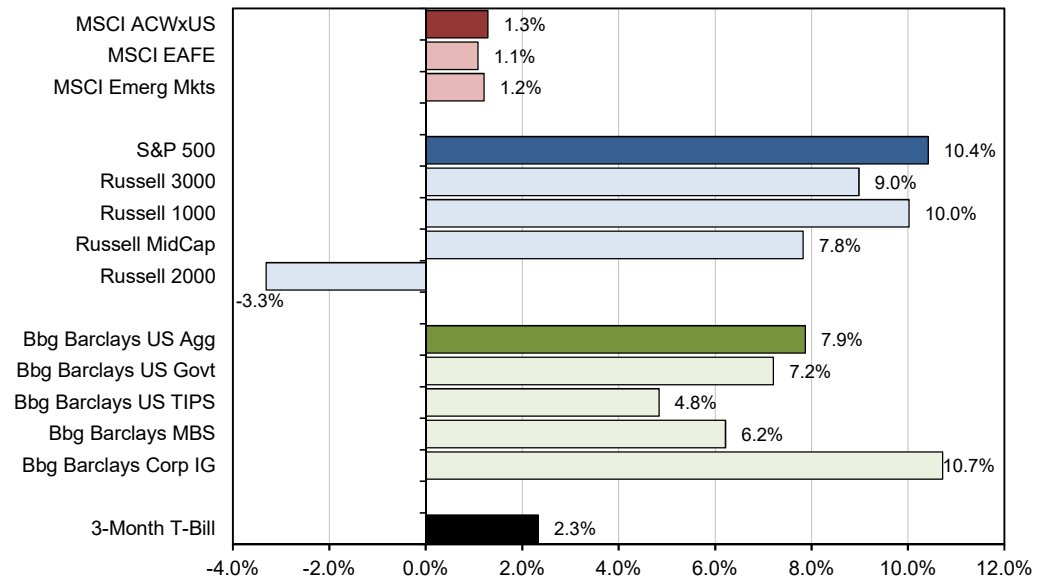


- Broad asset class returns were positive during the 2nd quarter of 2019 with both equity and fixed income indices extending their year-to-date gains. US stocks outperformed international stocks during a very volatile quarter. Equity indices rose to start the period as progress in global trade negotiations 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 uncertainty, 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.

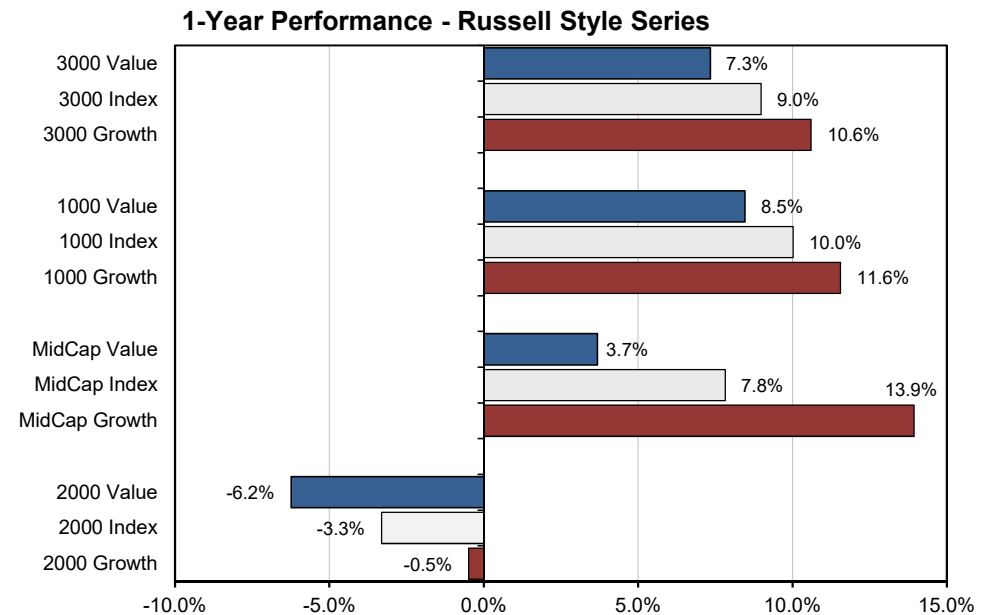
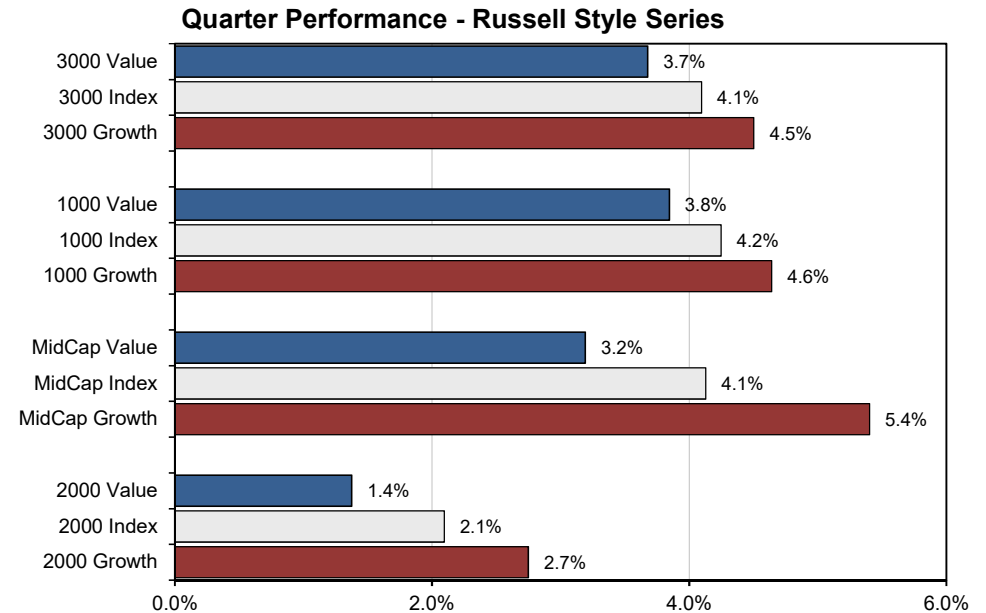
Quarter Performance



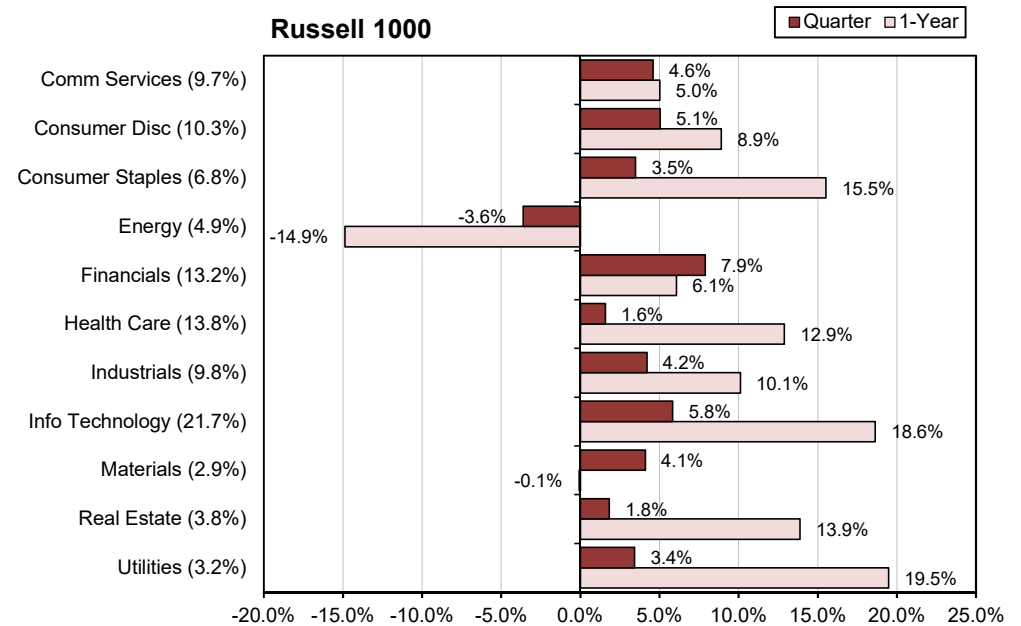
1-Year Performance



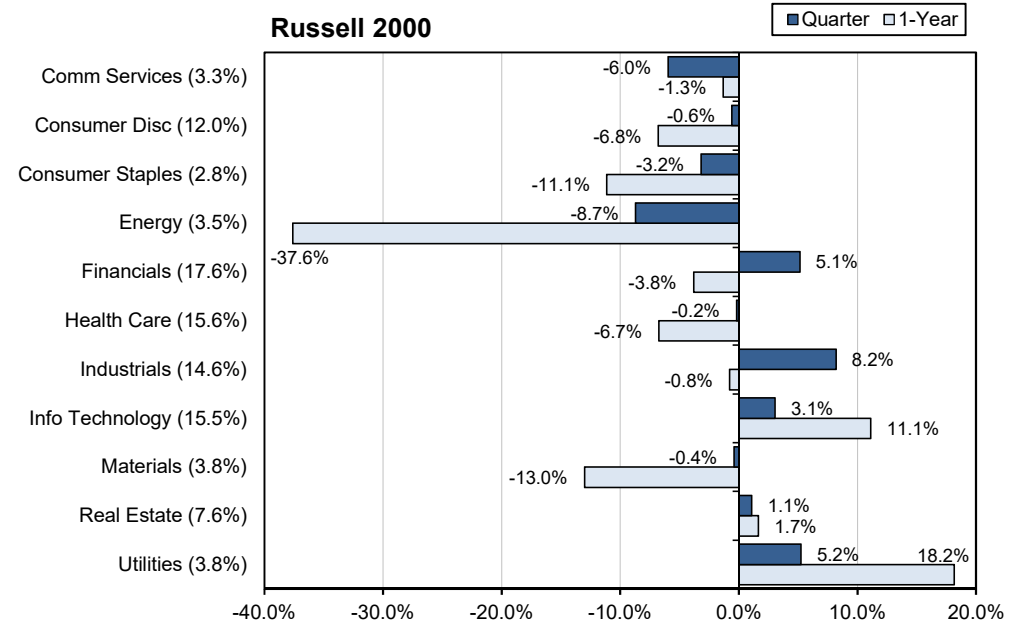
- US equity index returns were modestly positive across the style and capitalization spectrum for the 2nd quarter. Corporate earnings reported during the quarter surprised to the upside, but economic data released during the period showed signs of slowing growth. Developments around global trade were 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.



- 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%.



The Market Environment
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 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

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

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

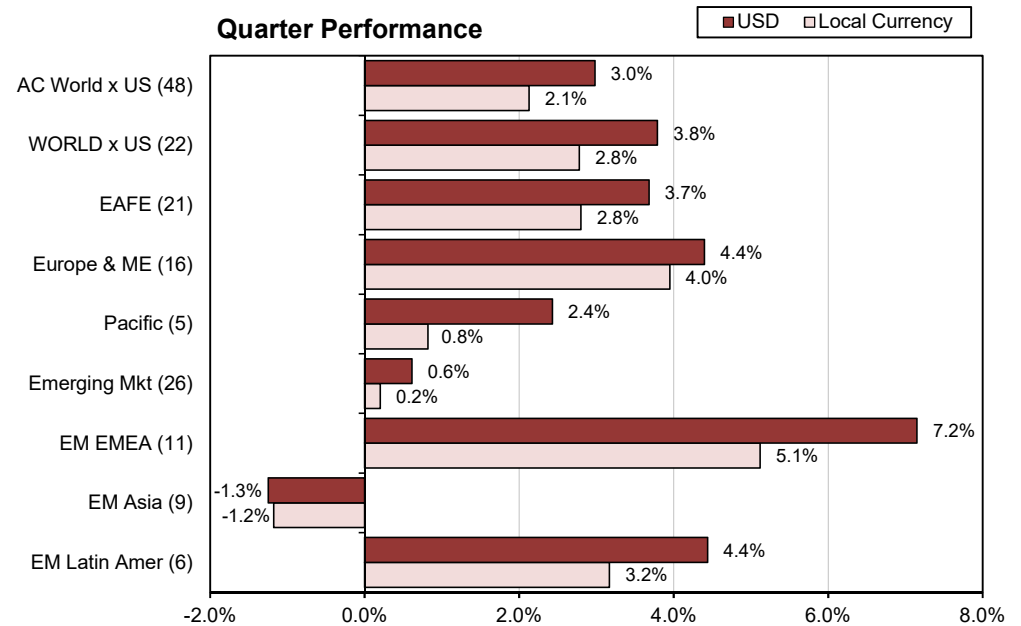
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Iovance Biotherapeutics Inc	0.13%	157.8%	91.6%	Health Care
Arqule Inc	0.06%	129.9%	99.1%	Health Care
Adverum Biotechnologies Inc	0.03%	126.9%	124.3%	Health Care
Chimerix Inc	0.01%	105.7%	-9.2%	Health Care
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 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
Nuvecra 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

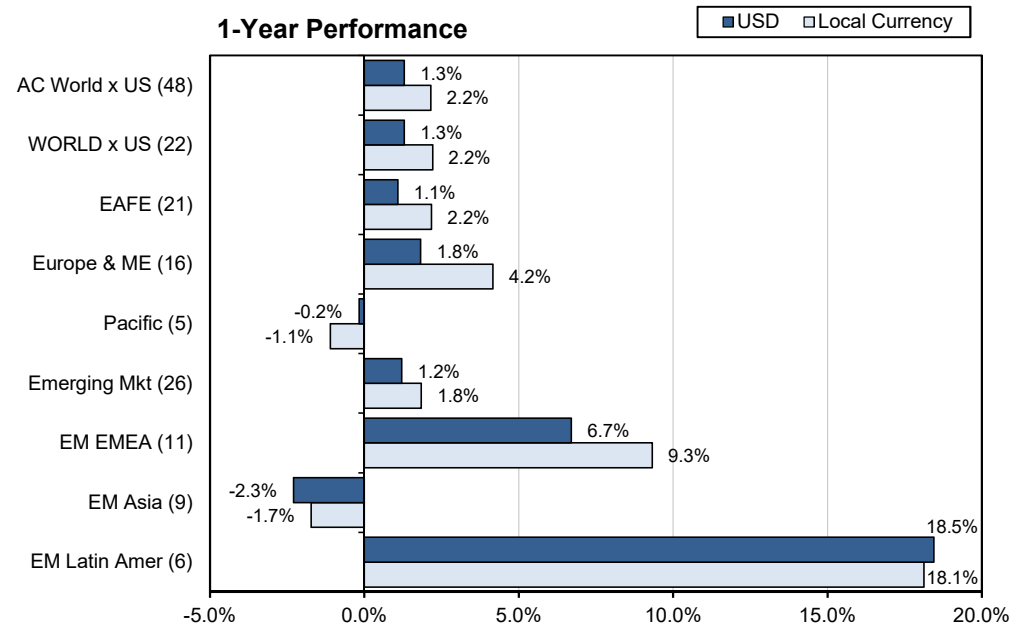


- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 2.1% in local currency terms and 3.0% in US dollar (USD) terms during the 2nd quarter. Similar to US markets, international equity investors balanced difficulties 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.

Quarter Performance



1-Year Performance



The Market Environment
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)

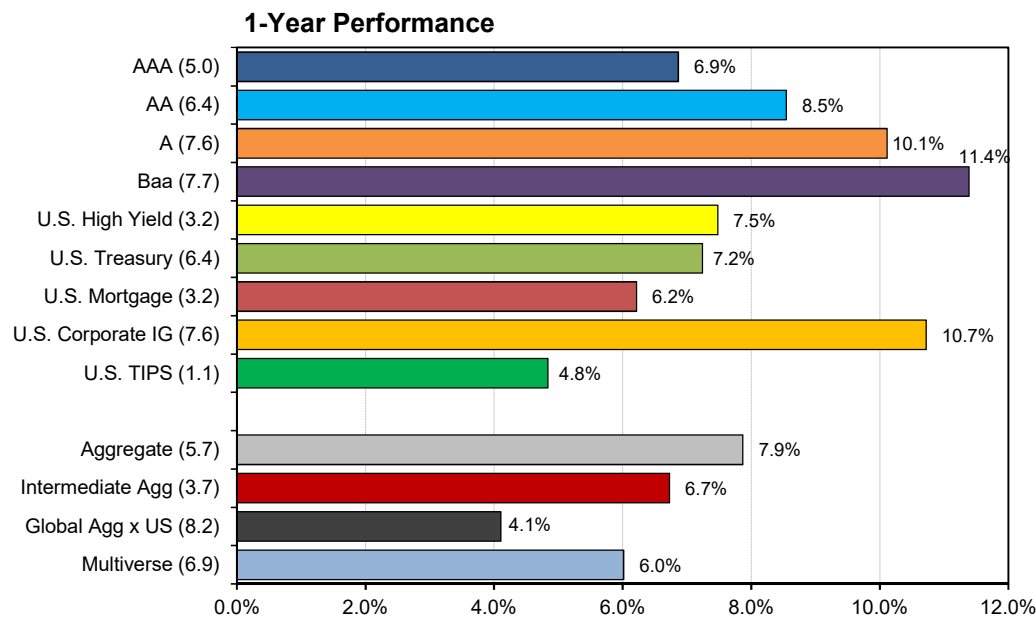
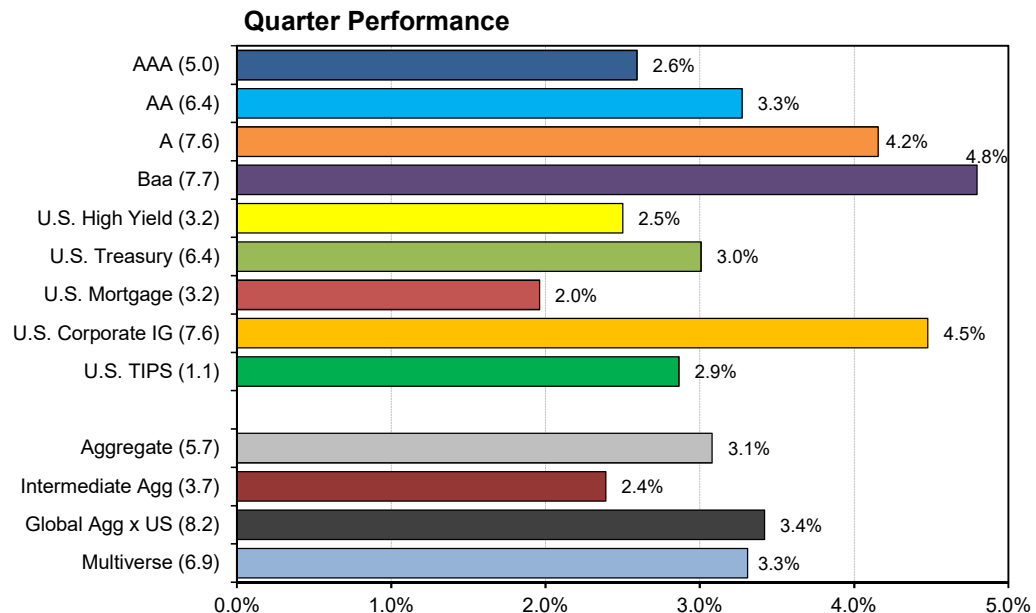
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



- 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.

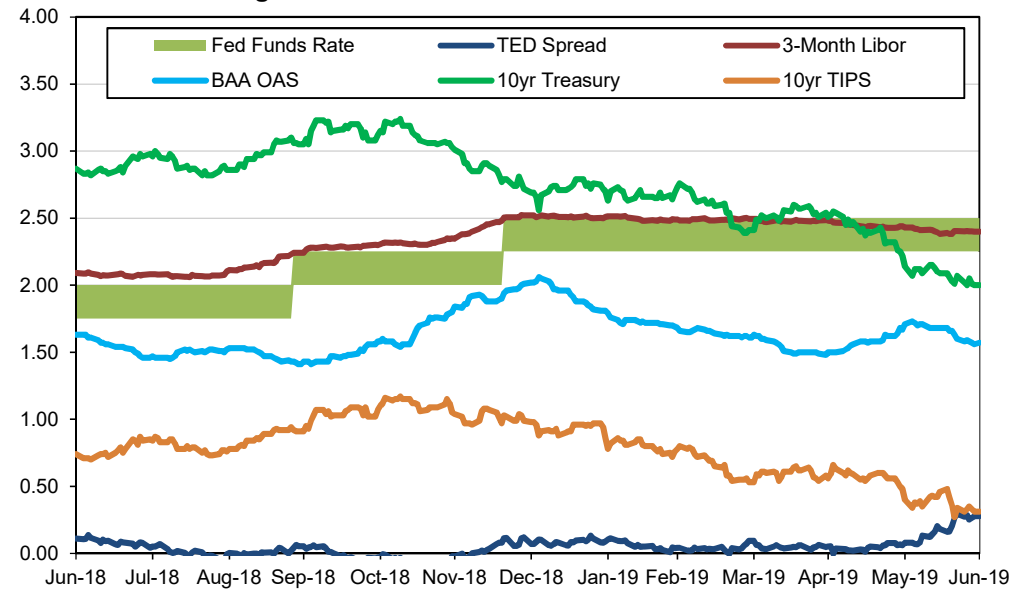
- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the 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.

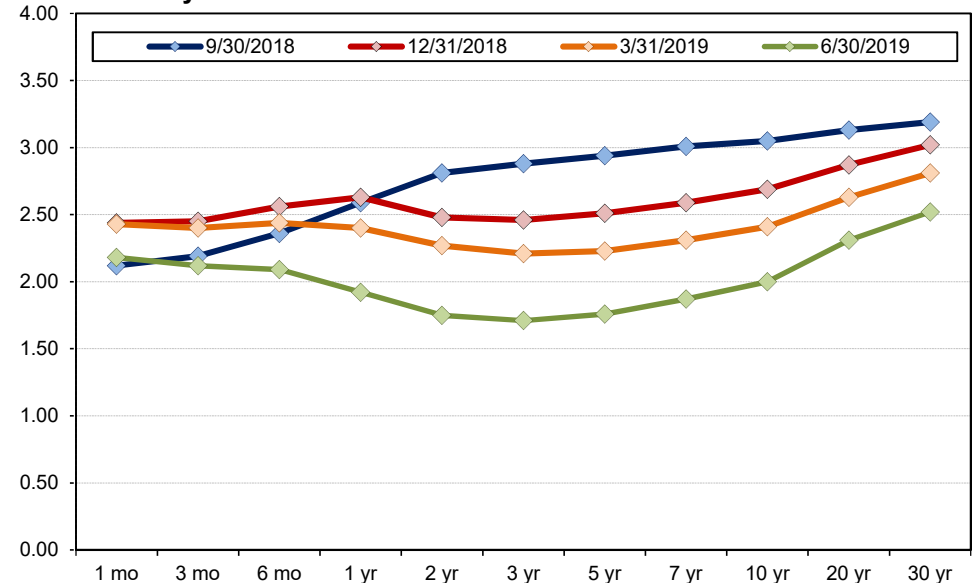


- Global fixed income returns were in line with their domestic counterparts, slightly outperforming during the 2nd quarter. These indices have lower, or in some cases (Germany, Japan), negative yields, but have higher durations. The returns of these indices are also significantly influenced by fluctuations 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.

