

Investment Performance Review
Period Ending March 31, 2020

Delray Beach Firefighters' Retirement System

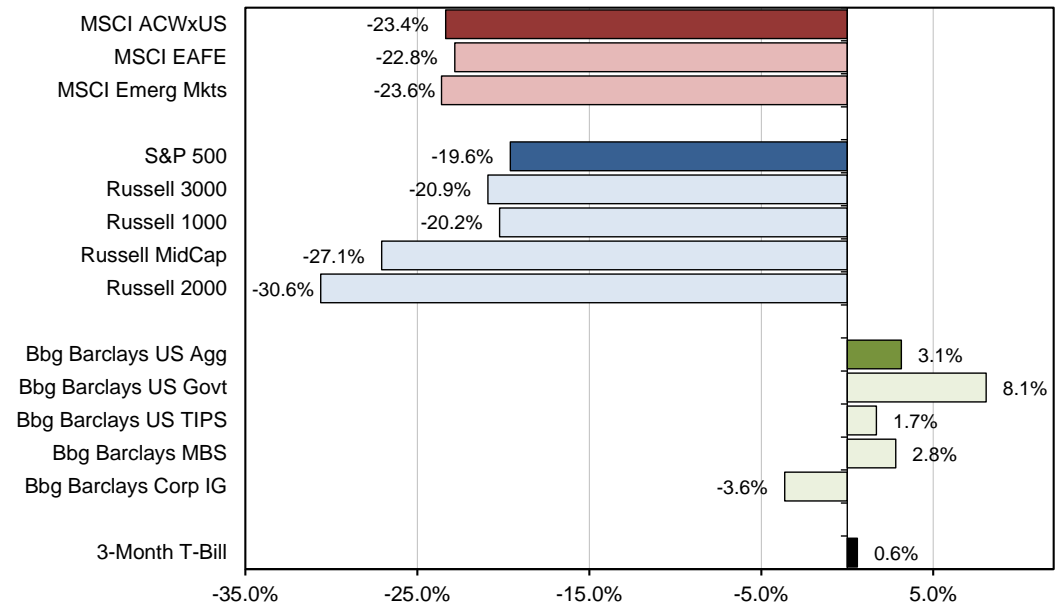


1st Quarter 2020 Market Environment

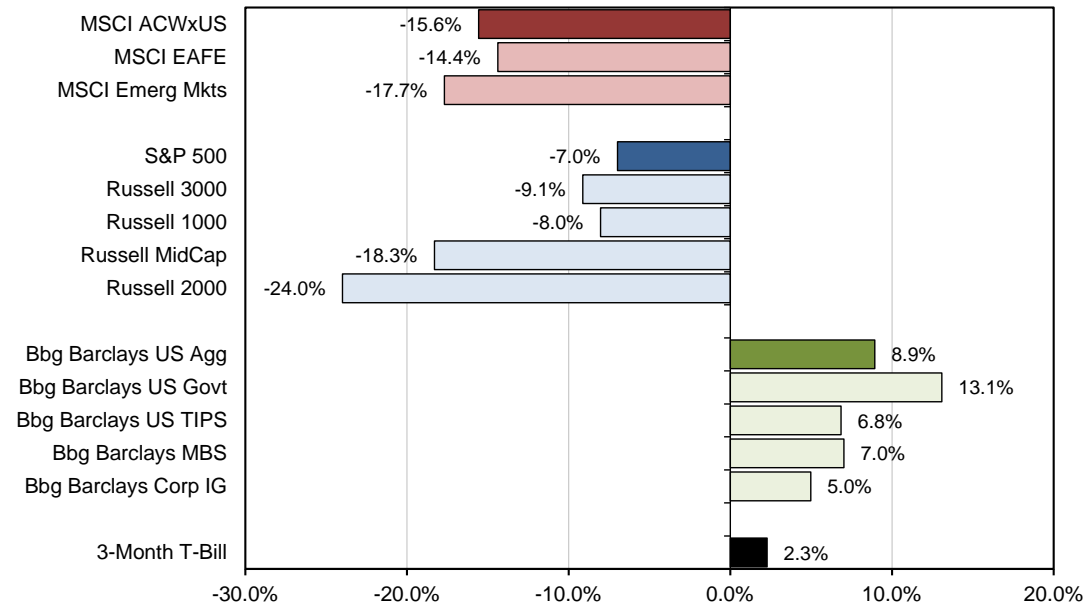


- Global risk asset class returns declined significantly during the 1st quarter of 2020 due primarily to the COVID-19 (Coronavirus) pandemic. Both domestic and international equities experienced significant drawdowns as investors moved into perceived haven assets such as US Treasury bonds. Equity market volatility, as measured by the VIX Index, reached its highest level since the Financial Crisis in 2008. Through the quarter, global economic growth turned negative as countries responded to the pandemic by shuttering their economies. In the US, as a result of the decision to institute social distancing and shelter-in-place orders, labor markets suffered significant losses as businesses closed or furloughed employees. Rising economic concerns resulted in swift action by the Federal Reserve (Fed) which cut its overnight lending rate to between 0% to 0.25%. Importantly, the US government responded with a stimulus package consisting of forgivable loans and other short-term benefits, that is designed to act as a bridge for the economy until businesses can reopen. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning -19.6% versus a -30.6% return for the small cap Russell 2000 Index. US equity returns over the 1-year period turned negative as a result of the drawdown with large and mid-cap stocks returning -7.0% and -18.3% respectively, while small cap stocks fell -24.0%.
- International markets also posted negative returns for the 1st quarter. Similar to US markets, international returns were impacted by the Coronavirus and deteriorating economic fundamentals. International returns also faced headwinds from a strengthening US dollar (USD) which appreciated against most major currencies during the period. Developed markets outpaced emerging markets during the period with the MSCI EAFE Index falling -22.8% versus a -23.6% decline for the MSCI Emerging Markets Index. Both developing and emerging markets posted losses over the 1-year period, returning -14.4% and -17.7% respectively.
- As expected during periods of rising volatility, high quality fixed income outperformed equities during the 1st quarter as investors looked for relative safety amid the equity market drawdown. The broad market Bloomberg Barclays Aggregate Index gained 3.1% as interest rates fell following rising concerns related to the Coronavirus and central bank stimulus from the Fed and other global central banks. US Government bonds were the best performing securities for the 1st quarter returning 8.1%. Investment grade corporate bonds suffered negative returns on concerns about economic growth prospects in the future. The bond market has meaningfully outperformed the equity market over the trailing 1-year period with the Bloomberg Barclays Aggregate posting a solid 8.9% return.