1-Year Trailing Market Rates



Treasury Yield Curve



**Delray Beach Fire Pension Plan
Compliance Checklist**

As of June 30, 2019

Total Fund Compliance:	Yes	No	N/A
	1. The Total Plan return equaled or exceeded the 7.25% actuarial earnings assumption over the trailing three and five year periods.		•
2. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three and five year periods.		•	
3. The Total Plan return ranked within the top 40th percentile of its peer group over the trailing three and five year periods.		•	

* Based off gross of fees and public plan peer group.

Total Equity Compliance:	Yes	No	N/A
	1. Total equity returns meet or exceed the benchmark over the trailing three and five year periods.		•
2. Total equity returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.			•
3. The total equity allocation was less than 70% of the total plan assets at market.	•		
4. Total foreign equity was less than 25% of the total plan assets at market.	•		

Total Fixed Income Compliance:	Yes	No	N/A
	1. Total fixed income returns meet or exceed the benchmark over the trailing three and five year periods.	•	
2. Total fixed income returns ranked within the top 40th percentile of its peer group over the trailing three and five year periods.	•		
3. No more than 15% of the fixed income portfolio was rated below BBB/Baa.	•		

	VG Total Stock Mkt			Boston			Rhumblin R1000G		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•			•
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•			•
3. Less than four consecutive quarters of under performance relative to the benchmark.			•	•			•		
4. Three and five-year down-market capture ratio less than the index.*			•			•			•
5. Manager reports compliance with PFIA.			•			•			•

	Polen LCG			Lazard			VG Mid-Cap		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•	•					•
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•		•		•		
3. Less than four consecutive quarters of under performance relative to the benchmark.	•			•					•
4. Three and five-year down-market capture ratio less than the index.*			•	•					•
5. Manager reports compliance with PFIA.			•	•					•

*3 years used when 5 years unavailable



**Delray Beach Fire Pension Plan
Compliance Checklist
As of June 30, 2019**

	H.L. Intl Equity			GHA			Templeton Global		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*			•			•	•		
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*			•			•	•		
3. Less than four consecutive quarters of under performance relative to the benchmark.	•				•		•		
4. Three and five-year down-market capture ratio less than the index.*			•			•	•		
5. Manager reports compliance with PFIA.			•	•					•

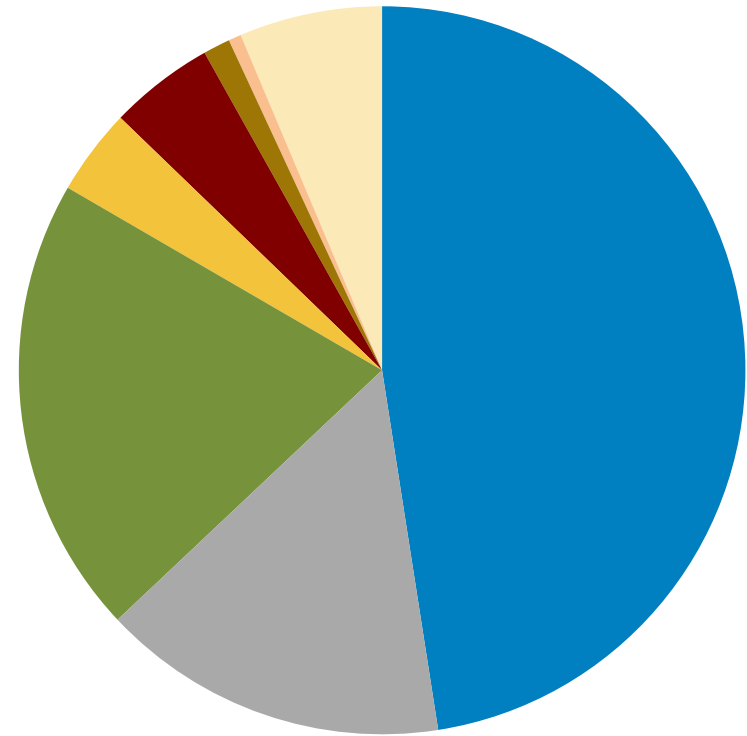
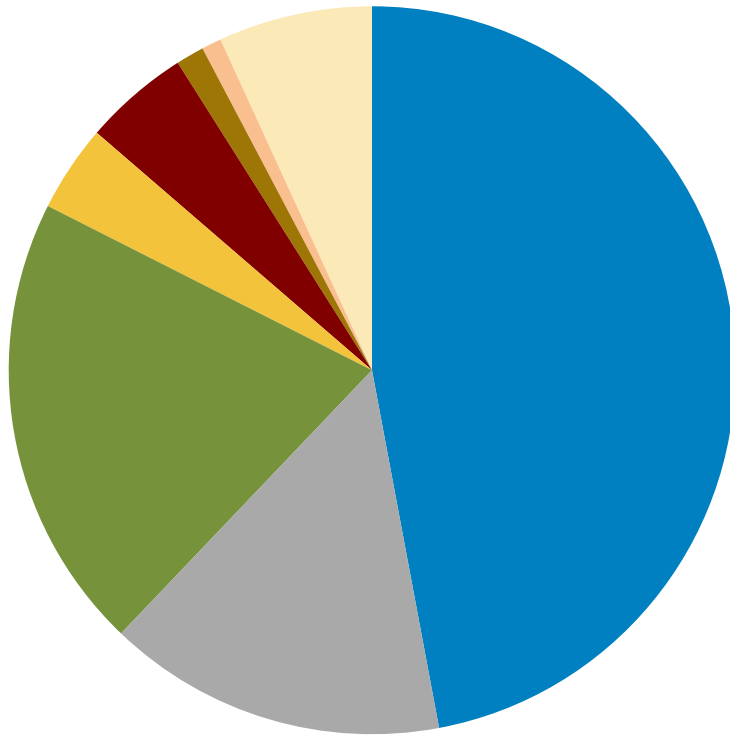
	American Realty								
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three and five year periods.*		•							
2. Manager ranked within the top 40th percentile over trailing three and five year periods.*		•							
3. Less than four consecutive quarters of under performance relative to the benchmark.	•								
4. Three and five-year down-market capture ratio less than the index.*			•						
5. Manager reports compliance with PFIA.			•						

*3 years used when 5 years unavailable



March 31, 2019 : \$106,819,348

June 30, 2019 : \$108,957,228

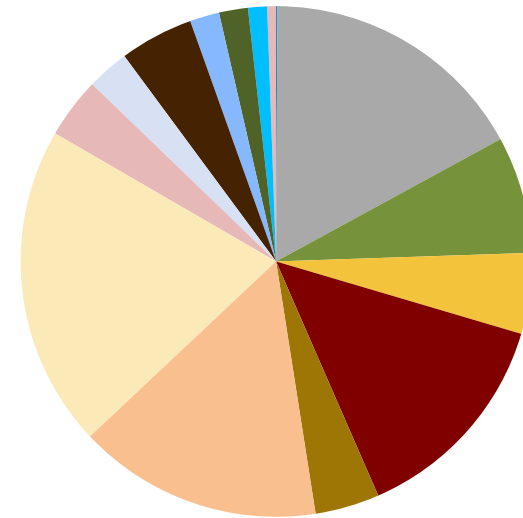
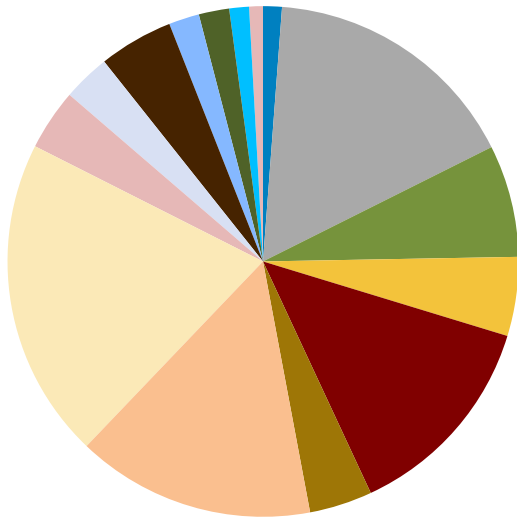


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ US Equity	50,255,669	47.0	■ US Equity	51,791,572	47.5
■ International Equity	16,116,530	15.1	■ International Equity	16,834,482	15.5
■ US Fixed Income	21,706,710	20.3	■ US Fixed Income	22,202,591	20.4
■ Global Fixed Income	4,126,449	3.9	■ Global Fixed Income	4,186,533	3.8
■ US Private Real Estate	5,022,573	4.7	■ US Private Real Estate	5,085,190	4.7
■ US Real Return	1,333,916	1.2	■ US Real Return	1,307,325	1.2
■ Cash	937,178	0.9	■ Cash	613,084	0.6
■ US Private Equity	7,320,322	6.9	■ US Private Equity	6,936,450	6.4



March 31, 2019 : \$106,819,348

June 30, 2019 : \$108,957,228



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard Total Stock Mkt (VTSAX)	1,271,104	1.2	■ Vanguard Total Stock Mkt (VTSAX)	87,980	0.1
■ Boston LCV	17,537,137	16.4	■ Boston LCV	18,483,494	17.0
■ Lazard SMid Cap Core	7,588,274	7.1	■ Lazard SMid Cap Core	8,076,425	7.4
■ Vanguard Mid-Cap Index (VIMAX)	5,338,607	5.0	■ Vanguard Mid-Cap Index (VIMAX)	5,571,542	5.1
■ Polen Capital LCG	14,273,651	13.4	■ Polen Capital LCG	15,128,422	13.9
■ Rhumblin R1000G	4,246,897	4.0	■ Rhumblin R1000G	4,443,708	4.1
■ Harding Loevner Intl Equity (HLMIX)	16,116,530	15.1	■ Harding Loevner Intl Equity (HLMIX)	16,834,482	15.5
■ Garcia Hamilton Fixed Income	21,706,710	20.3	■ Garcia Hamilton Fixed Income	22,202,591	20.4
■ Templeton Global Total Return (FTTRX)	4,126,449	3.9	■ Templeton Global Total Return (FTTRX)	4,186,533	3.8
■ Crescent Direct Lending Levered Fund	3,204,803	3.0	■ Crescent Direct Lending Levered Fund	2,913,797	2.7
■ American Core Realty	5,022,573	4.7	■ American Core Realty	5,085,190	4.7
■ Angelo Gordon Net Lease Realty Fund III, L.P.	2,063,526	1.9	■ Angelo Gordon Net Lease Realty Fund III, L.P.	2,028,200	1.9
■ Dune Real Estate Fund III	2,051,993	1.9	■ Dune Real Estate Fund III	1,994,453	1.8
■ Molpus Woodlands Timber	1,333,916	1.2	■ Molpus Woodlands Timber	1,307,325	1.2
■ Mutual Fund Cash	3,112	0.0	■ Mutual Fund Cash	3,128	0.0
■ R&D	934,066	0.9	■ R&D	609,956	0.6

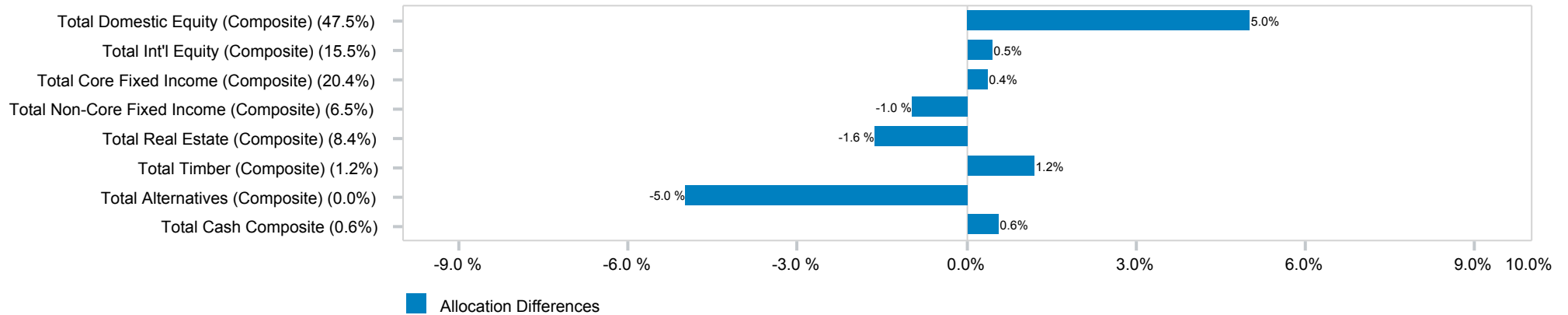


Asset Allocation Compliance
Delray Beach Firefighters' Retirement System Total Fund (Composite)

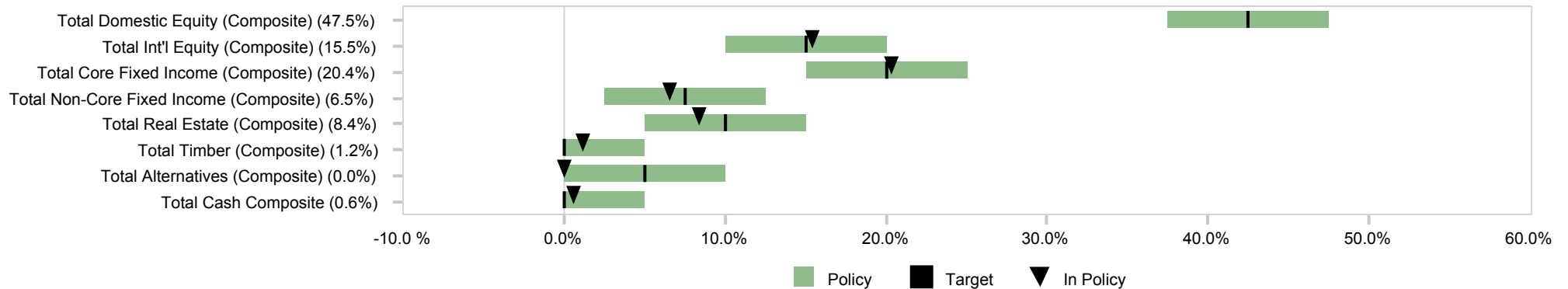
As of June 30, 2019

Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Total Fund (Composite)	108,957,228	100.00	100.00	0.00	-
Total Domestic Equity (Composite)	51,791,572	47.53	42.50	5.03	-5,484,750
Total Int'l Equity (Composite)	16,834,482	15.45	15.00	0.45	-490,898
Total Core Fixed Income (Composite)	22,202,591	20.38	20.00	0.38	-411,145
Total Non-Core Fixed Income (Composite)	7,100,330	6.52	7.50	-0.98	1,071,462
Total Real Estate (Composite)	9,107,843	8.36	10.00	-1.64	1,787,879
Total Timber (Composite)	1,307,325	1.20	0.00	1.20	-1,307,325
Total Alternatives (Composite)	-	0.00	5.00	-5.00	5,447,861
Total Cash Composite	613,084	0.56	0.00	0.56	-613,084



Executive Summary



Comparative Performance
Total Fund Trailing Returns
As of June 30, 2019

Comparative Performance																	
	QTR		YTD		FYTD		1 YR		2 YR		3 YR		5 YR		Inception		Inception Date
Total Fund (Net)	3.90	(11)	13.01	(19)	3.63	(39)	7.20	(21)	7.57	(11)	8.22	(18)	5.87	(15)	5.38	(50)	10/01/2005
Total Fund Policy	3.41	(27)	12.65	(26)	4.04	(30)	7.68	(16)	8.08	(8)	9.34	(7)	6.95	(4)	6.38	(14)	
Difference	0.49		0.36		-0.41		-0.48		-0.51		-1.12		-1.08		-1.00		
IM Mixed-Asset Target Alloc Moderate (MF) Median	2.99		11.55		3.14		5.53		5.57		7.09		4.42		5.37		
Total Fund (Gross)	3.97	(4)	13.15	(20)	3.85	(35)	7.53	(16)	7.92	(21)	8.61	(63)	6.31	(36)	5.84	(86)	10/01/2005
Total Fund Policy	3.41	(29)	12.65	(34)	4.04	(29)	7.68	(14)	8.08	(17)	9.34	(30)	6.95	(9)	6.38	(58)	
Difference	0.56		0.50		-0.19		-0.15		-0.16		-0.73		-0.64		-0.54		
All Public Plans-Total Fund Median	3.24		12.02		3.45		6.36		7.30		8.91		5.99		6.48		
Total Equity	5.35		19.69		2.63		7.86		10.26		11.50		7.38		6.91		10/01/2005
Total Equity Policy	3.70		17.43		1.38		6.92		9.92		12.92		7.29		6.49		
Difference	1.65		2.26		1.25		0.94		0.34		-1.42		0.09		0.42		
Total Domestic Equity	5.64	(17)	20.77	(29)	3.93	(24)	10.62	(25)	12.13	(34)	12.04	(57)	8.90	(42)	7.87	(50)	10/01/2005
Total Domestic Equity Policy	3.94	(50)	18.72	(43)	1.60	(41)	8.77	(36)	11.80	(37)	14.04	(36)	9.98	(28)	8.75	(33)	
Difference	1.70		2.05		2.33		1.85		0.33		-2.00		-1.08		-0.88		
IM U.S. All Cap Equity (SA+CF+MF) Median	3.91		18.15		0.53		6.65		10.12		12.74		8.32		7.84		
Total Int'l Equity	4.45	(25)	16.57	(30)	-0.97	(56)	0.69	(56)	5.40	(31)	9.81	(38)	3.08	(57)	4.06	(9)	05/01/2007
Total Int'l Policy	2.98	(66)	13.60	(69)	0.58	(37)	1.29	(43)	4.24	(48)	9.39	(45)	2.16	(80)	1.22	(100)	
Difference	1.47		2.97		-1.55		-0.60		1.16		0.42		0.92		2.84		
IM International Large Cap Core Equity (SA+CF) Median	3.61		14.84		-0.35		0.87		4.17		9.11		3.18		2.88		
Total Fixed Income	1.97	(93)	4.38	(94)	5.71	(81)	6.20	(84)	3.77	(43)	3.80	(25)	3.75	(14)	5.14	(22)	10/01/2005
Total Fixed Policy	3.08	(45)	6.11	(71)	7.85	(28)	7.87	(38)	3.65	(50)	2.31	(78)	2.95	(52)	4.25	(68)	
Difference	-1.11		-1.73		-2.14		-1.67		0.12		1.49		0.80		0.89		
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	3.04		6.62		7.34		7.61		3.65		2.96		2.99		4.56		
Total Real Estate	1.04	(88)	3.13	(74)	4.91	(77)	7.95	(33)	8.72	(44)	8.92	(38)	10.41	(55)	4.52	(100)	07/01/2007
NCREIF ODCE	1.34	(68)	3.05	(75)	4.71	(84)	6.90	(85)	7.75	(74)	7.87	(74)	10.03	(61)	5.51	(70)	
Difference	-0.30		0.08		0.20		1.05		0.97		1.05		0.38		-0.99		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.47		3.46		5.28		7.59		8.60		8.43		10.69		5.69		
Total Timber	0.00		-0.04		4.14		4.53		-2.80		-1.77		1.73		2.81		07/01/2007
NCREIF Timberland Index	1.04		1.15		1.91		2.95		3.26		3.29		4.62		5.16		
Difference	-1.04		-1.19		2.23		1.58		-6.06		-5.06		-2.89		-2.35		



**Comparative Performance
Total Fund Trailing Returns**

As of June 30, 2019

	QTR		YTD		FYTD		1 YR		2 YR		3 YR		5 YR		Inception	Inception Date
Total Domestic Equity (Composite)	5.64		20.77		3.93		10.62		12.13		12.04		8.90		7.87	10/01/2005
Vanguard Total Stock Mkt (VTSAX)	4.09	(40)	N/A		N/A		N/A		N/A		N/A		N/A		4.09 (40)	04/01/2019
CRSP U.S. Total Market TR Index	4.08	(40)	18.71	(41)	1.79	(37)	9.00	(33)	11.88	(30)	14.04	(31)	10.18	(24)	4.08 (40)	
Difference	0.01		N/A		N/A		N/A		N/A		N/A		N/A		0.01	
IM U.S. Equity (MF) Median	3.52		17.69		0.10		5.69		8.36		11.48		7.66		3.52	
Boston LCV	5.51	(14)	16.85	(36)	0.67	(50)	6.81	(45)	N/A		N/A		N/A		4.42 (40)	01/01/2018
Russell 1000 Value Index	3.84	(53)	16.24	(43)	2.61	(27)	8.46	(32)	7.61	(55)	10.19	(71)	7.46	(59)	4.37 (42)	
Difference	1.67		0.61		-1.94		-1.65		N/A		N/A		N/A		0.05	
IM U.S. Large Cap Value Equity (SA+CF) Median	3.96		15.93		0.62		6.43		7.95		11.35		7.80		3.79	
Total Growth	5.80 (25)		23.78 (24)		9.98 (4)		19.70 (3)		17.92 (32)		15.45 (84)		11.94 (64)		6.69 (97)	07/01/2007
Russell 1000 Growth Index	4.64	(57)	21.49	(54)	2.19	(60)	11.56	(41)	16.91	(44)	18.07	(45)	13.39	(34)	10.20 (33)	
Difference	1.16		2.29		7.79		8.14		1.01		-2.62		-1.45		-3.51	
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	4.83		21.76		2.93		10.89		16.36		17.72		12.61		9.68	
Rhumbline R1000G	4.63	(60)	21.46	(54)	2.18	(64)	11.54	(54)	N/A		N/A		N/A		12.69 (58)	01/01/2018
Russell 1000 Growth Index	4.64	(60)	21.49	(54)	2.19	(64)	11.56	(54)	16.91	(45)	18.07	(45)	13.39	(42)	12.70 (58)	
Difference	-0.01		-0.03		-0.01		-0.02		N/A		N/A		N/A		-0.01	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.11		21.69		3.67		11.89		16.32		17.73		12.85		13.44	
Polen Capital LCG	6.15	(24)	24.48	(23)	N/A		N/A		N/A		N/A		N/A		24.48 (23)	01/01/2019
Russell 1000 Growth Index	4.64	(60)	21.49	(54)	2.19	(64)	11.56	(54)	16.91	(45)	18.07	(45)	13.39	(42)	21.49 (54)	
Difference	1.51		2.99		N/A		N/A		N/A		N/A		N/A		2.99	
IM U.S. Large Cap Growth Equity (SA+CF) Median	5.11		21.69		3.67		11.89		16.32		17.73		12.85		21.69	
Lazard SMid Cap Core	6.63	(14)	22.28	(23)	-0.82	(43)	2.58	(53)	8.51	(58)	12.97	(40)	8.10	(74)	12.67 (88)	02/01/2010
Russell 2500 Index	2.96	(76)	19.25	(59)	-2.80	(65)	1.77	(65)	8.76	(55)	12.34	(69)	7.66	(90)	12.99 (81)	
Difference	3.67		3.03		1.98		0.81		-0.25		0.63		0.44		-0.32	
IM U.S. SMID Cap Core Equity (SA+CF) Median	4.37		19.57		-1.82		2.80		8.85		12.60		8.96		14.37	
Vanguard Mid-Cap Index (VIMAX)	4.36	(38)	21.86	(12)	3.03	(16)	7.83	(18)	9.94	(20)	12.32	(22)	N/A		8.86 (20)	07/01/2015
CRSP U.S. Mid Cap TR Index	4.37	(38)	21.90	(10)	3.06	(15)	7.85	(18)	9.97	(18)	12.36	(19)	8.85	(14)	8.90 (19)	
Difference	-0.01		-0.04		-0.03		-0.02		-0.03		-0.04		N/A		-0.04	
IM U.S. Mid Cap Core Equity (MF) Median	4.08		18.90		0.28		4.25		6.41		9.70		6.04		6.37	
Total Int'l Equity (Composite)	4.45		16.57		-0.97		0.69		5.40		9.81		3.08		4.06	05/01/2007
Harding Loevner Intl Equity (HLMIX)	4.45	(18)	16.57	(25)	-0.97	(62)	0.69	(40)	5.40	(24)	N/A		N/A		8.16 (31)	09/01/2016
MSCI AC World ex USA (Net)	2.98	(43)	13.60	(49)	0.58	(48)	1.29	(36)	4.24	(36)	9.39	(34)	2.16	(52)	7.87 (35)	
Difference	1.47		2.97		-1.55		-0.60		1.16		N/A		N/A		0.29	
IM International Equity (MF) Median	2.58		13.47		0.31		-0.27		3.19		8.44		2.22		7.01	



**Comparative Performance
Total Fund Trailing Returns**

As of June 30, 2019

	QTR	YTD	FYTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
Total Core Fixed Income	2.34	4.91	6.22	6.01	3.14	2.32	3.23	4.24	10/01/2005
Core Fixed Policy	3.08	6.11	7.85	7.87	3.65	2.31	2.95	4.19	
Difference	-0.74	-1.20	-1.63	-1.86	-0.51	0.01	0.28	0.05	
Garcia Hamilton Fixed Income	2.34 (97)	4.91 (97)	6.22 (97)	6.01 (98)	N/A	N/A	N/A	3.91 (90)	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	3.08 (69)	6.11 (79)	7.85 (65)	7.87 (79)	3.65 (85)	2.31 (88)	2.95 (89)	4.04 (81)	
Difference	-0.74	-1.20	-1.63	-1.86	N/A	N/A	N/A	-0.13	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.14	6.43	7.92	8.11	3.97	2.80	3.29	4.32	
Total Non-Core Fixed Income	0.83	2.78	3.97	6.13	4.97	7.03	4.71	7.87	07/01/2010
Bloomberg Barclays Global Aggregate	3.29	5.57	6.83	5.85	3.58	1.63	1.20	2.66	
Difference	-2.46	-2.79	-2.86	0.28	1.39	5.40	3.51	5.21	
Templeton Global Total Return (FTTRX)	1.46 (98)	3.43 (96)	5.76 (72)	7.23 (29)	2.60 (80)	5.57 (3)	2.00 (38)	3.55 (18)	07/01/2011
Blmbg. Barc. Global Multiverse	3.31 (55)	5.78 (78)	6.86 (41)	6.01 (60)	3.65 (40)	1.95 (74)	1.35 (57)	1.91 (66)	
Difference	-1.85	-2.35	-1.10	1.22	-1.05	3.62	0.65	1.64	
IM Global Fixed Income (MF) Median	3.37	6.54	6.51	6.42	3.41	2.56	1.51	2.37	
Total Real Estate (Composite)	1.04	3.13	4.91	7.95	8.72	8.92	10.41	4.52	07/01/2007
American Core Realty	1.53 (32)	3.29 (72)	5.29 (50)	7.60 (50)	7.88 (67)	7.74 (77)	9.55 (76)	5.54 (64)	07/01/2007
NCREIF ODCE	1.34 (68)	3.05 (75)	4.71 (84)	6.90 (85)	7.75 (74)	7.87 (74)	10.03 (61)	5.51 (70)	
Difference	0.19	0.24	0.58	0.70	0.13	-0.13	-0.48	0.03	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.47	3.46	5.28	7.59	8.60	8.43	10.69	5.69	
Total Timber (Composite)	0.00	-0.04	4.14	4.53	-2.80	-1.77	1.73	2.81	07/01/2007
Molpus Woodlands Timber	0.00	-0.05	4.46	4.86	0.90	0.99	2.40	2.62	06/01/2008
NCREIF Timberland Index	1.04	1.15	1.91	2.95	3.26	3.29	4.62	3.92	
Difference	-1.04	-1.20	2.55	1.91	-2.36	-2.30	-2.22	-1.30	

^ Some products shown on IRR page.



As of June 30, 2019

Comparative Performance - IRR

	QTR	Inception	Inception Date
Molpus Woodlands Timber	0.00	2.18	06/24/2008
Angelo Gordon Net Lease Realty Fund III, L.P.	0.00	6.75	03/10/2014
Dune Real Estate Fund III	0.88	13.13	11/06/2014
Crescent Direct Lending Levered Fund	0.00	7.59	10/09/2014



Comparative Performance
Total Fund Trailing Returns
As of June 30, 2019

Comparative Performance																		
	FYTD		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		Oct-2011 To Sep-2012		Oct-2010 To Sep-2011	
Total Fund (Net)	3.63	(39)	8.29	(12)	11.09	(29)	8.82	(50)	-1.22	(28)	10.01	(28)	10.96	(41)	16.79	(51)	1.26	(20)
Total Fund Policy	4.04	(30)	8.59	(11)	11.90	(17)	10.34	(19)	0.55	(5)	10.23	(25)	10.24	(51)	15.21	(75)	2.15	(12)
Difference	-0.41		-0.30		-0.81		-1.52		-1.77		-0.22		0.72		1.58		-0.89	
IM Mixed-Asset Target Alloc Moderate (MF) Median	3.14		5.04		9.98		8.78		-2.36		8.34		10.27		16.82		-0.55	
Total Fund (Gross)	3.85	(35)	8.66	(23)	11.49	(58)	9.41	(61)	-0.72	(49)	10.58	(39)	11.52	(58)	17.35	(53)	1.61	(34)
Total Fund Policy	4.04	(29)	8.59	(24)	11.90	(50)	10.34	(33)	0.55	(21)	10.23	(46)	10.24	(71)	15.21	(77)	2.15	(24)
Difference	-0.19		0.07		-0.41		-0.93		-1.27		0.35		1.28		2.14		-0.54	
All Public Plans-Total Fund Median	3.45		7.11		11.84		9.74		-0.78		9.93		12.05		17.55		0.68	
Total Equity	2.63		13.13		16.40		11.59		-3.61		13.96		21.06		25.94		-0.85	
Total Equity Policy	1.38		13.60		18.94		13.34		-6.20		11.73		19.62		22.72		-4.71	
Difference	1.25		-0.47		-2.54		-1.75		2.59		2.23		1.44		3.22		3.86	
Total Domestic Equity	3.93	(24)	16.10	(45)	14.99	(78)	12.80	(36)	-1.73	(53)	17.23	(34)	22.56	(56)	27.44	(46)	3.01	(16)
Total Domestic Equity Policy	1.60	(41)	17.73	(32)	18.62	(46)	14.77	(18)	-1.18	(47)	17.67	(29)	22.03	(60)	29.64	(25)	0.48	(32)
Difference	2.33		-1.63		-3.63		-1.97		-0.55		-0.44		0.53		-2.20		2.53	
IM U.S. All Cap Equity (SA+CF+MF) Median	0.53		15.09		18.20		11.48		-1.46		15.77		23.34		26.94		-1.62	
Total Int'l Equity	-0.97	(56)	5.85	(14)	18.68	(69)	7.98	(50)	-8.63	(65)	6.07	(50)	16.67	(89)	21.58	(5)	-10.95	(69)
Total Int'l Policy	0.58	(37)	1.76	(60)	19.61	(59)	9.26	(33)	-12.16	(90)	4.77	(63)	16.48	(90)	14.49	(83)	-10.81	(69)
Difference	-1.55		4.09		-0.93		-1.28		3.53		1.30		0.19		7.09		-0.14	
IM International Large Cap Core Equity (SA+CF) Median	-0.35		2.46		20.20		7.86		-7.08		6.04		22.60		17.31		-9.42	
Total Fixed Income	5.71	(81)	0.99	(13)	3.93	(19)	5.81	(48)	2.09	(44)	6.00	(22)	2.81	(8)	11.79	(14)	3.12	(76)
Total Fixed Policy	7.85	(28)	-1.22	(64)	0.07	(84)	5.19	(68)	2.94	(17)	3.96	(74)	-2.35	(90)	5.75	(84)	5.96	(9)
Difference	-2.14		2.21		3.86		0.62		-0.85		2.04		5.16		6.04		-2.84	
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	7.34		-0.91		1.30		5.72		1.83		4.75		-0.97		7.75		4.40	
Total Real Estate	4.91	(77)	10.10	(27)	9.82	(31)	9.06	(97)	14.70	(62)	12.33	(69)	8.10	(100)	13.00	(46)	14.11	(90)
NCREIF ODCE	4.71	(84)	8.82	(59)	7.81	(60)	10.62	(69)	14.71	(62)	12.39	(68)	12.47	(67)	11.77	(63)	18.03	(44)
Difference	0.20		1.28		2.01		-1.56		-0.01		-0.06		-4.37		1.23		-3.92	
IM U.S. Open End Private Real Estate (SA+CF) Median	5.28		9.04		8.29		11.32		15.45		12.78		13.18		12.87		16.96	
Total Timber	4.14		-9.38		0.28		6.48		6.70		9.49		4.51		-5.86		3.87	
NCREIF Timberland Index	1.91		4.00		3.28		3.28		9.26		10.38		9.68		2.25		0.26	
Difference	2.23		-13.38		-3.00		3.20		-2.56		-0.89		-5.17		-8.11		3.61	
Total Alternatives	N/A		4.94		8.16		9.11		-3.68		6.84		-9.88		-8.55		-0.85	
Alternatives Policy	5.59		8.07		9.04		10.41		1.10		7.56		-3.91		-2.59		1.58	
Difference	N/A		-3.13		-0.88		-1.30		-4.78		-0.72		-5.97		-5.96		-2.43	



**Comparative Performance
Total Fund Trailing Returns**

As of June 30, 2019

	FYTD	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	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Domestic Equity (Composite)	3.93	16.10	14.99	12.80	-1.73	17.23	22.56	27.44	3.01
Vanguard Total Stock Mkt (VTSAX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Total Market TR Index	1.79 (37)	17.62 (31)	18.64 (40)	14.99 (27)	-0.55 (46)	17.77 (23)	21.59 (55)	29.96 (29)	0.46 (32)
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Equity (MF) Median	0.10	13.30	17.48	12.13	-0.92	13.74	22.53	27.33	-1.87
Macquarie (Delaware Value)	N/A	N/A	12.49 (89)	19.29 (10)	-3.67 (57)	21.59 (17)	24.74 (41)	29.80 (34)	6.36 (7)
Russell 1000 Value Index	2.61 (27)	9.45 (77)	15.12 (75)	16.19 (26)	-4.42 (64)	18.89 (43)	22.30 (60)	30.92 (26)	-1.89 (62)
Difference	N/A	N/A	-2.63	3.10	0.75	2.70	2.44	-1.12	8.25
IM U.S. Large Cap Value Equity (SA+CF) Median	0.62	11.72	17.89	13.22	-3.29	18.40	23.76	28.16	-0.98
Boston LCV	0.67 (50)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	2.61 (27)	9.45 (77)	15.12 (75)	16.19 (26)	-4.42 (64)	18.89 (43)	22.30 (60)	30.92 (26)	-1.89 (62)
Difference	-1.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Value Equity (SA+CF) Median	0.62	11.72	17.89	13.22	-3.29	18.40	23.76	28.16	-0.98
Total Growth	9.98 (4)	22.19 (74)	14.70 (95)	7.63 (88)	4.20 (36)	18.19 (40)	18.74 (62)	29.37 (35)	8.43 (2)
Russell 1000 Growth Index	2.19 (60)	26.30 (38)	21.94 (31)	13.76 (20)	3.17 (49)	19.15 (28)	19.27 (56)	29.19 (36)	3.78 (22)
Difference	7.79	-4.11	-7.24	-6.13	1.03	-0.96	-0.53	0.18	4.65
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	2.93	24.88	20.28	11.16	3.07	17.25	19.73	27.44	0.80
Rhumblin R1000G	2.18 (64)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.19 (64)	26.30 (37)	21.94 (37)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (63)	29.19 (39)	3.78 (30)
Difference	-0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.67	24.44	20.81	11.69	3.60	18.19	20.25	27.65	1.38
Sawgrass Large Cap Growth	N/A	21.72 (66)	14.70 (92)	7.63 (87)	4.20 (40)	18.19 (51)	18.74 (69)	29.37 (38)	N/A
Russell 1000 Growth Index	2.19 (64)	26.30 (37)	21.94 (37)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (63)	29.19 (39)	3.78 (30)
Difference	N/A	-4.58	-7.24	-6.13	1.03	-0.96	-0.53	0.18	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.67	24.44	20.81	11.69	3.60	18.19	20.25	27.65	1.38
Polen Capital LCG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	2.19 (64)	26.30 (37)	21.94 (37)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (63)	29.19 (39)	3.78 (30)
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Growth Equity (SA+CF) Median	3.67	24.44	20.81	11.69	3.60	18.19	20.25	27.65	1.38
Lazard SMid Cap Core	-0.82 (43)	13.70 (69)	20.53 (25)	10.26 (88)	4.02 (40)	11.99 (36)	31.12 (33)	30.14 (52)	-9.00 (97)
Russell 2500 Index	-2.80 (65)	16.19 (57)	17.79 (71)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)	30.93 (41)	-2.22 (71)
Difference	1.98	-2.49	2.74	-4.18	3.64	3.02	1.33	-0.79	-6.78
IM U.S. SMID Cap Core Equity (SA+CF) Median	-1.82	16.28	18.86	12.61	2.28	11.29	30.27	30.24	-0.86



**Comparative Performance
Total Fund Trailing Returns**

As of June 30, 2019

	FYTD		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	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Vanguard Mid-Cap Index (VIMAX)	3.03	(16)	13.42 (30)	15.30 (49)	12.63 (39)	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Mid Cap TR Index	3.06	(15)	13.44 (30)	15.33 (47)	12.68 (37)	1.76 (20)	15.94 (14)	28.08 (40)	26.23 (50)	-0.18 (21)
Difference	-0.03		-0.02	-0.03	-0.05	N/A	N/A	N/A	N/A	N/A
IM U.S. Mid Cap Core Equity (MF) Median	0.28		10.82	15.25	11.65	-1.26	12.56	27.41	26.17	-3.68
Total Int'l Equity (Composite)	-0.97		5.85	18.68	7.98	-8.63	6.07	16.67	21.58	-10.95
Harding Loevner Intl Equity (HLMIX)	-0.97	(62)	5.85 (10)	18.65 (58)	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	0.58	(48)	1.76 (34)	19.61 (48)	9.26 (51)	-12.16 (64)	4.77 (43)	16.48 (56)	14.49 (65)	-10.81 (38)
Difference	-1.55		4.09	-0.96	N/A	N/A	N/A	N/A	N/A	N/A
IM International Equity (MF) Median	0.31		0.08	19.36	9.33	-8.76	4.27	17.81	16.20	-12.09



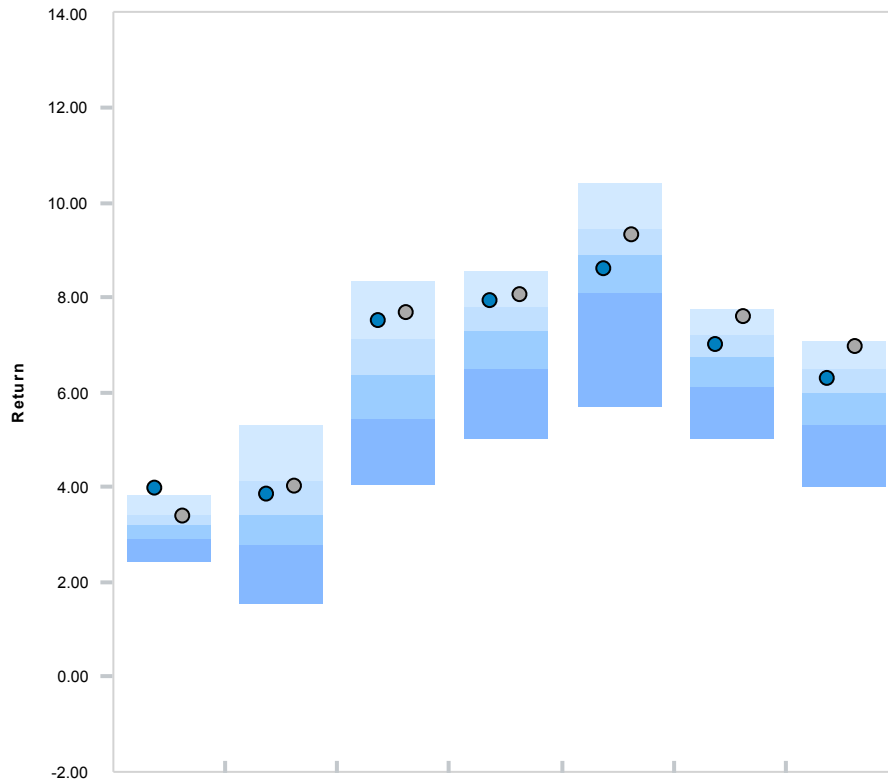
**Comparative Performance
Total Fund Trailing Returns**

As of June 30, 2019

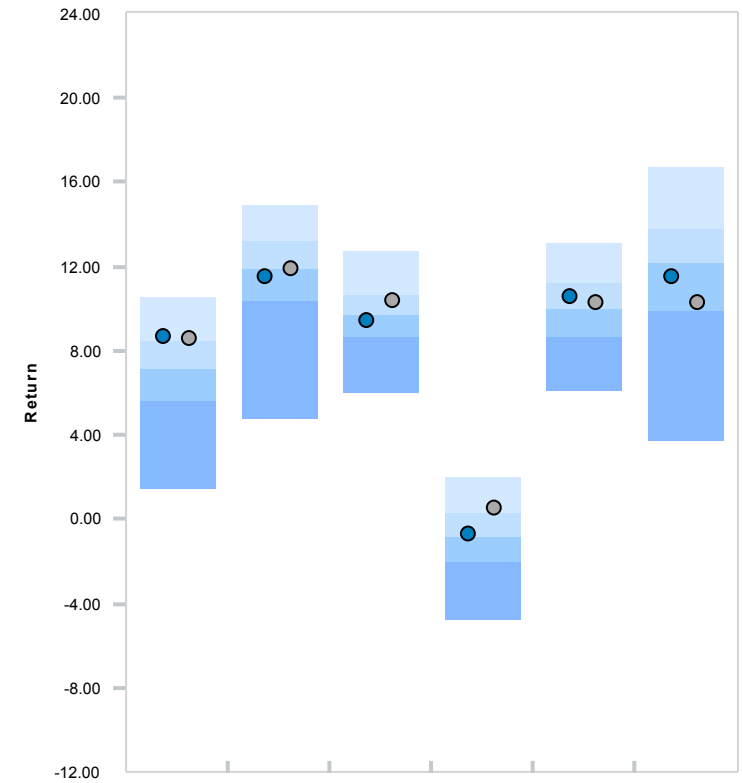
	FYTD	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Core Fixed Income	6.22	-0.67	0.82	5.78	3.88	4.40	-1.26	7.71	4.42
Core Fixed Policy	7.85	-1.22	0.07	5.19	2.94	3.96	-1.68	5.16	5.26
Difference	-1.63	0.55	0.75	0.59	0.94	0.44	0.42	2.55	-0.84
Garcia Hamilton Fixed Income	6.22 (97)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate Index	7.85 (65)	-1.22 (89)	0.07 (87)	5.19 (81)	2.94 (60)	3.96 (81)	-1.68 (80)	5.16 (91)	5.26 (49)
Difference	-1.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	7.92	-0.74	0.62	5.67	3.02	4.51	-1.22	6.62	5.26
Mutual of America Core Fixed	N/A	N/A	0.82 (39)	5.78 (44)	3.88 (7)	4.43 (53)	-1.01 (39)	7.24 (38)	N/A
Blmbg. Barc. U.S. Aggregate Index	7.85 (65)	-1.22 (89)	0.07 (87)	5.19 (81)	2.94 (60)	3.96 (81)	-1.68 (80)	5.16 (91)	5.26 (49)
Difference	N/A	N/A	0.75	0.59	0.94	0.47	0.67	2.08	N/A
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	7.92	-0.74	0.62	5.67	3.02	4.51	-1.22	6.62	5.26
Total Non-Core Fixed Income	3.97	4.97	11.18	6.07	-2.56	9.33	11.74	24.76	-3.22
Bloomberg Barclays Global Aggregate	6.83	-1.31	-1.26	8.83	-3.26	1.19	-2.64	5.07	4.00
Difference	-2.86	6.28	12.44	-2.76	0.70	8.14	14.38	19.69	-7.22
Templeton Global Total Return (FTTRX)	5.76 (72)	-1.90 (66)	13.82 (1)	2.64 (94)	-8.23 (95)	5.71 (22)	5.29 (2)	15.90 (3)	N/A
Blmbg. Barc. Global Multiverse	6.86 (41)	-1.32 (51)	-0.56 (77)	9.23 (25)	-3.56 (42)	1.40 (79)	-2.22 (56)	5.57 (81)	3.85 (11)
Difference	-1.10	-0.58	14.38	-6.59	-4.67	4.31	7.51	10.33	N/A
IM Global Fixed Income (MF) Median	6.51	-1.29	1.02	7.42	-3.85	3.37	-1.81	7.17	1.74
Total Real Estate (Composite)	4.91	10.10	9.82	9.06	14.70	12.33	8.10	13.00	14.11
American Core Realty	5.29 (50)	8.50 (66)	7.52 (67)	9.04 (97)	13.98 (69)	12.49 (64)	12.27 (70)	11.56 (65)	16.11 (65)
NCREIF ODCE	4.71 (84)	8.82 (59)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (63)	18.03 (44)
Difference	0.58	-0.32	-0.29	-1.58	-0.73	0.10	-0.20	-0.21	-1.92
IM U.S. Open End Private Real Estate (SA+CF) Median	5.28	9.04	8.29	11.32	15.45	12.78	13.18	12.87	16.96
Total Timber (Composite)	4.14	-9.38	0.28	6.48	6.70	9.49	4.51	-5.86	3.87
Amsouth Timber Fund	N/A	-15.26	-0.52	6.12	11.73	7.98	3.85	-1.33	2.00
NCREIF Timberland Index	1.91	4.00	3.28	3.28	9.26	10.38	9.68	2.25	0.26
Difference	N/A	-19.26	-3.80	2.84	2.47	-2.40	-5.83	-3.58	1.74
Molpus Woodlands Timber	4.46	-2.66	1.18	6.08	1.64	10.96	5.25	-10.32	5.68
NCREIF Timberland Index	1.91	4.00	3.28	3.28	9.26	10.38	9.68	2.25	0.26
Difference	2.55	-6.66	-2.10	2.80	-7.62	0.58	-4.43	-12.57	5.42
Alternatives									
Westwood Income Opportunity Fund (WHGIX)	N/A	4.94 (36)	8.14 (60)	9.20 (40)	-3.83 (46)	N/A	N/A	N/A	N/A
Alternatives Policy	5.59 (12)	8.07 (18)	9.04 (50)	10.41 (24)	1.10 (11)	7.56 (55)	-3.91 (95)	-2.59 (100)	1.58 (24)
Difference	N/A	-3.13	-0.90	-1.21	-4.93	N/A	N/A	N/A	N/A
IM Flexible Portfolio (MF) Median	2.26	3.38	9.03	8.56	-4.23	8.00	8.24	15.70	-0.87