Quarter Performance



1-Year Performance

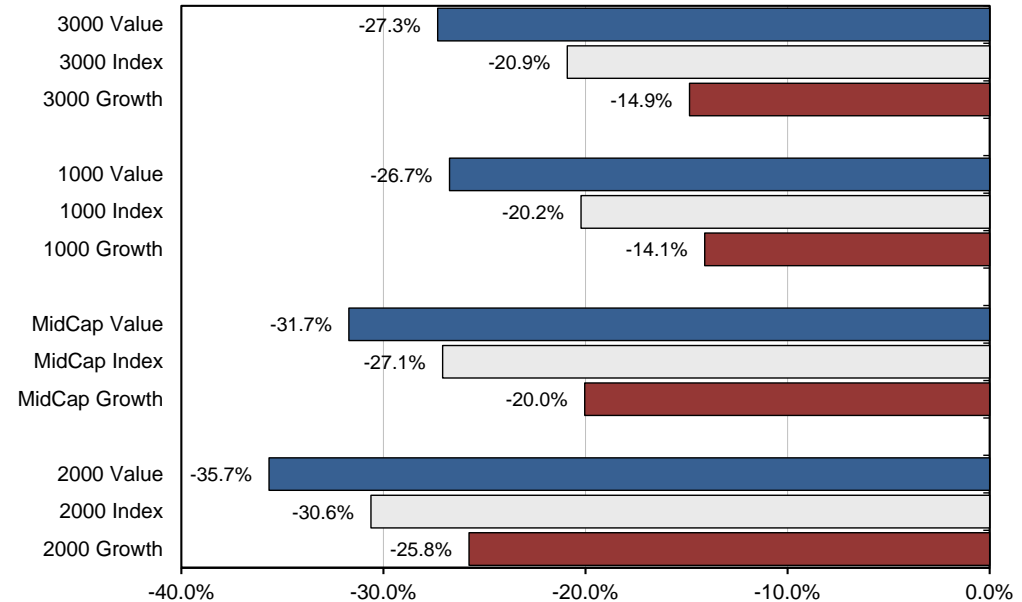


Source: Investment Metrics

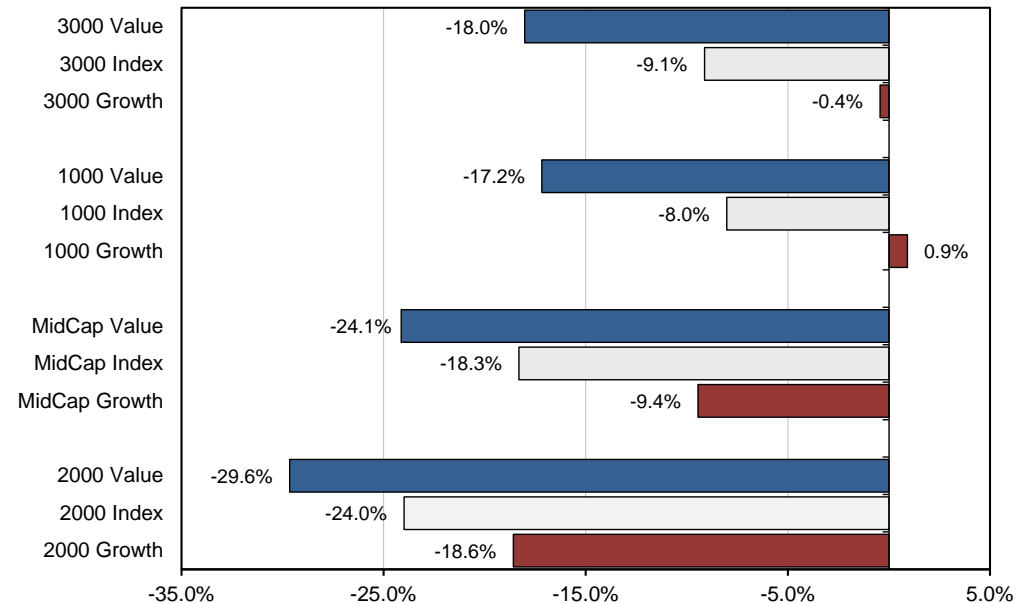


- US equity returns were significantly lower during the 1st quarter with varied results across both style and market capitalization. Concerns related to the Coronavirus, in combination with signs that the US economy could be entering into recession weighed on equities. Labor markets came under significant pressure during the quarter as companies began laying off employees in response to the government's decision to mandate a shelter-in-place approach to dealing with the pandemic. In response to the deteriorating economic conditions, the Fed took unprecedented action on March 15th and lowered the Fed Fund's rate to between 0% to 0.25%. The Fed also announced that it would be purchasing up to \$500 billion in US Treasury bonds and \$200 billion in mortgage-backed bonds. Subsequently, the Fed announced on March 23rd that it would begin purchasing unlimited amounts of US Treasury and mortgage-backed bonds. This announcement was well received by investors and marked the recent low in equity markets.
- During the quarter, higher market capitalization stocks were down less than lower market capitalization stocks across the style spectrum. The large cap Russell 1000 Index lost -20.2% during the period versus a -30.6% return for the small cap Russell 2000 Index. Investors preferred large cap stocks relative to small cap stocks as they are typically viewed as less risky during periods of rising market volatility given the size of their balance sheets and ability to generate cash flow. When viewed over the most recent 1-year period, large cap stocks significantly outpaced small cap stocks with the Russell 1000 posting a -8.0% loss compared to the -24.0% drawdown in the Russell 2000.
- In general, value stocks underperformed growth stocks across market capitalizations during the 1st quarter despite value stocks trading near all-time lows based on valuation metrics. Importantly, value indexes contain large exposures to such sectors as energy, consumer durables and financials, all of which came under pressure during the quarter. Large cap growth stocks held up better than large cap value stocks due to larger weightings in the technology and industrials sectors as well as a smaller exposure to the underperforming energy sector. The Russell 1000 Growth Index was the least negative style index for the period, returning -14.1%. The small cap value index posted the weakest relative return for the quarter with a loss of -35.7%. Results over the 1-year period were mixed with value stocks underperforming across market capitalizations while large cap stocks outpaced both mid and small cap stocks due in large part to the exposure to technology stocks and relative underweights to both energy and financial stocks.