Peer Group Analysis - All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fund (Composite)	3.97 (4)	3.85 (35)	7.53 (16)	7.92 (21)	8.61 (63)	7.00 (38)	6.31 (36)
● Total Fund Policy	3.41 (29)	4.04 (29)	7.68 (14)	8.08 (17)	9.34 (30)	7.61 (10)	6.95 (9)
Median	3.24	3.45	6.36	7.30	8.91	6.77	5.99



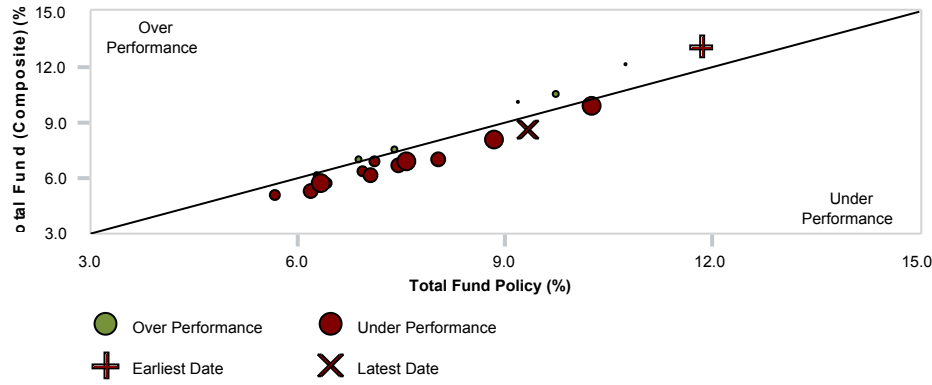
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Total Fund (Composite)	8.66 (23)	11.49 (58)	9.41 (61)	-0.72 (48)	10.58 (38)	11.52 (60)
● Total Fund Policy	8.59 (24)	11.90 (50)	10.34 (34)	0.55 (21)	10.23 (47)	10.24 (71)
Median	7.11	11.89	9.74	-0.83	9.95	12.16

Comparative Performance

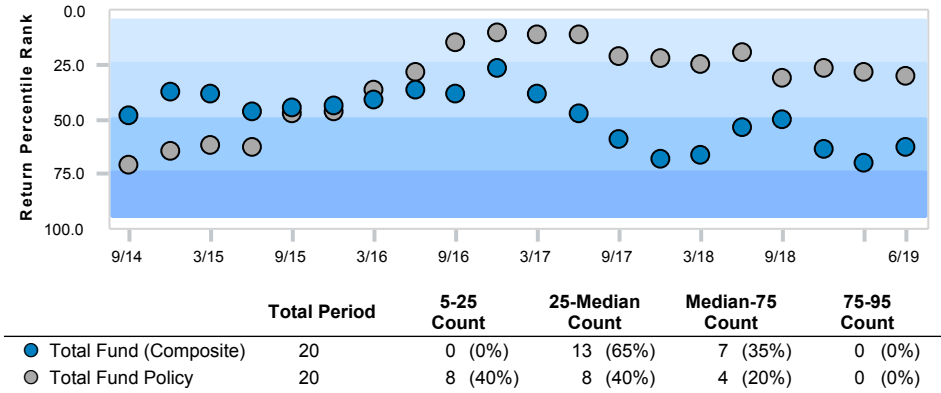
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Total Fund (Composite)	8.83 (38)	-8.22 (67)	3.54 (13)	1.89 (15)	-0.29 (48)	3.29 (70)
Total Fund Policy	8.94 (33)	-7.65 (52)	3.50 (14)	1.60 (24)	-0.65 (71)	3.94 (32)
All Public Plans-Total Fund Median	8.42	-7.55	2.58	1.03	-0.32	3.61



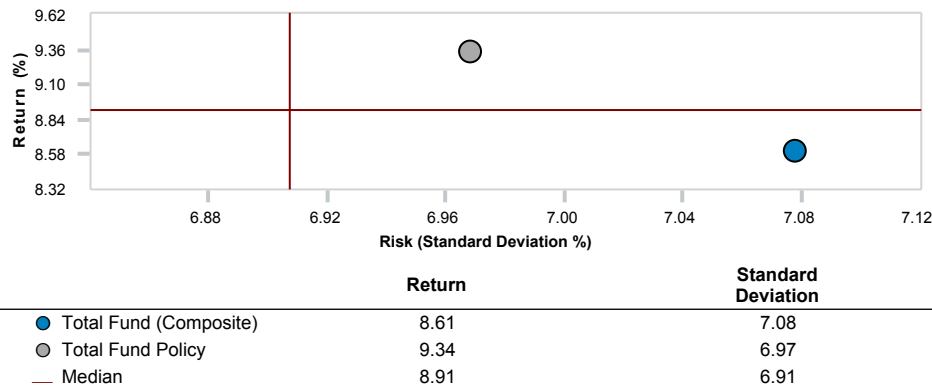
3 Yr Rolling Under/Over Performance - 5 Years



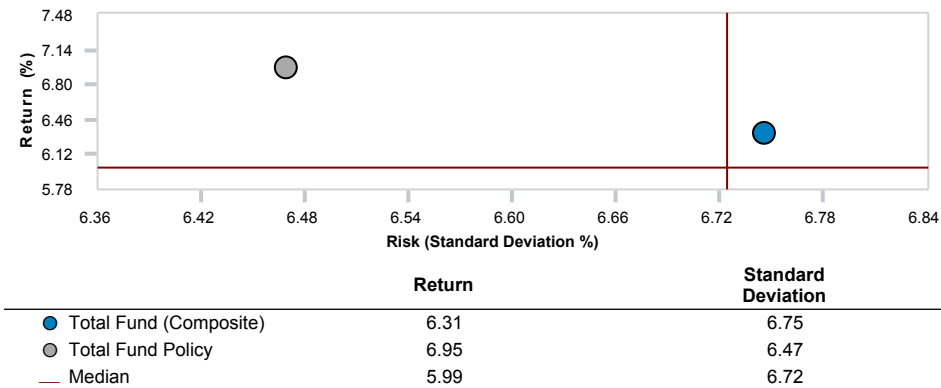
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

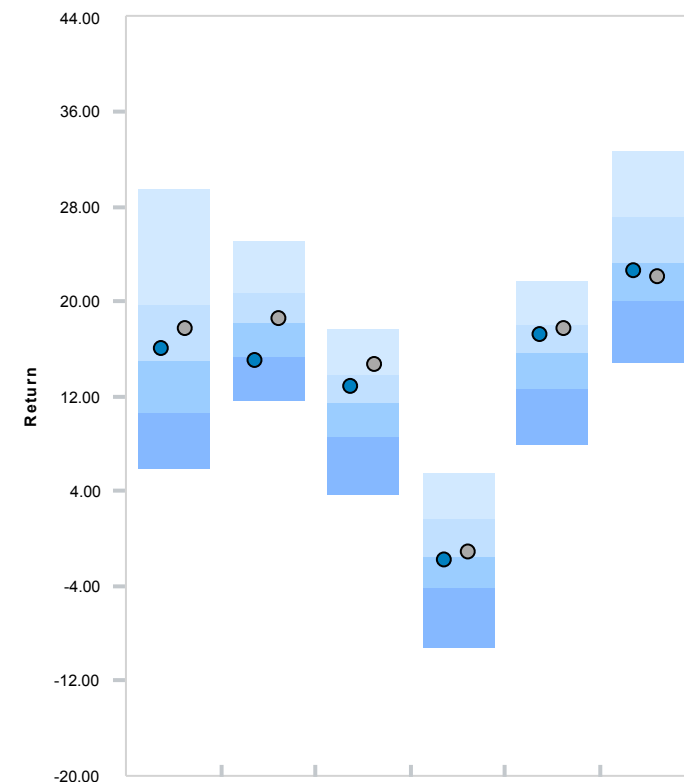
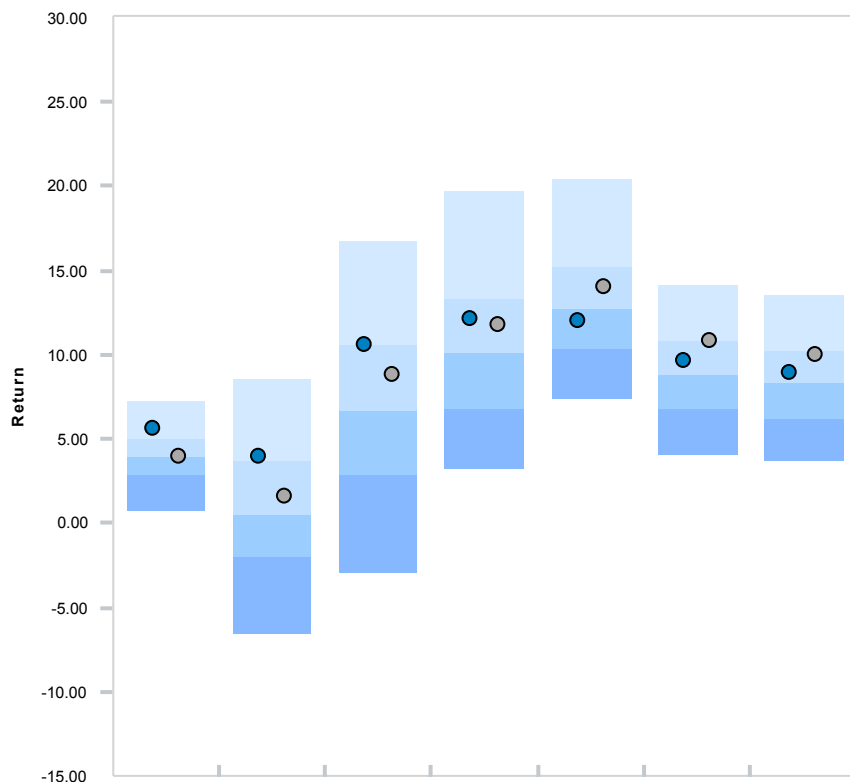
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.18	95.95	101.26	-0.69	-0.57	1.01	1.00	4.69
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	1.12	1.00	4.47

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	0.98	96.94	112.07	-0.81	-0.60	0.83	1.03	4.26
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.95	1.00	3.85



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Total Domestic Equity	5.64 (17)	3.93 (24)	10.62 (25)	12.13 (34)	12.04 (57)	9.64 (39)	8.90 (42)
Total Domestic Equity Policy	3.94 (50)	1.60 (41)	8.77 (36)	11.80 (37)	14.04 (36)	10.81 (25)	9.98 (28)
Median	3.91	0.53	6.65	10.12	12.74	8.80	8.32

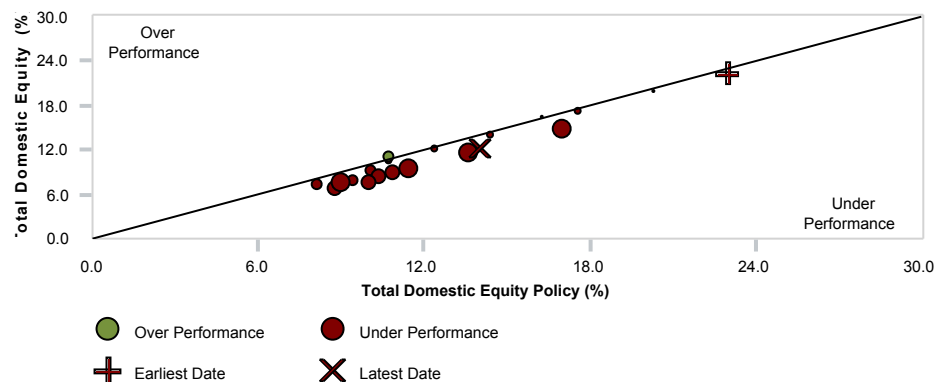
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
Total Domestic Equity	16.10 (45)	14.99 (78)	12.80 (36)	-1.73 (53)	17.23 (34)	22.56 (56)
Total Domestic Equity Policy	17.73 (32)	18.62 (46)	14.77 (18)	-1.18 (47)	17.67 (29)	22.03 (60)
Median	15.09	18.20	11.48	-1.46	15.77	23.34

Comparative Performance

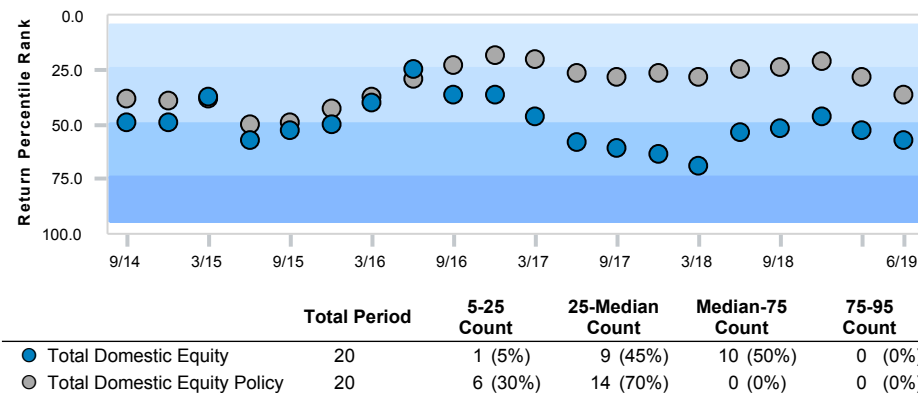
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Total Domestic Equity	14.32 (42)	-13.94 (35)	6.44 (44)	4.44 (23)	-1.22 (66)	5.74 (57)
Total Domestic Equity Policy	14.23 (43)	-14.43 (43)	7.06 (32)	4.11 (28)	-0.70 (56)	6.37 (40)
IM U.S. All Cap Equity (SA+CF+MF) Median	13.67	-14.87	5.91	2.84	-0.51	6.01



3 Yr Rolling Under/Over Performance - 5 Years



3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

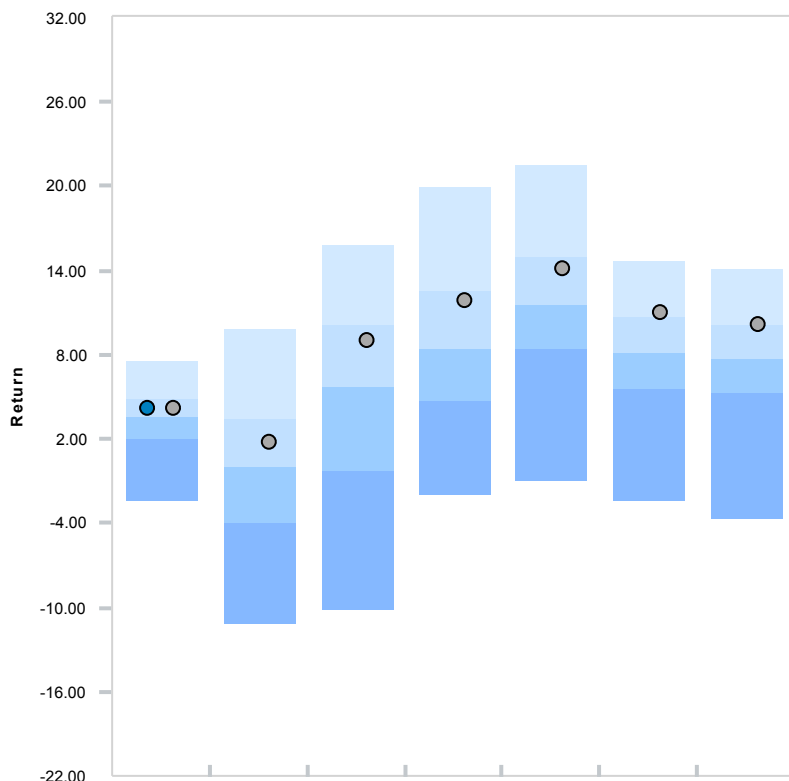
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	1.90	91.45	97.42	-1.41	-0.96	0.89	0.97	8.17
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	1.02	1.00	8.30

Historical Statistics - 5 Years

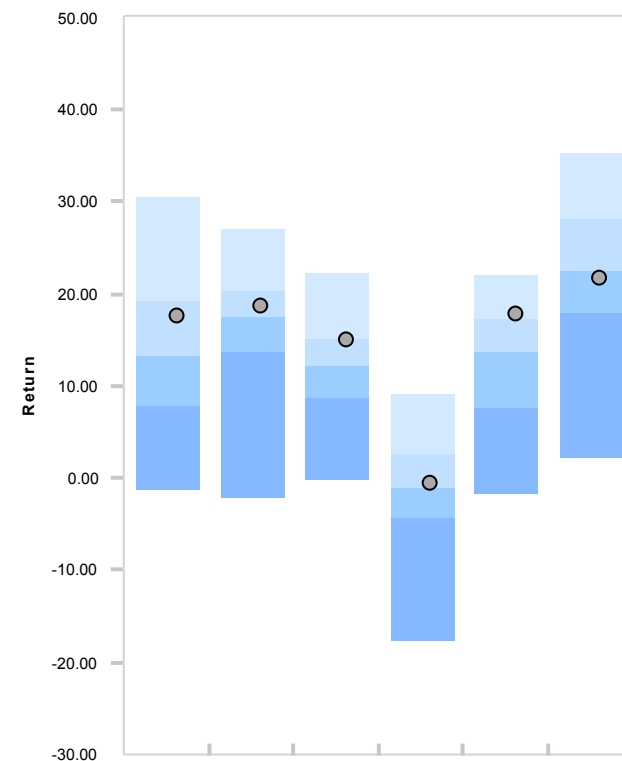
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	2.07	91.59	93.27	-0.44	-0.51	0.72	0.94	7.58
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.77	1.00	7.87



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Vanguard Total Stock Mkt (VTSAX)	4.09 (40)	N/A	N/A	N/A	N/A	N/A	N/A
● CRSP U.S. Total Market TR Index	4.08 (40)	1.79 (37)	9.00 (33)	11.88 (30)	14.04 (31)	10.94 (23)	10.18 (24)
Median	3.52	0.10	5.69	8.36	11.48	8.18	7.66



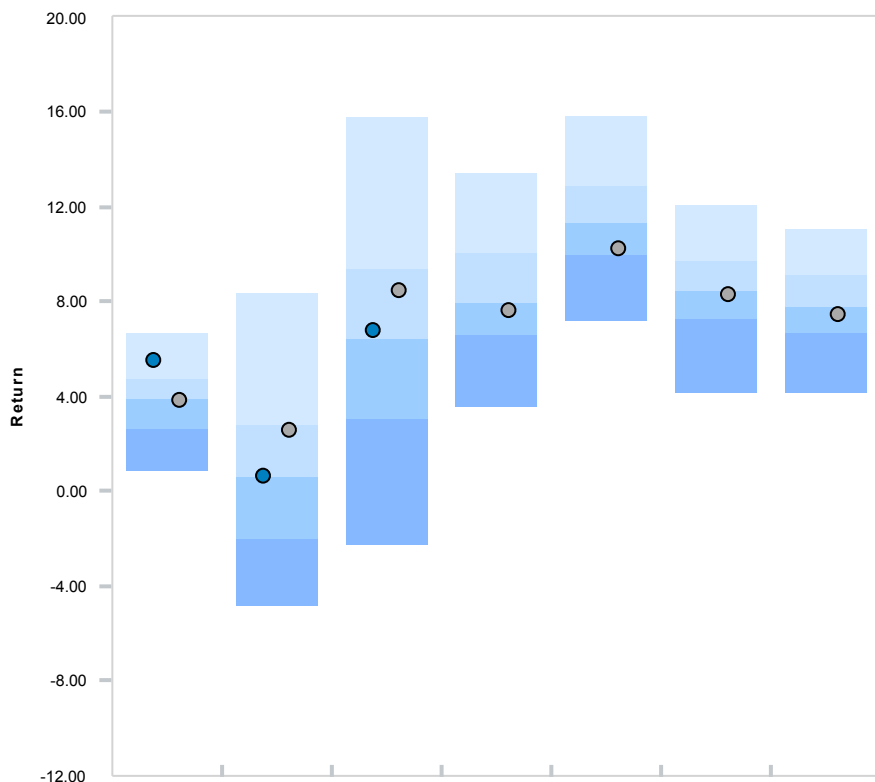
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Vanguard Total Stock Mkt (VTSAX)	N/A	N/A	N/A	N/A	N/A	N/A
● CRSP U.S. Total Market TR Index	7.62 (31)	8.64 (40)	4.99 (27)	0.55 (46)	7.77 (23)	1.59 (55)
Median	3.30	7.48	2.13	0.92	3.74	2.53

Comparative Performance

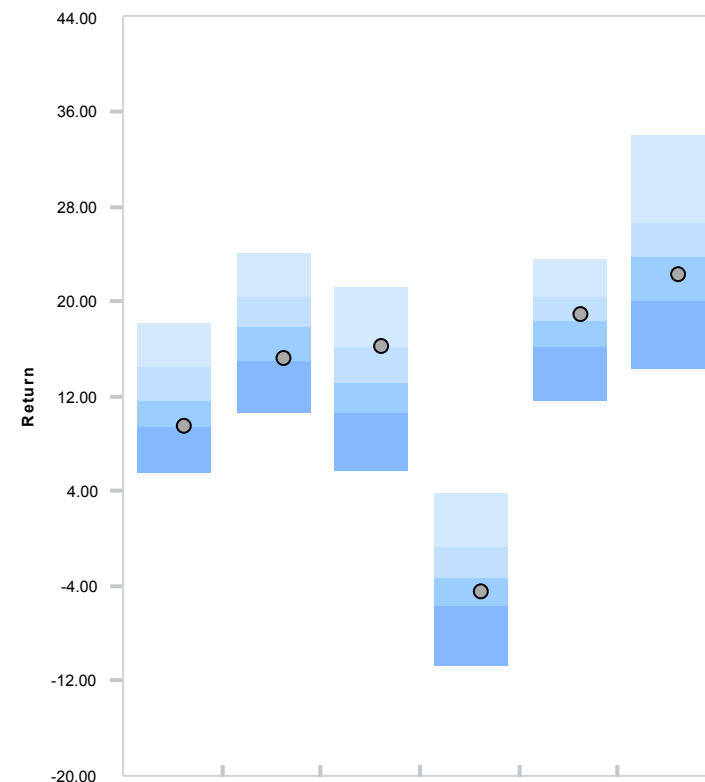
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Vanguard Total Stock Mkt (VTSAX)	N/A	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Total Market TR Index	14.06 (46)	-14.26 (41)	7.08 (30)	3.91 (45)	-0.60 (45)	6.34 (32)
IM U.S. Equity (MF) Median	13.62	-15.37	5.34	3.48	-0.86	5.40



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Boston LCV	5.51 (13)	0.67 (50)	6.81 (45)	N/A	N/A	N/A	N/A
● Russell 1000 Value Index	3.84 (53)	2.61 (28)	8.46 (32)	7.61 (55)	10.19 (71)	8.31 (54)	7.46 (59)
Median	3.95	0.62	6.44	7.95	11.34	8.50	7.79



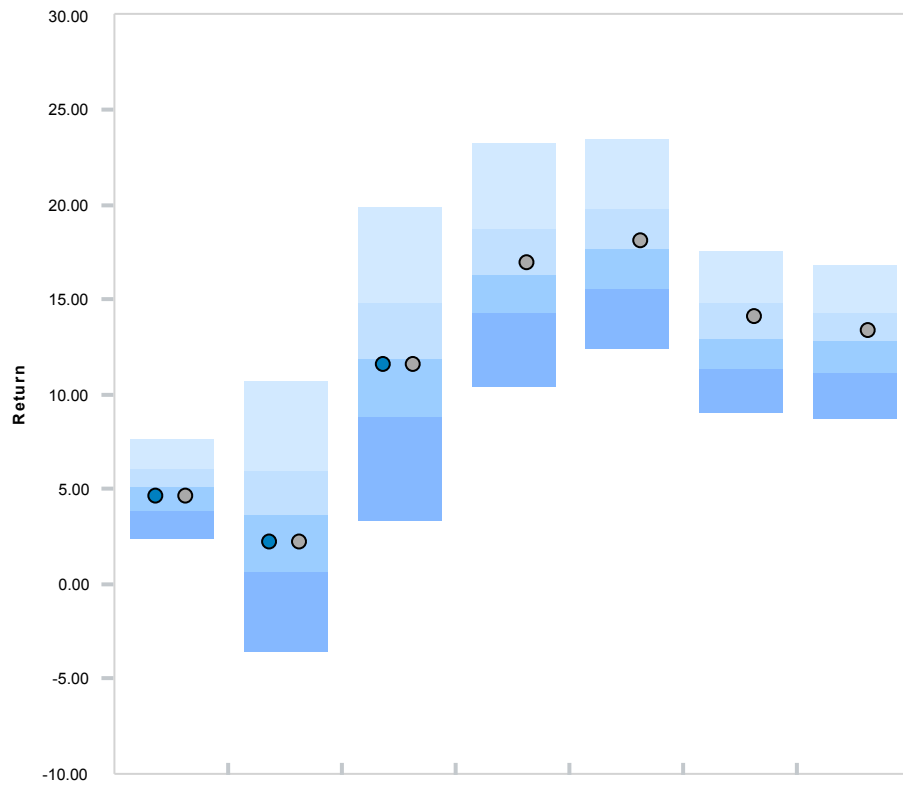
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Boston LCV	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Value Index	9.45 (77)	15.12 (75)	16.19 (26)	-4.42 (64)	18.89 (43)	22.30 (60)
Median	11.72	17.89	13.22	-3.29	18.40	23.76

Comparative Performance

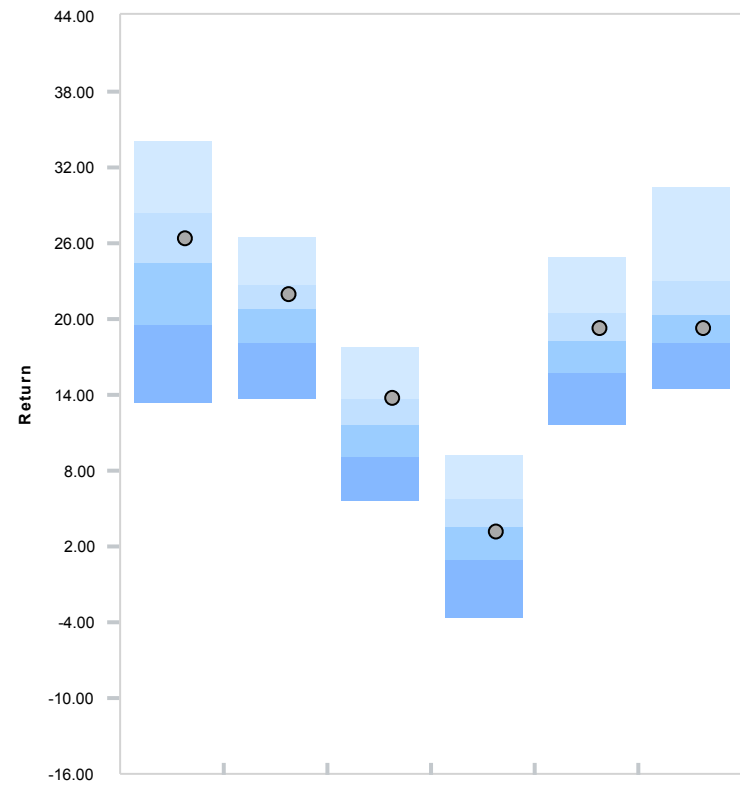
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Boston LCV	10.75 (72)	-13.85 (57)	6.11 (40)	2.23 (35)	-2.29 (60)	N/A
Russell 1000 Value Index	11.93 (46)	-11.72 (30)	5.70 (51)	1.18 (66)	-2.83 (74)	5.33 (76)
IM U.S. Large Cap Value Equity (SA+CF) Median	11.75	-13.48	5.71	1.73	-1.98	6.31



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Rhumblin R1000G	4.63 (60)	2.18 (64)	11.54 (54)	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	4.64 (60)	2.19 (64)	11.56 (54)	16.91 (45)	18.07 (45)	14.11 (39)	13.39 (42)
Median	5.11	3.67	11.89	16.32	17.73	12.98	12.85



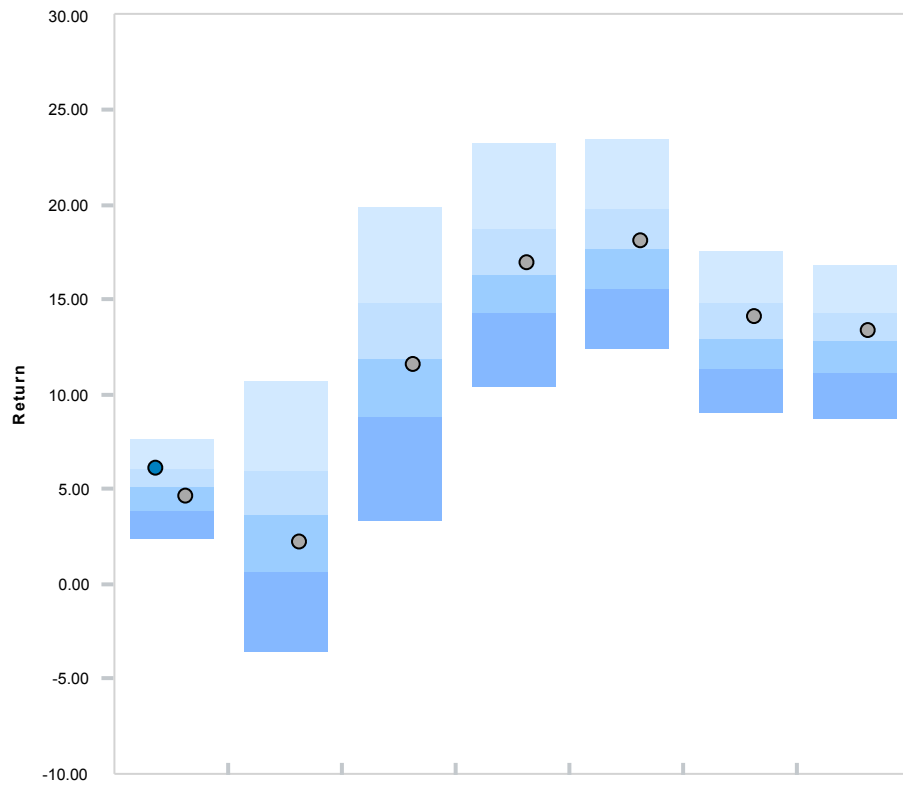
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Rhumblin R1000G	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	26.30 (37)	21.94 (37)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (63)
Median	24.44	20.81	11.69	3.60	18.19	20.25

Comparative Performance

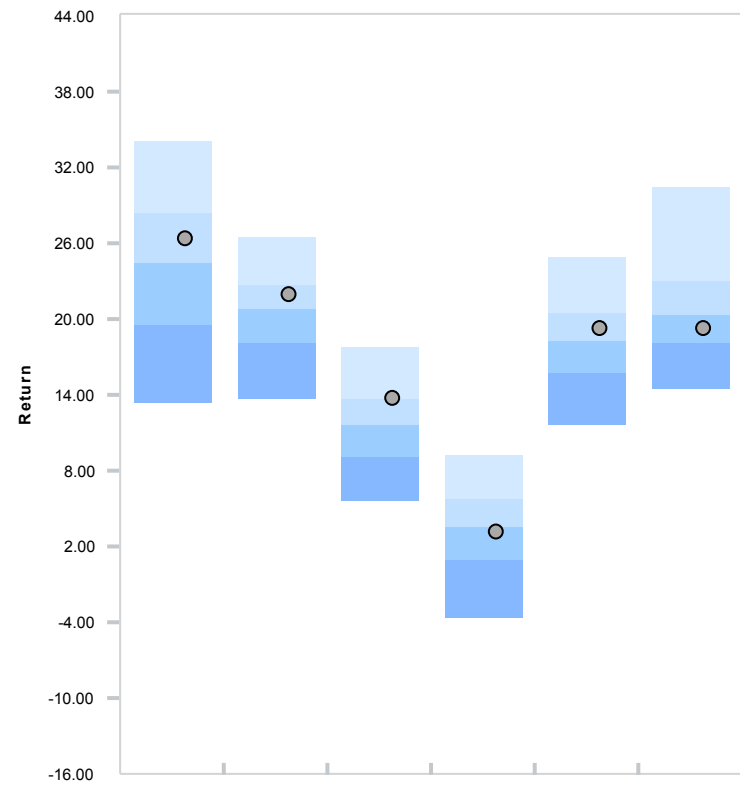
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Rhumblin R1000G	16.08 (46)	-15.87 (61)	9.16 (23)	5.76 (42)	1.41 (61)	N/A
Russell 1000 Growth Index	16.10 (46)	-15.89 (61)	9.17 (23)	5.76 (42)	1.42 (61)	7.86 (21)
IM U.S. Large Cap Growth Equity (SA+CF) Median	15.90	-15.14	8.14	5.26	2.09	6.89



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Polen Capital LCG	6.15 (24)	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	4.64 (60)	2.19 (64)	11.56 (54)	16.91 (45)	18.07 (45)	14.11 (39)	13.39 (42)
Median	5.11	3.67	11.89	16.32	17.73	12.98	12.85



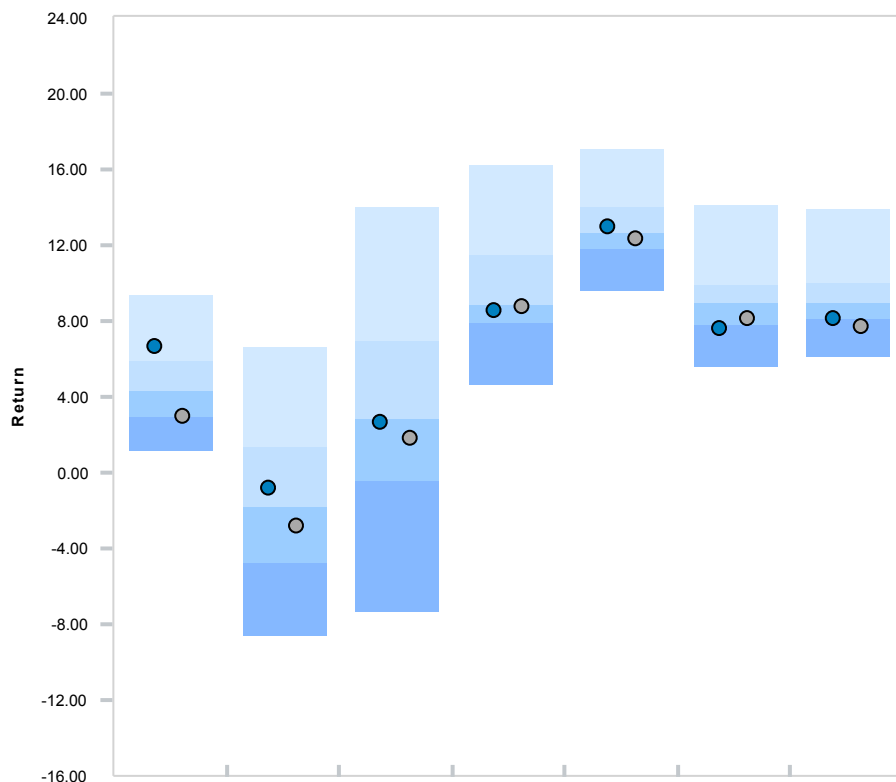
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Polen Capital LCG	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	26.30 (37)	21.94 (37)	13.76 (23)	3.17 (55)	19.15 (40)	19.27 (63)
Median	24.44	20.81	11.69	3.60	18.19	20.25

Comparative Performance

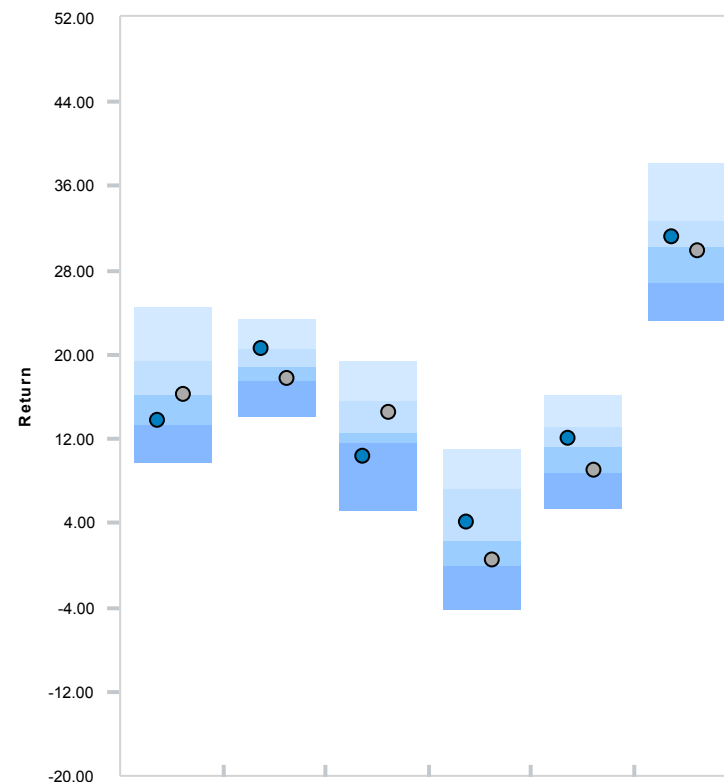
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Polen Capital LCG	17.27 (28)	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	16.10 (46)	-15.89 (61)	9.17 (23)	5.76 (42)	1.42 (61)	7.86 (21)
IM U.S. Large Cap Growth Equity (SA+CF) Median	15.90	-15.14	8.14	5.26	2.09	6.89



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Lazard SMid Cap Core	6.63 (14)	-0.82 (43)	2.58 (53)	8.51 (58)	12.97 (40)	7.59 (87)	8.10 (74)
● Russell 2500 Index	2.96 (76)	-2.80 (65)	1.77 (65)	8.76 (55)	12.34 (69)	8.10 (70)	7.66 (90)
Median	4.37	-1.82	2.80	8.85	12.60	9.00	8.96



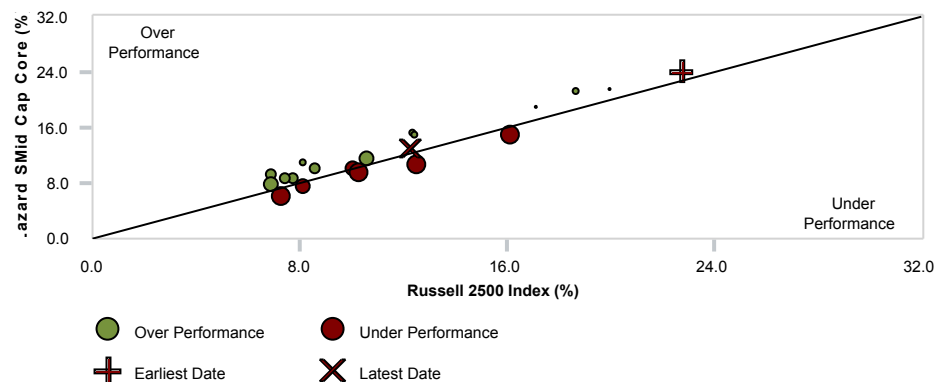
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Lazard SMid Cap Core	13.70 (69)	20.53 (25)	10.26 (88)	4.02 (40)	11.99 (36)	31.12 (33)
● Russell 2500 Index	16.19 (57)	17.79 (71)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)
Median	16.28	18.86	12.61	2.28	11.29	30.27

Comparative Performance

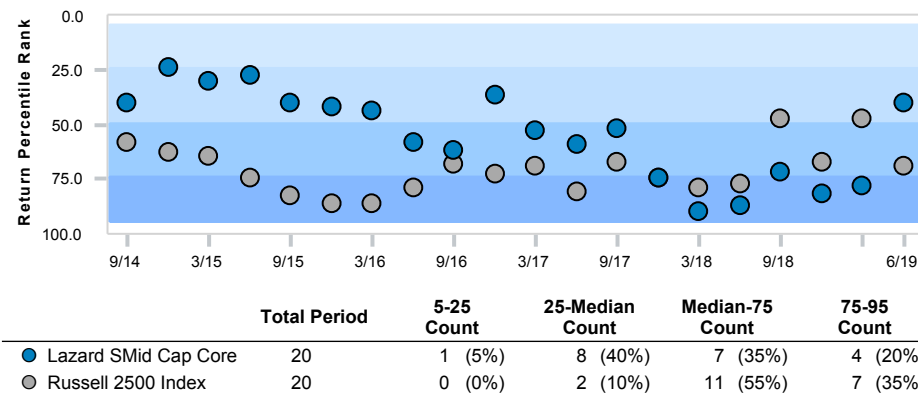
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Lazard SMid Cap Core	14.68 (63)	-18.89 (70)	3.43 (75)	5.76 (29)	-0.98 (85)	4.98 (68)
Russell 2500 Index	15.82 (28)	-18.49 (64)	4.70 (55)	5.71 (33)	-0.24 (65)	5.24 (56)
IM U.S. SMID Cap Core Equity (SA+CF) Median	15.02	-18.23	4.80	4.67	0.17	5.46



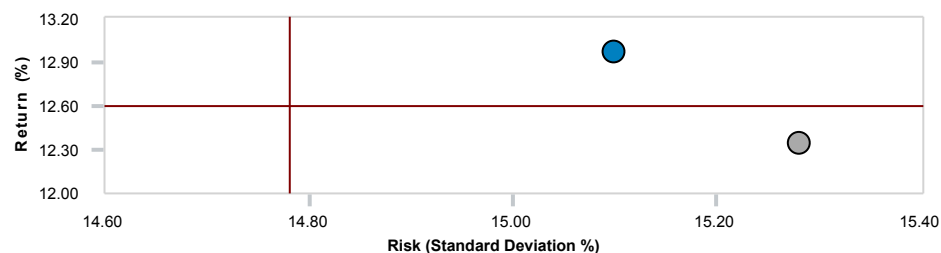
3 Yr Rolling Under/Over Performance - 5 Years



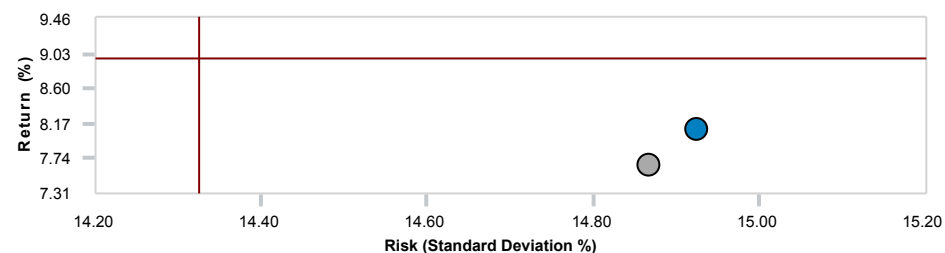
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

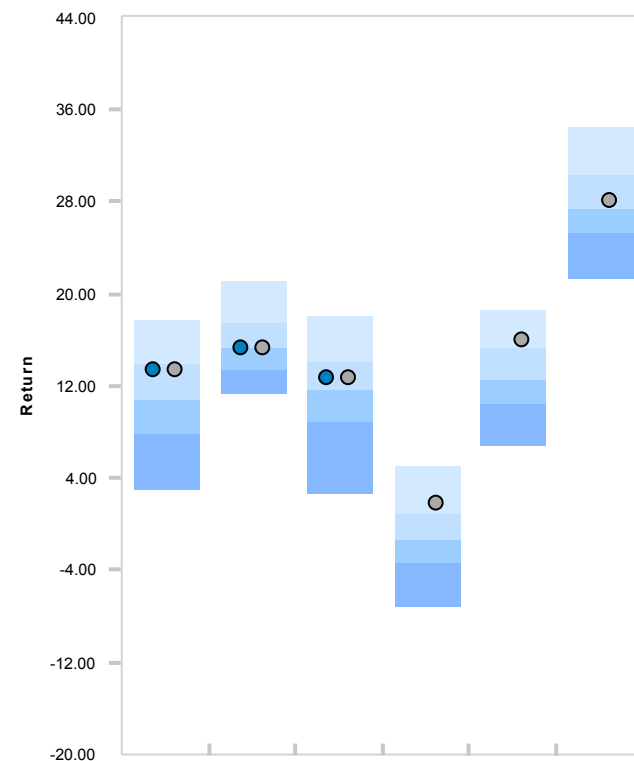
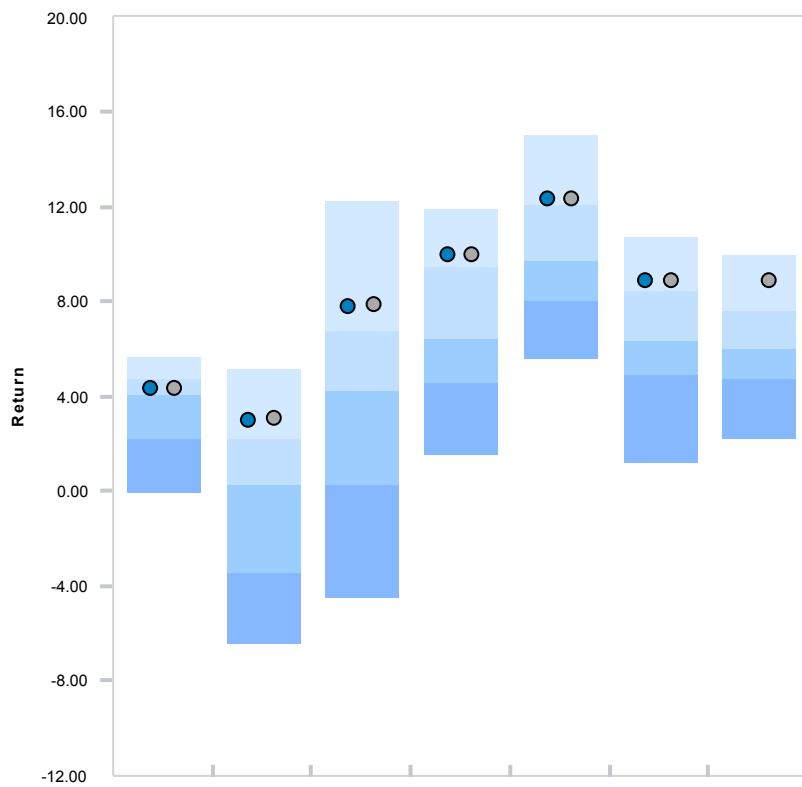
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Lazard SMid Cap Core	3.48	96.86	89.85	1.04	0.16	0.80	0.96	10.22
Russell 2500 Index	0.00	100.00	100.00	0.00	N/A	0.75	1.00	10.20

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Lazard SMid Cap Core	3.33	99.54	96.59	0.60	0.13	0.54	0.98	10.05
Russell 2500 Index	0.00	100.00	100.00	0.00	N/A	0.52	1.00	10.06



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Vanguard Mid-Cap Index (VIMAX)	4.36 (38)	3.03 (16)	7.83 (18)	9.94 (20)	12.32 (22)	8.86 (20)	N/A
● CRSP U.S. Mid Cap TR Index	4.37 (38)	3.06 (15)	7.85 (18)	9.97 (18)	12.36 (19)	8.90 (19)	8.85 (14)
Median	4.08	0.28	4.25	6.41	9.70	6.37	6.04

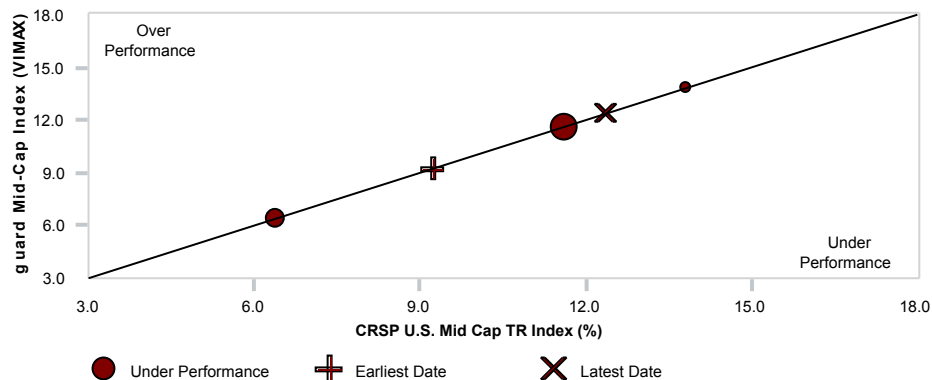
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Vanguard Mid-Cap Index (VIMAX)	3.42 (30)	5.30 (49)	2.63 (39)	N/A	N/A	N/A
● CRSP U.S. Mid Cap TR Index	3.44 (30)	5.33 (47)	2.68 (37)	1.76 (20)	5.94 (14)	8.08 (40)
Median	0.82	5.25	1.65	-1.26	2.56	7.41

Comparative Performance

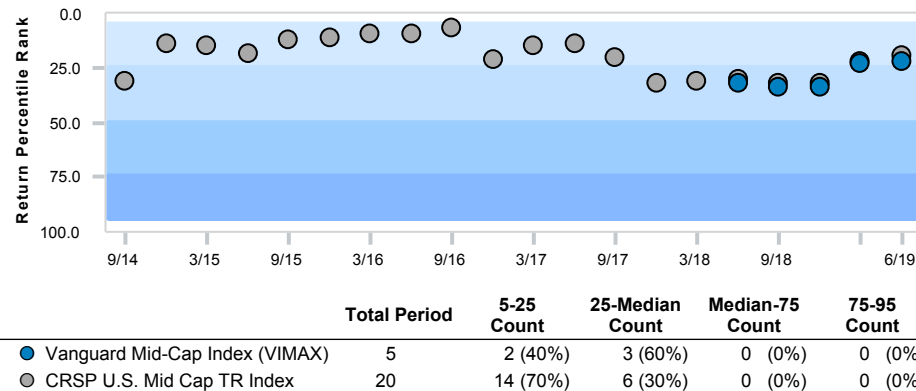
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Vanguard Mid-Cap Index (VIMAX)	16.77 (8)	-15.46 (47)	4.66 (40)	2.57 (41)	0.01 (20)	5.64 (43)
CRSP U.S. Mid Cap TR Index	16.79 (6)	-15.46 (47)	4.65 (41)	2.58 (39)	0.03 (19)	5.65 (42)
IM U.S. Mid Cap Core Equity (MF) Median	14.58	-15.76	4.11	2.31	-1.27	5.43



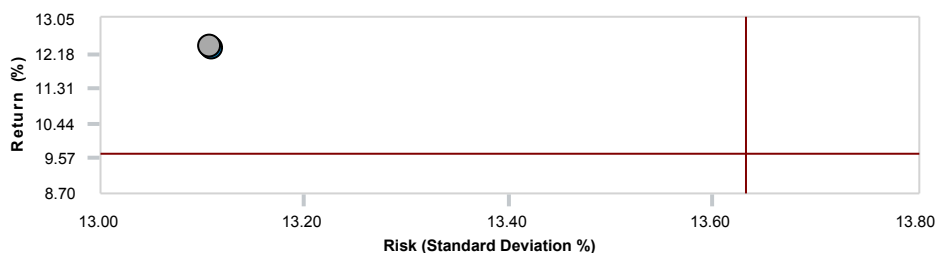
3 Yr Rolling Under/Over Performance - 5 Years



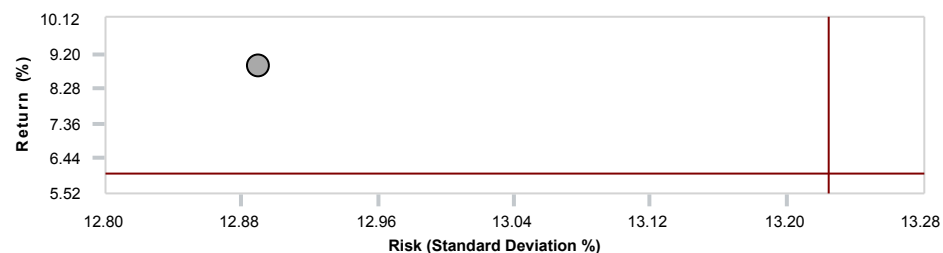
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Vanguard Mid-Cap Index (VIMAX)	0.02	99.89	100.11	-0.04	-1.51	0.85	1.00	8.78
CRSP U.S. Mid Cap TR Index	0.00	100.00	100.00	0.00	N/A	0.86	1.00	8.78

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Vanguard Mid-Cap Index (VIMAX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Mid Cap TR Index	0.00	100.00	100.00	0.00	N/A	0.66	1.00	8.45



Fund Information

Fund Name : Vanguard Index Funds: Vanguard Mid-Cap Index Fund; Admiral Shares
 Fund Family : Vanguard Group Inc
 Ticker : VIMAX
 Inception Date : 11/12/2001
 Fund Assets : \$39,939 Million
 Portfolio Turnover : 16%

Portfolio Assets : \$102,636 Million
 Portfolio Manager : Butler/Johnson
 PM Tenure : 2001--2016
 Fund Style : IM U.S. Mid Cap Core Equity (MF)
 Style Benchmark : CRSP U.S. Mid Cap TR Index

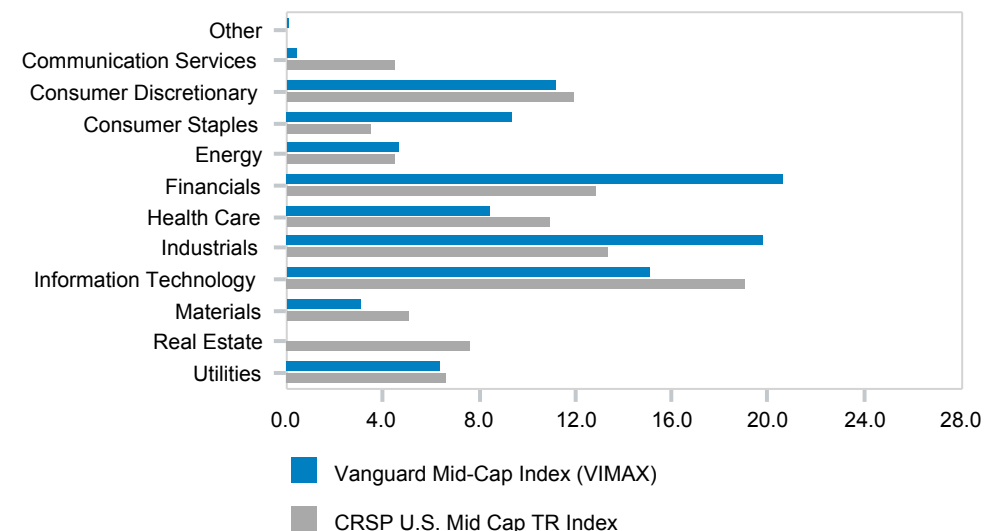
Portfolio Characteristics As of 05/31/2019

	Portfolio	Benchmark
Total Securities	374	359
Avg. Market Cap (\$)	16,407,807,126	11,784,260,450
Price/Earnings (P/E)	29.48	21.05
Price/Book (P/B)	5.32	2.96
Dividend Yield	2.45	1.68
Annual EPS	23.35	4.19
5 Yr EPS	12.37	11.60
3 Yr EPS Growth	16.88	N/A
Beta (3 Years, Monthly)	1.00	1.00

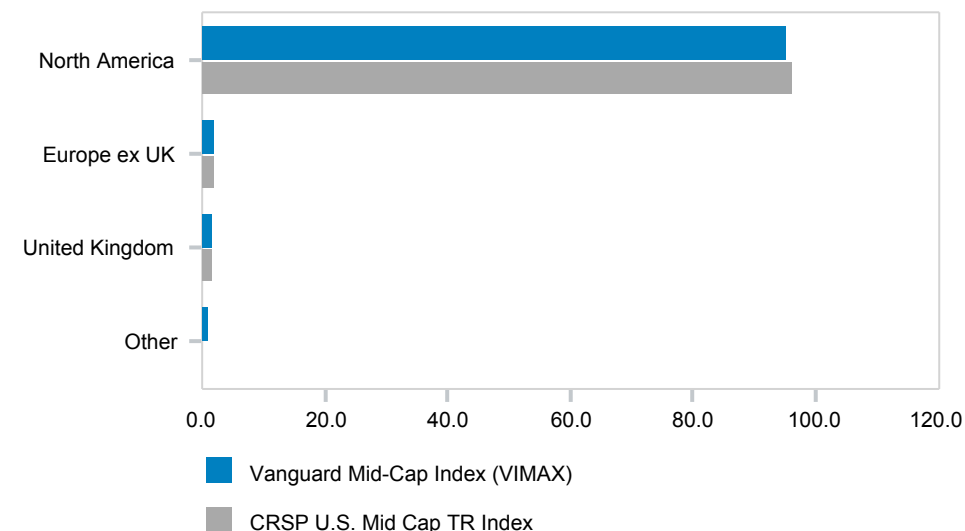
Top Ten Securities As of 05/31/2019

Worldpay Inc ORD	0.9 %
Roper Technologies Inc ORD	0.9 %
Fiserv Inc ORD	0.8 %
Red Hat Inc ORD	0.8 %
Moody's Corp ORD	0.7 %
Twitter Inc ORD	0.6 %
ONEOK Inc ORD	0.6 %
Amphenol Corp ORD	0.6 %
Xilinx Inc ORD	0.6 %
WEC Energy Group Inc ORD	0.6 %

Sector Weights As of 05/31/2019



Region Weights As of 05/31/2019



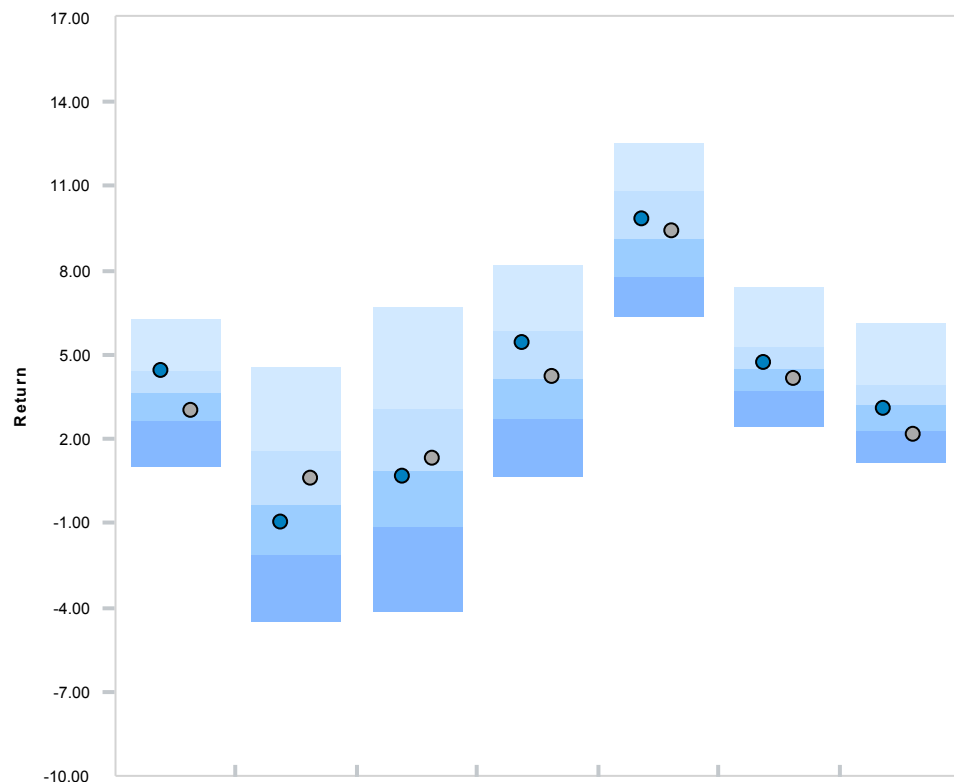
Statistics provided by Lipper. Most recent available data shown.



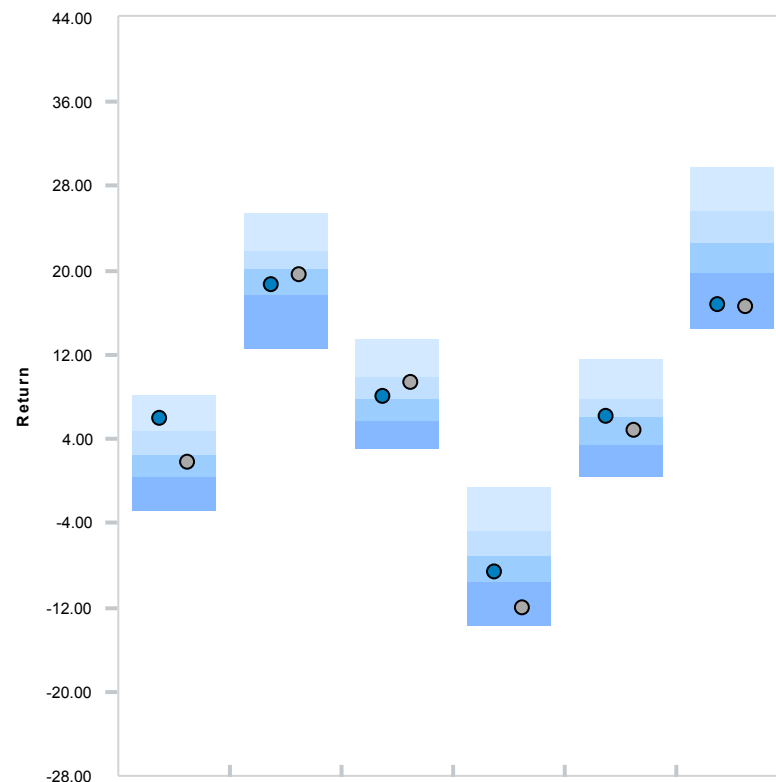
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Peer Group Analysis - IM International Large Cap Core Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Int'l Equity	4.45 (25)	-0.97 (56)	0.69 (56)	5.40 (31)	9.81 (38)	4.73 (44)	3.08 (57)
● Total Int'l Policy	2.98 (66)	0.58 (37)	1.29 (43)	4.24 (48)	9.39 (45)	4.11 (61)	2.16 (80)
Median	3.61	-0.35	0.87	4.17	9.11	4.51	3.18



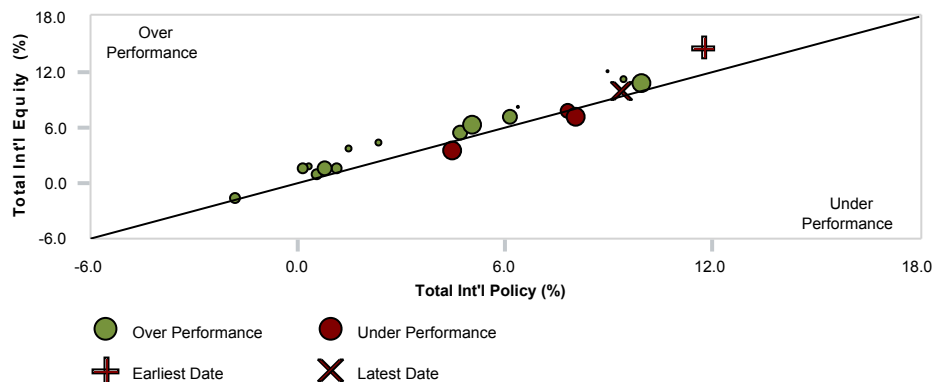
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Total Int'l Equity	5.85 (14)	18.68 (69)	7.98 (50)	-8.63 (65)	6.07 (50)	16.67 (89)
● Total Int'l Policy	1.76 (60)	19.61 (59)	9.26 (33)	-12.16 (90)	4.77 (63)	16.48 (90)
Median	2.46	20.20	7.86	-7.08	6.04	22.60

Comparative Performance

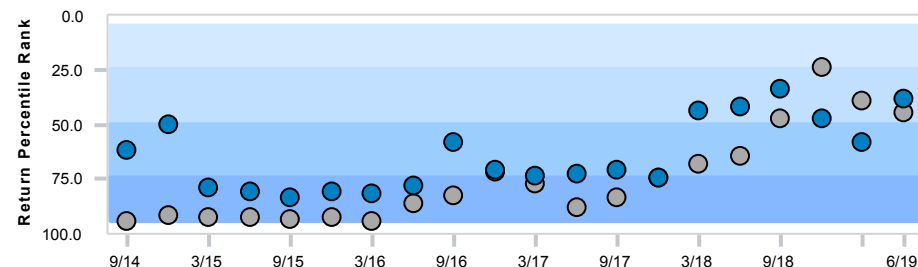
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Total Int'l Equity	11.60 (35)	-15.04 (86)	1.67 (30)	-1.30 (41)	0.92 (9)	4.52 (35)
Total Int'l Policy	10.31 (64)	-11.46 (20)	0.71 (62)	-2.61 (70)	-1.18 (60)	5.00 (24)
IM International Large Cap Core Equity (SA+CF) Median	10.85	-13.18	1.01	-1.81	-0.87	4.25



3 Yr Rolling Under/Over Performance - 5 Years

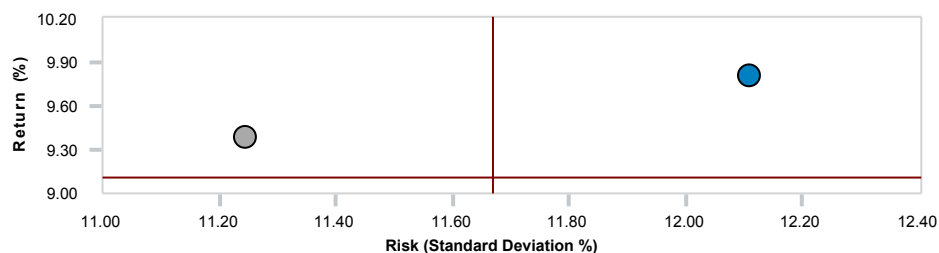


3 Yr Rolling Percentile Ranking - 5 Years



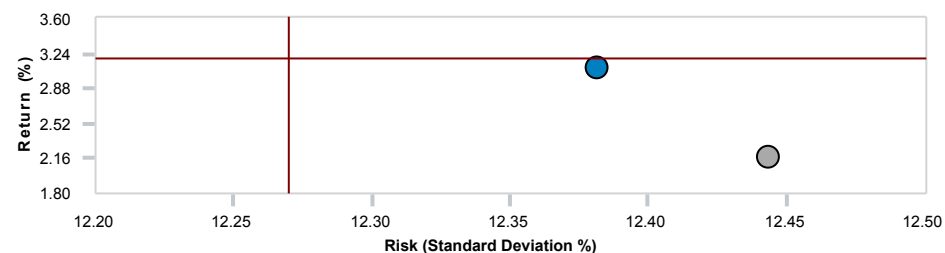
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Total Int'l Equity	20	0 (0%)	6 (30%)	8 (40%)	6 (30%)
● Total Int'l Policy	20	1 (5%)	3 (15%)	4 (20%)	12 (60%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Total Int'l Equity	9.81	12.11
● Total Int'l Policy	9.39	11.24
— Median	9.11	11.67

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Total Int'l Equity	3.08	12.38
● Total Int'l Policy	2.16	12.44
— Median	3.18	12.27

Historical Statistics - 3 Years

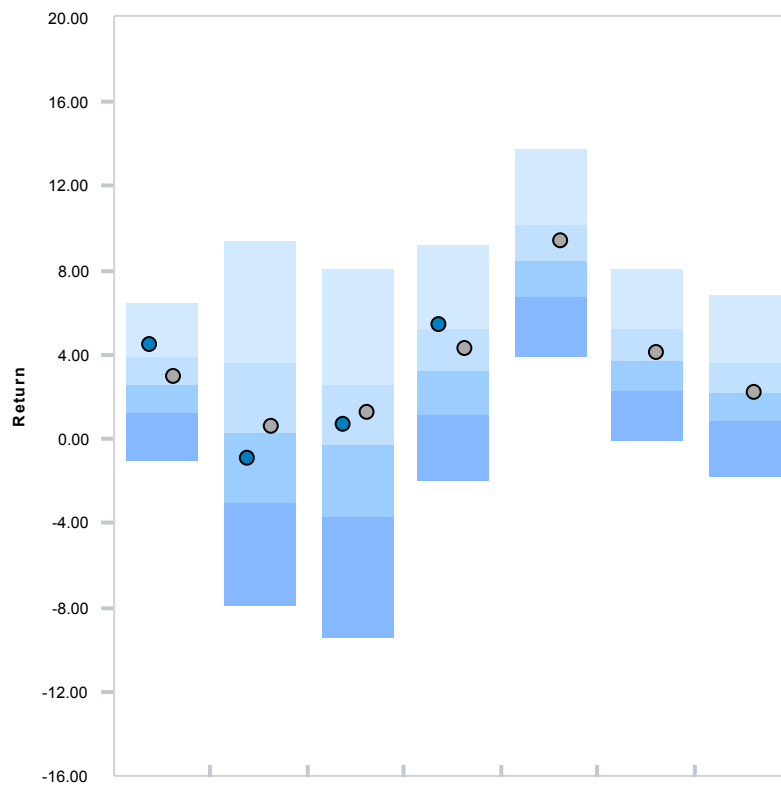
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.31	101.73	98.88	0.14	0.15	0.72	1.04	8.16
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	0.73	1.00	7.34

Historical Statistics - 5 Years

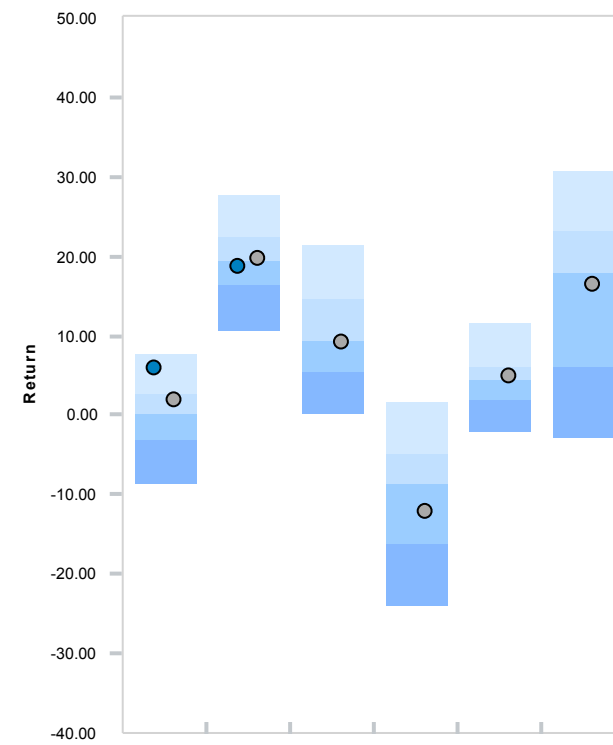
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.78	97.17	90.96	1.05	0.24	0.24	0.95	8.58
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	0.17	1.00	8.41



Peer Group Analysis - IM International Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Harding Loevner Intl Equity (HLMIX)	4.45 (18)	-0.97 (62)	0.69 (40)	5.40 (24)	N/A	N/A	N/A
○ MSCI AC World ex USA (Net)	2.98 (43)	0.58 (48)	1.29 (36)	4.24 (36)	9.39 (34)	4.11 (42)	2.16 (52)
Median	2.58	0.31	-0.27	3.19	8.44	3.69	2.22



	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
● Harding Loevner Intl Equity (HLMIX)	5.85 (10)	8.65 (58)	N/A	N/A	N/A	N/A
○ MSCI AC World ex USA (Net)	1.76 (34)	9.61 (48)	9.26 (51)	2.16 (64)	4.77 (43)	6.48 (56)
Median	0.08	9.36	9.33	8.76	4.27	7.81

Comparative Performance

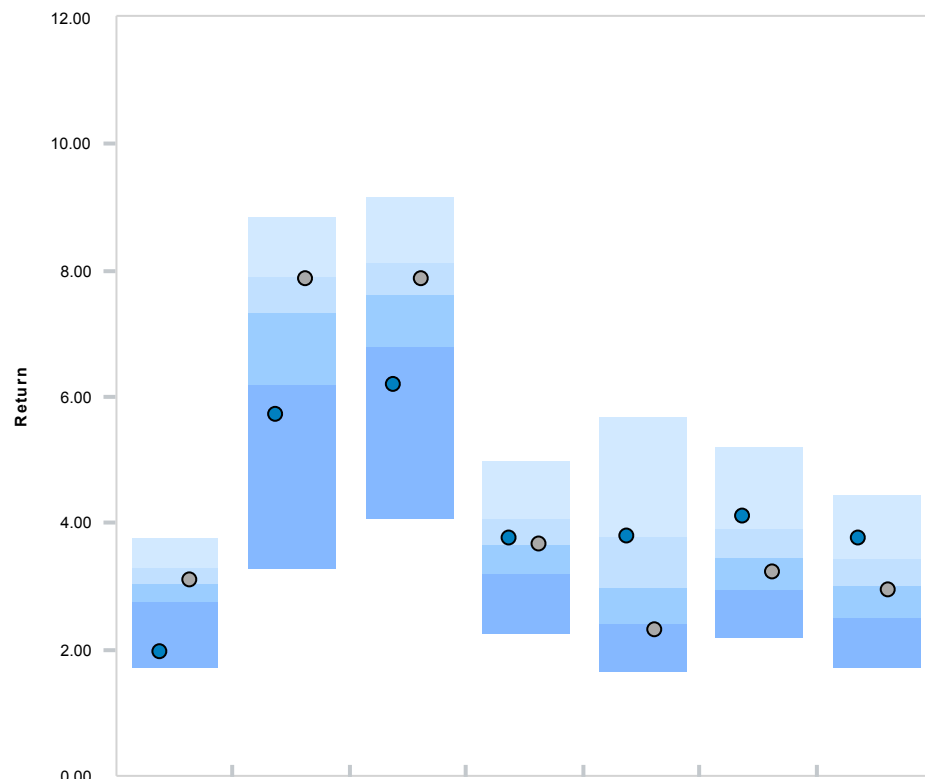
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Harding Loevner Intl Equity (HLMIX)	11.60 (35)	-15.04 (80)	1.67 (13)	-1.30 (22)	0.92 (36)	4.52 (53)
MSCI AC World ex USA (Net)	10.31 (54)	-11.46 (44)	0.71 (31)	-2.61 (41)	-1.18 (76)	5.00 (45)
IM International Equity (MF) Median	10.53	-12.23	-0.27	-3.33	-0.07	4.67



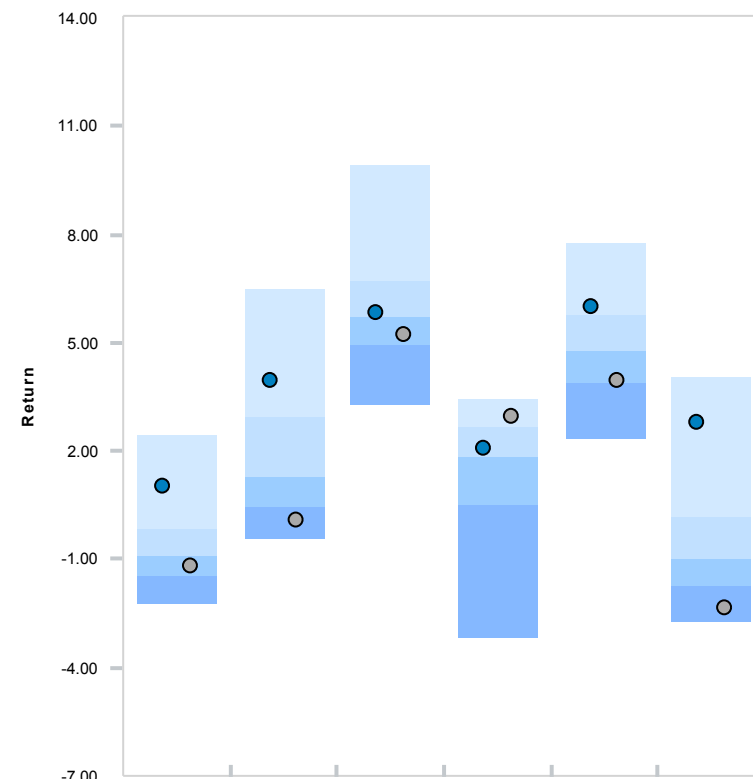
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Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF+MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fixed Income	1.97 (93)	5.71 (81)	6.20 (84)	3.77 (43)	3.80 (25)	4.11 (20)	3.75 (14)
● Total Fixed Policy	3.08 (45)	7.85 (28)	7.87 (38)	3.65 (50)	2.31 (78)	3.22 (62)	2.95 (52)
Median	3.04	7.34	7.61	3.65	2.96	3.45	2.99



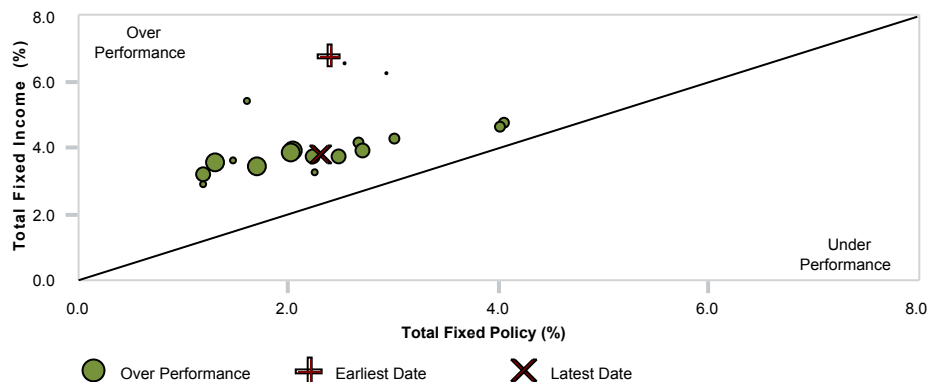
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Total Fixed Income	0.99 (13)	3.93 (19)	5.81 (48)	2.09 (44)	6.00 (22)	2.81 (8)
● Total Fixed Policy	-1.22 (64)	0.07 (84)	5.19 (68)	2.94 (17)	3.96 (74)	-2.35 (90)
Median	-0.91	1.30	5.72	1.83	4.75	-0.97

Comparative Performance

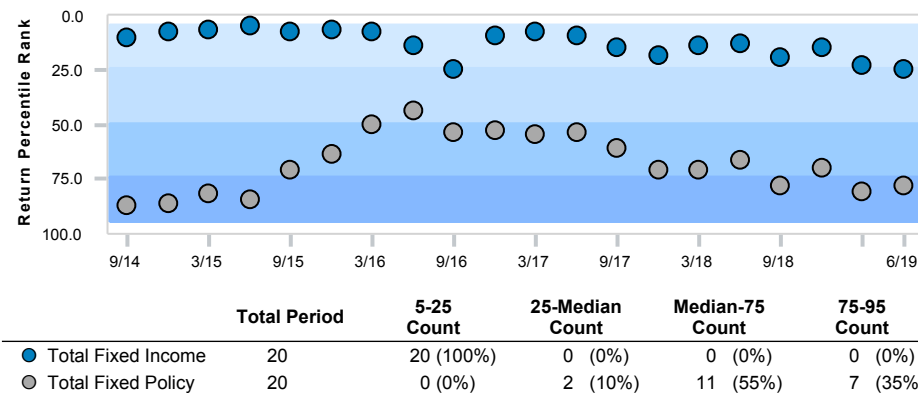
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Total Fixed Income	2.36 (93)	1.28 (26)	0.46 (35)	0.13 (15)	0.21 (5)	0.18 (82)
Total Fixed Policy	2.94 (78)	1.64 (9)	0.02 (79)	-0.16 (39)	-1.46 (65)	0.39 (59)
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	3.42	0.71	0.26	-0.24	-1.33	0.45



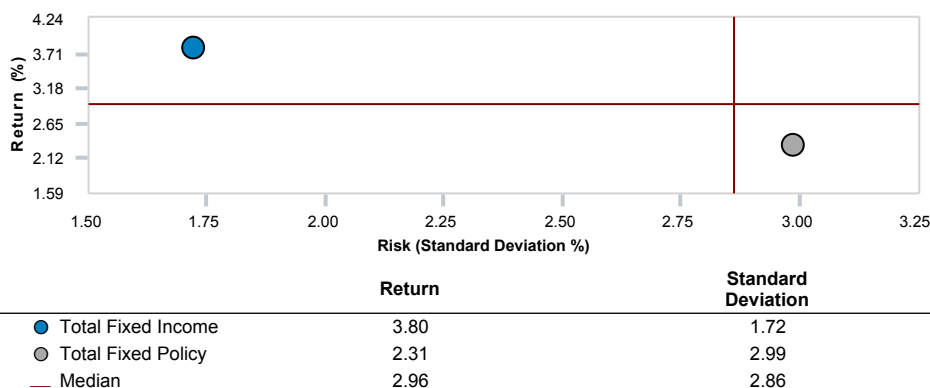
3 Yr Rolling Under/Over Performance - 5 Years



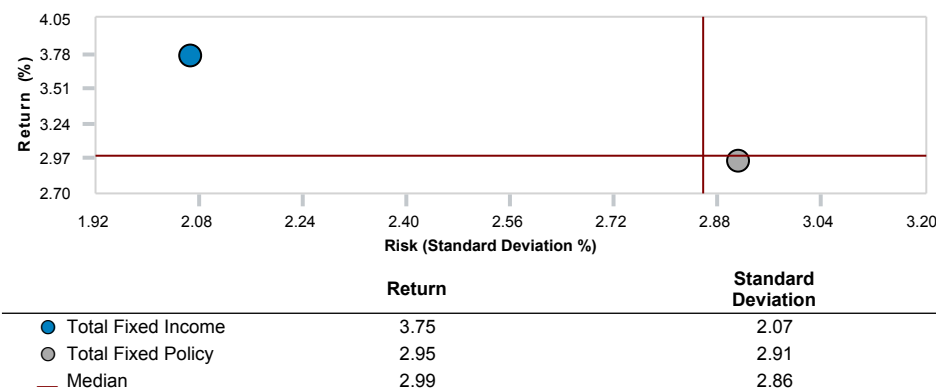
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

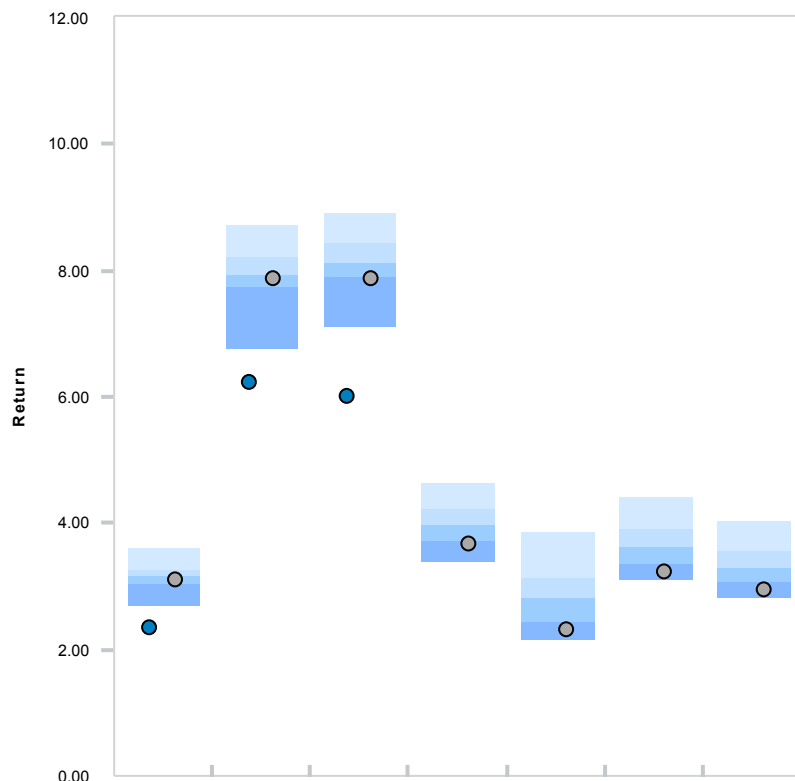
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.93	72.82	0.52	2.72	0.74	1.43	0.46	0.89
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.34	1.00	1.85

Historical Statistics - 5 Years

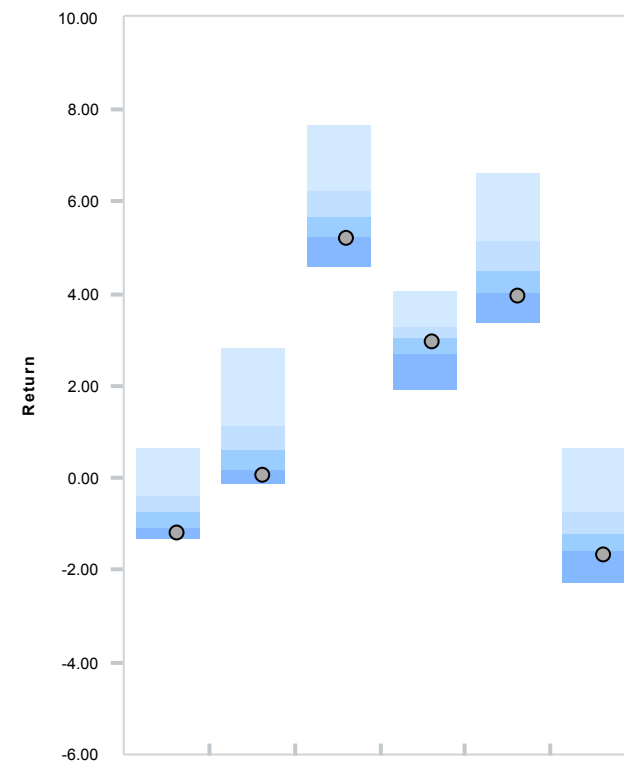
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.81	76.68	20.15	2.08	0.42	1.40	0.56	0.93
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.73	1.00	1.63



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Garcia Hamilton Fixed Income	2.34 (97)	6.22 (97)	6.01 (98)	N/A	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate Index	3.08 (69)	7.85 (65)	7.87 (79)	3.65 (85)	2.31 (88)	3.22 (89)	2.95 (89)
Median	3.14	7.92	8.11	3.97	2.80	3.63	3.29



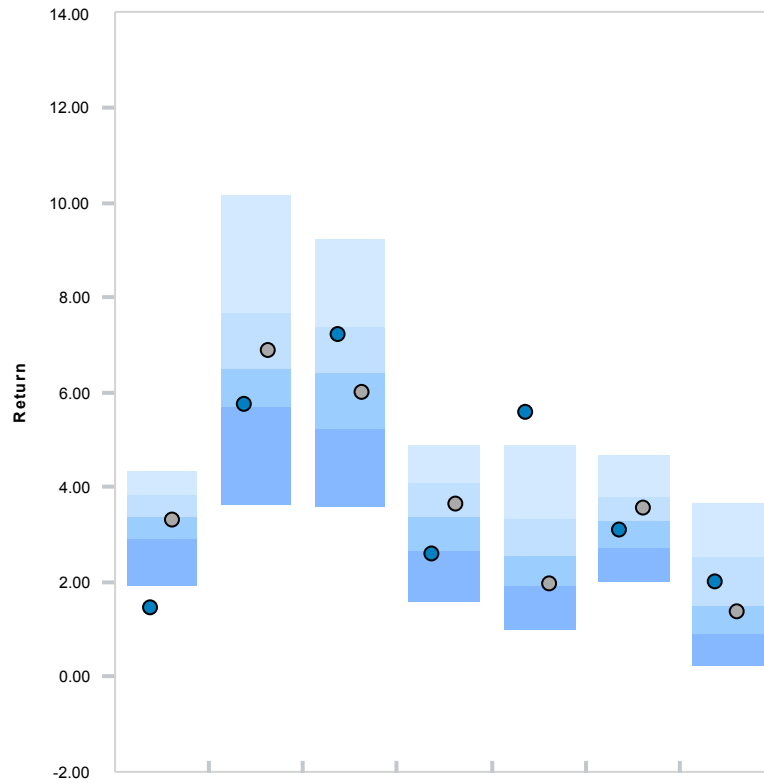
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Garcia Hamilton Fixed Income	N/A	N/A	N/A	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate Index	1.22 (89)	0.07 (87)	5.19 (81)	2.94 (60)	3.96 (81)	1.68 (80)
Median	0.74	0.62	5.67	3.02	4.51	1.22

Comparative Performance

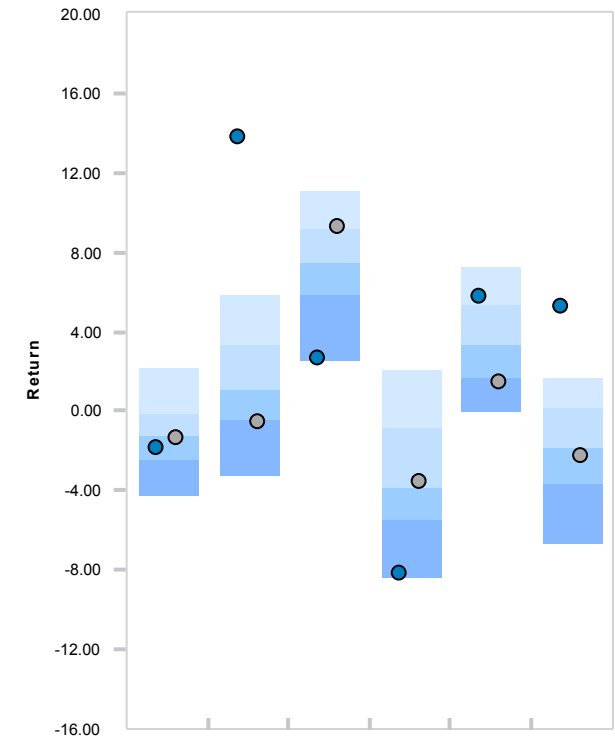
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Garcia Hamilton Fixed Income	2.50 (96)	1.25 (66)	-0.19 (95)	0.47 (4)	-0.54 (6)	N/A
Blmbg. Barc. U.S. Aggregate Index	2.94 (83)	1.64 (23)	0.02 (83)	-0.16 (73)	-1.46 (68)	0.39 (80)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	3.22	1.40	0.18	-0.09	-1.37	0.51



Peer Group Analysis - IM Global Fixed Income (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Templeton Global Tol Return (FTTRX)	1.46 (98)	5.76 (72)	7.23 (29)	2.60 (80)	5.57 (3)	3.10 (59)	2.00 (38)
● Blmbg. Barc. Global Multiverse	3.31 (55)	6.86 (41)	6.01 (60)	3.65 (40)	1.95 (74)	3.58 (39)	1.35 (57)
Median	3.37	6.51	6.42	3.41	2.56	3.31	1.51



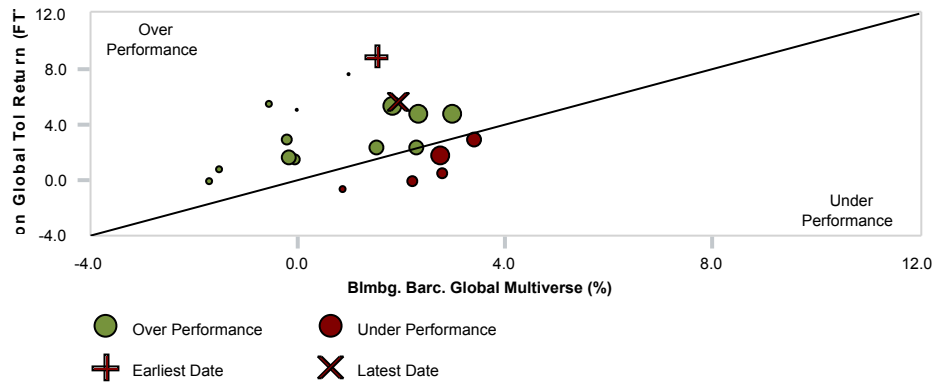
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
● Templeton Global Tol Return (FTTRX)	1.90 (66)	3.82 (1)	2.64 (94)	8.23 (95)	5.71 (22)	5.29 (2)
● Blmbg. Barc. Global Multiverse	1.32 (51)	0.56 (77)	9.23 (25)	3.56 (42)	1.40 (79)	2.22 (56)
Median	1.29	1.02	7.42	3.85	3.37	1.81

Comparative Performance

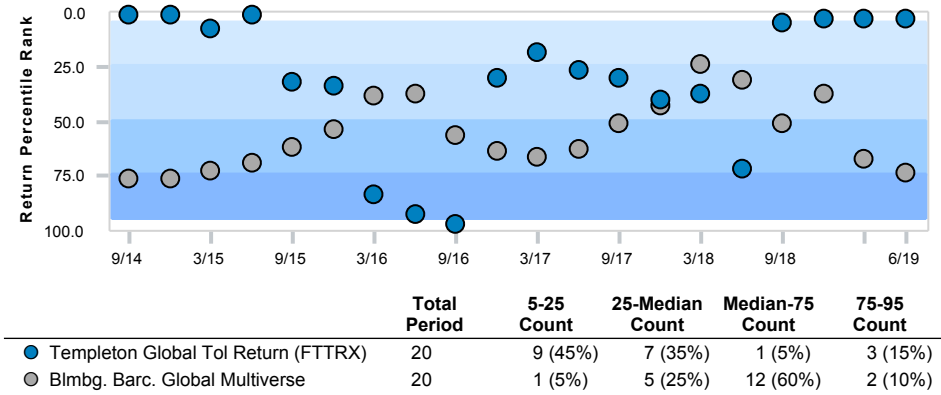
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
Templeton Global Tol Return (FTTRX)	1.94 (87)	2.26 (1)	1.38 (5)	-3.13 (55)	1.64 (27)	-1.73 (100)
Blmbg. Barc. Global Multiverse	2.39 (76)	1.02 (23)	-0.80 (66)	-2.83 (53)	1.30 (34)	1.06 (17)
IM Global Fixed Income (MF) Median	3.10	0.35	-0.39	-2.29	0.80	0.66



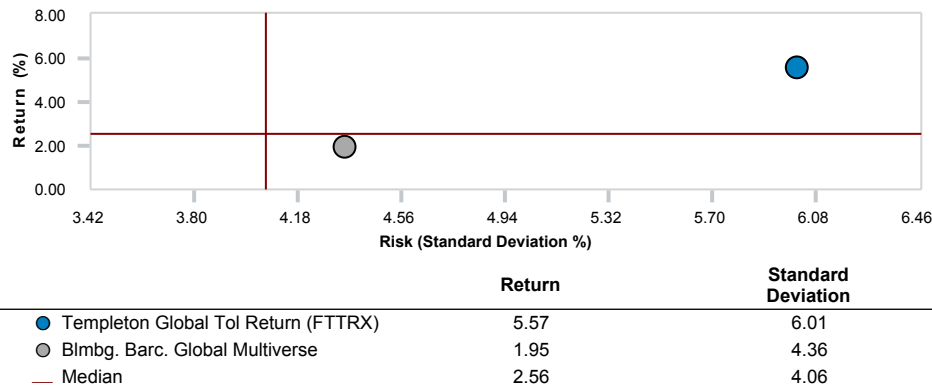
3 Yr Rolling Under/Over Performance - 5 Years



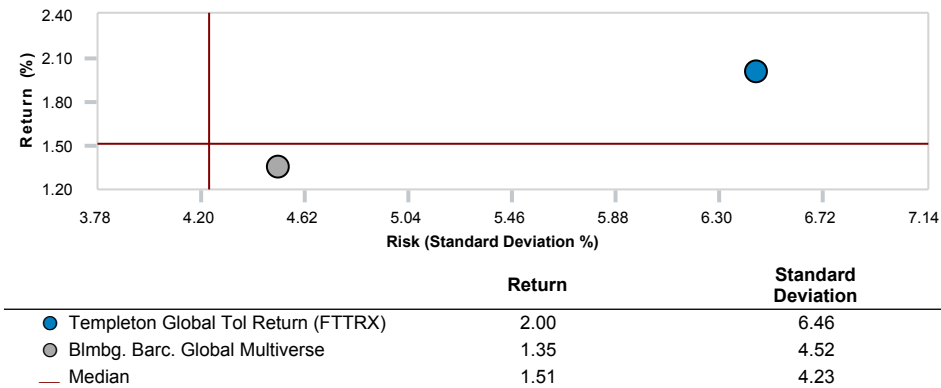
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

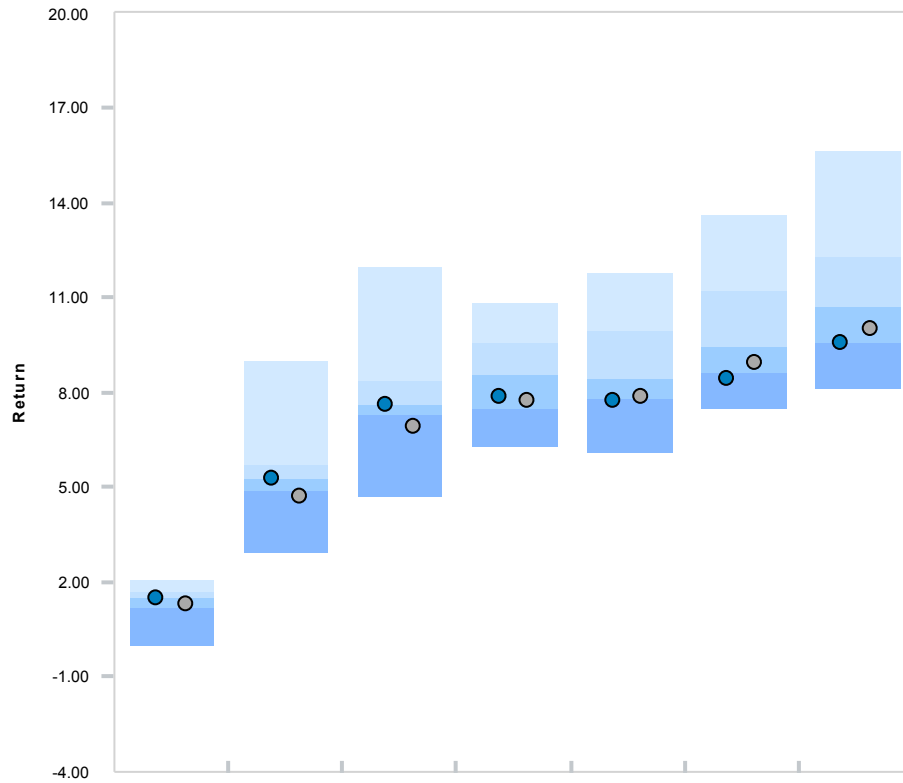
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Return (FTTRX)	8.16	16.80	-89.92	6.41	0.44	0.70	-0.30	3.37
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.16	1.00	3.12

Historical Statistics - 5 Years

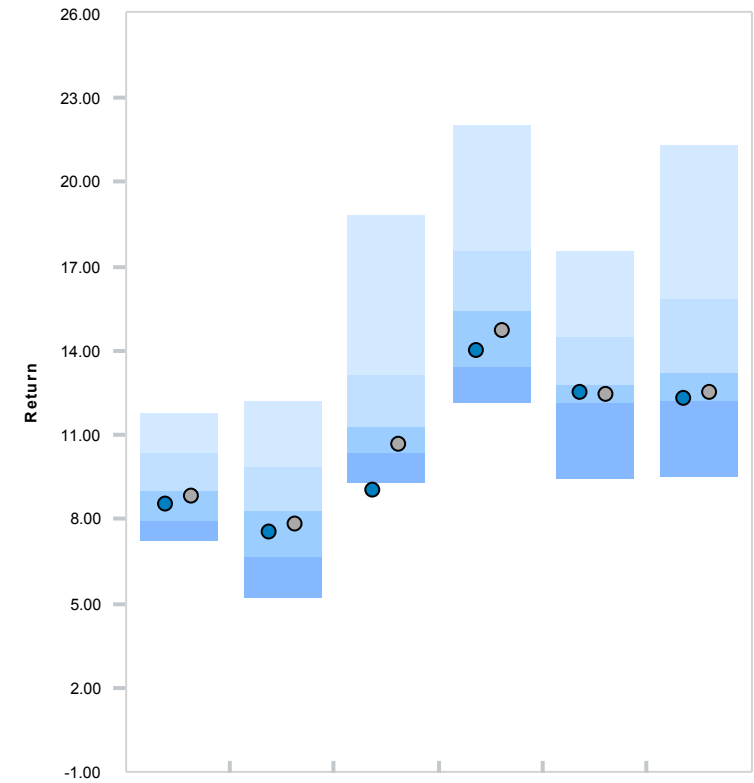
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Return (FTTRX)	7.94	4.46	-35.17	2.25	0.09	0.21	-0.02	4.10
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.13	1.00	3.10



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
American Core Realty	1.53 (32)	5.29 (50)	7.60 (50)	7.88 (67)	7.74 (77)	8.46 (77)	9.55 (76)
NCREIF ODCE	1.34 (68)	4.71 (84)	6.90 (85)	7.75 (74)	7.87 (74)	8.94 (73)	10.03 (61)
Median	1.47	5.28	7.59	8.60	8.43	9.45	10.69



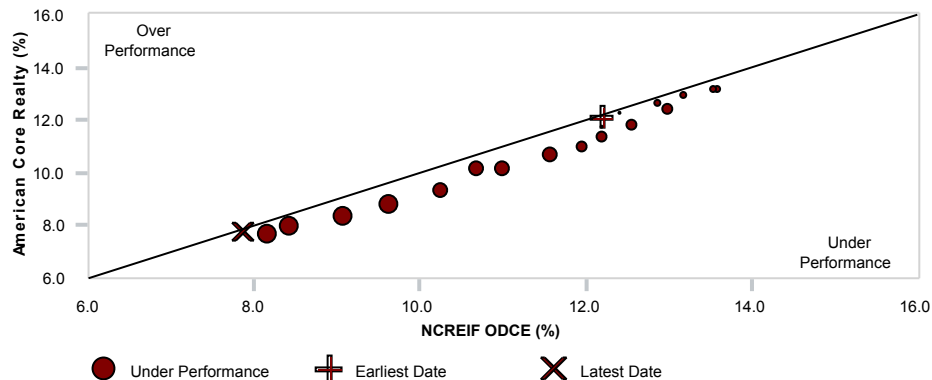
	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013
American Core Realty	8.50 (66)	7.52 (67)	9.04 (97)	13.98 (69)	12.49 (64)	12.27 (70)
NCREIF ODCE	8.82 (59)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)
Median	9.04	8.29	11.32	15.45	12.78	13.18

Comparative Performance

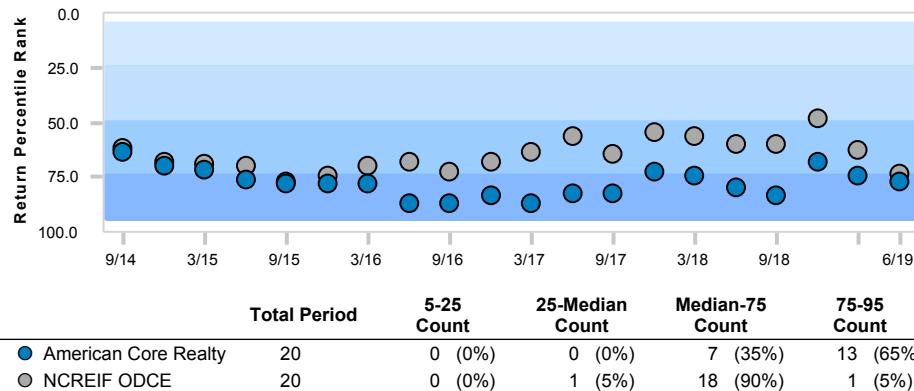
	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017
American Core Realty	1.74 (76)	1.94 (27)	2.19 (47)	2.09 (66)	2.23 (45)	1.73 (87)
NCREIF ODCE	1.69 (81)	1.62 (62)	2.09 (54)	2.13 (61)	2.17 (55)	2.15 (57)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.99	1.76	2.10	2.22	2.21	2.25



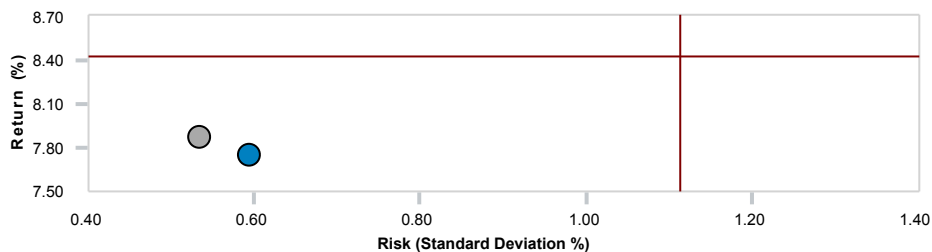
3 Yr Rolling Under/Over Performance - 5 Years



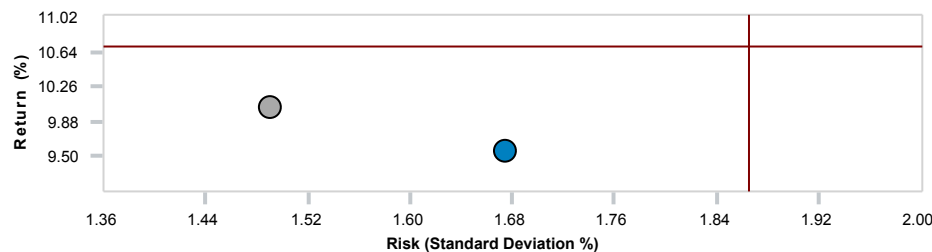
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	0.74	98.41	N/A	0.18	-0.16	1.98	0.96	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	1.99	1.00	0.00

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
American Core Realty	1.04	95.39	N/A	0.07	-0.43	2.03	0.95	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	2.08	1.00	0.00



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Delray Beach Firefighters' Retirement System
Illiquid Investments
June 30, 2019

	Market Value	Uncalled Capital Commitment	QTD IRR	Inception IRR	Inception Date	Expected Termination
*Angelo Gordon Net Lease Realty Fund III, L.P.	\$2,028,200.00	\$84,111	0	6.75	3/10/2014	4/1/2027
*Crescent Direct Lending Levered Fund	\$2,913,797.00	\$668,697	0	7.59	10/9/2014	12/1/2022
*Dune Real Estate Fund III	\$1,994,453	\$158,981	0.88	13.13	11/6/2014	12/1/2024
*Molpus Woodlands Timber	\$1,307,325.00	\$0	0	2.18	6/24/2008	5/2018-5/2022

* Market Value as of 06-30-2019
Market Value includes contributions & distributions since end of period.



Benchmark History
Investment Policy Benchmarks
As of June 30, 2019

Total Fund Policy			
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1978		Oct-2013	
S&P 500 Index	65.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	MSCI AC World ex USA (Net)	15.00
FTSE 3 Month T-Bill	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Apr-2007		NCREIF ODCE	5.00
Blmbg. Barc. U.S. Gov't/Credit	30.00	Quadrant Custom Policy	5.00
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	NCREIF Timberland Index	5.00
S&P 500 Index	60.00	CPI+5%	7.50
MSCI EAFE (Net) Index	5.00	May-2014	
Oct-2007		Wilshire 5000 Total Market Index (full-cap) Index	35.00
MSCI EAFE (Net) Index	10.00	MSCI AC World ex USA (Net)	15.00
Bloomberg Barclays Intermed Aggregate Index	30.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Blmbg. Barc. U.S. TIPS 1-10 Year	5.00	NCREIF ODCE	10.00
Russell 3000 Index	50.00	NCREIF Timberland Index	5.00
NCREIF Property Index	5.00	CPI+5%	7.50
Jan-2010		Jul-2015	
MSCI AC World ex USA (Net)	15.00	Wilshire 5000 Total Market Index (full-cap) Index	35.00
Blmbg. Barc. U.S. Aggregate Index	30.00	MSCI AC World ex USA (Net)	15.00
Bloomberg Barclays U.S. TIPS Index	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
Russell 3000 Index	45.00	NCREIF ODCE	10.00
NCREIF Property Index	5.00	NCREIF Timberland Index	5.00
Jul-2010		Alternatives Policy	7.50
Wilshire 5000 Total Market Index (full-cap) Index	35.00	Nov-2015	
MSCI AC World ex USA (Net)	15.00	Wilshire 5000 Total Market Index (full-cap) Index	42.50
Blmbg. Barc. U.S. Aggregate Index	25.00	MSCI AC World ex USA (Net)	15.00
Bloomberg Barclays U.S. TIPS Index	5.00	Blmbg. Barc. U.S. Aggregate Index	27.50
NCREIF ODCE	5.00	NCREIF ODCE	10.00
Barclay BTOP 50	5.00	Alternatives Policy	5.00
Quadrant Custom Policy	5.00		
NCREIF Timberland Index	5.00		



Benchmark History
Investment Policy Benchmarks
As of June 30, 2019

Total Equity Policy	
Allocation Mandate	Weight (%)
Oct-2005	
S&P 500 Index	95.00
FTSE 3 Month T-Bill	5.00
Apr-2007	
FTSE 3 Month T-Bill	5.00
S&P 500 Index	85.00
MSCI EAFE (Net) Index	10.00
Oct-2007	
MSCI EAFE (Net) Index	15.00
Russell 3000 Index	85.00
Jan-2010	
MSCI AC World ex USA (Net)	25.00
Russell 3000 Index	75.00
Jul-2010	
MSCI AC World ex USA (Net)	45.00
Wilshire 5000 Total Market Index (full-cap) Index	55.00
Nov-2015	
MSCI AC World ex USA (Net)	25.00
Wilshire 5000 Total Market Index (full-cap) Index	75.00

Domestic Equity Policy	
Allocation Mandate	Weight (%)
Oct-2005	
S&P 500 Index	100.00
Oct-2007	
Russell 3000 Index	100.00
Jul-2010	
Wilshire 5000 Total Market Index (full-cap) Index	100.00

Total Int'l Policy	
Allocation Mandate	Weight (%)
Jan-1970	
MSCI EAFE (Net) Index	100.00
Jan-2010	
MSCI AC World ex USA (Net)	100.00
Alternatives Policy	
Allocation Mandate	Weight (%)
Aug-2010	
Barclay BTOP 50	100.00
Nov-2013	
CPI+5%	100.00
Jul-2015	
S&P 500 Index	50.00
Blmbg. Barc. U.S. Aggregate Index	50.00

Total Fixed Policy	
Allocation Mandate	Weight (%)
Oct-2005	
Blmbg. Barc. U.S. Gov't/Credit	95.00
FTSE 3 Month T-Bill	5.00
Jan-2007	
Blmbg. Barc. U.S. Gov't/Credit	85.00
Blmbg. Barc. U.S. TIPS 1-10 Year	15.00
Oct-2007	
Blmbg. Barc. U.S. TIPS 1-10 Year	15.00
Bloomberg Barclays Intermed Aggregate Index	85.00
Jan-2010	
Bloomberg Barclays U.S. TIPS Index	15.00
Blmbg. Barc. U.S. Aggregate Index	85.00
Oct-2013	
Blmbg. Barc. U.S. Aggregate Index	100.00



Delray Beach Firefighters' Retirement System

Fee Analysis

As of June 30, 2019

	Market Value (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)	Fee Schedule
Vanguard Total Stock Mkt (VTSAX)	87,980	35	0.04	0.04 % of Assets
Boston LCV	18,483,494	101,659	0.55	0.55 % of First \$25 M 0.45 % of Next \$25 M 0.35 % of Next \$50 M 0.25 % Thereafter
Rhumblin R1000G	4,443,708	1,777	0.04	0.04 % of Assets
Polen Capital LCG	15,128,422	90,771	0.60	0.60 % of Assets
Lazard SMid Cap Core	8,076,425	60,573	0.75	0.75 % of Assets
Vanguard Mid-Cap Index (VIMAX)	5,571,542	4,457	0.08	0.08 % of Assets
Harding Loevner Intl Equity (HLMIX)	16,834,482	141,410	0.84	0.84 % of Assets
Garcia Hamilton Fixed Income	22,202,591	55,506	0.25	0.25 % of Assets
Templeton Global Total Return (FTTRX)	4,186,533	28,050	0.67	0.67 % of Assets
American Core Realty	5,085,190	55,937	1.10	1.10 % of Assets
Total Fund (Composite)	108,983,819	540,176	0.50	



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



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

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

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