Quarter Performance - Russell Style Series



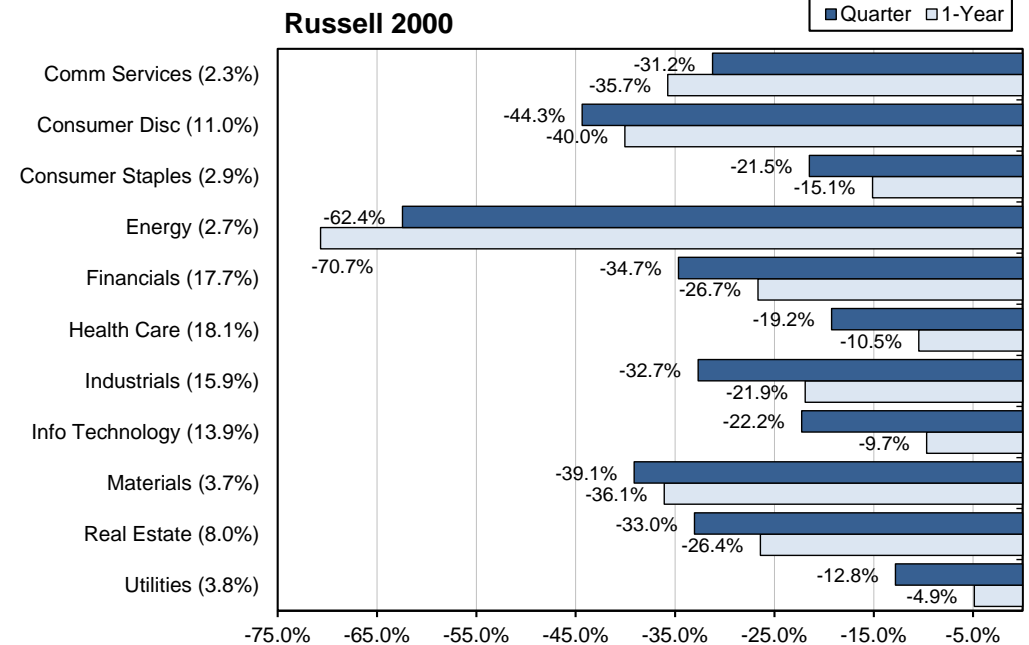
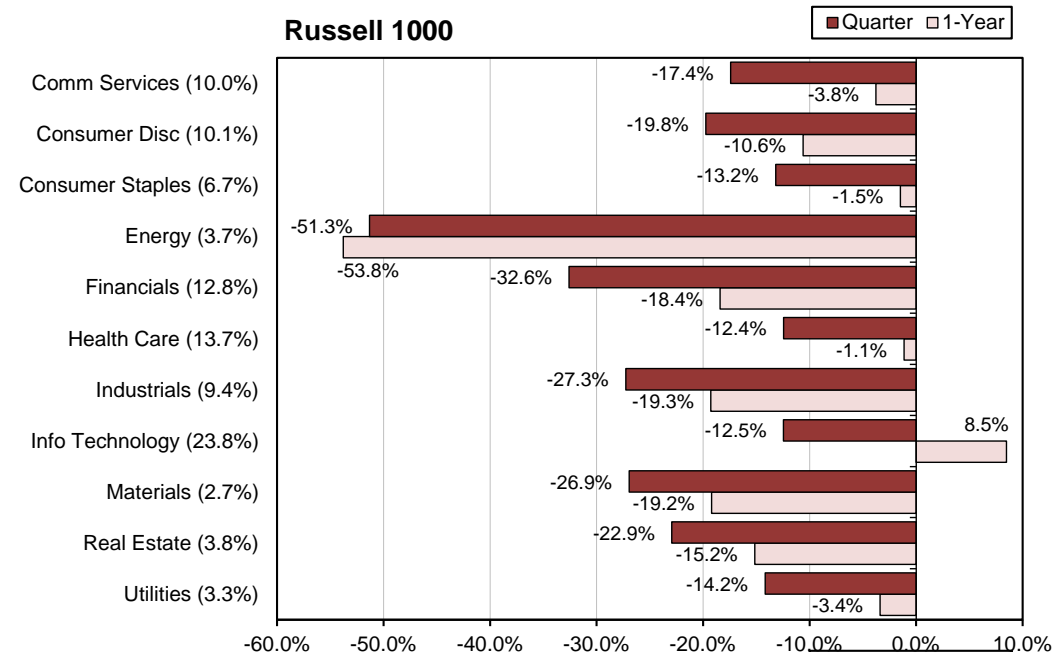
1-Year Performance - Russell Style Series



Source: Investment Metrics



- Generally, sector performance was negative across large cap sectors for the 1st quarter. The outlier during the period was the energy sector which saw significant losses due primarily to the drop in oil prices as a result of demand destruction related to the Coronavirus and the inability of OPEC to agree on production cuts. Health care and technology were the two of the least negative during the quarter returning -12.4% and -12.5%. Energy stocks fell a staggering -51.3% during the quarter as crude oil prices fell as global economic growth receded during the period. Financial stocks also lagged, declining -32.6%, as interest rates fell and a flat yield curve, in combination with fewer borrowers, increased pressure on financial stocks. Returns over the 1-year period were also generally negative with only the technology sector showing a positive return (+8.5%). Similar to the quarter's results, energy stocks underperformed by a considerable margin relative to other sectors. Industrials, materials, and financials also lagged for the year returning -19.3%, -19.2% and -18.4% respectively.
- Quarterly results for small capitalization sectors were generally worse than their large capitalization counterparts with only utilities outperforming during the period. All eleven economic sectors saw substantial losses during the period with only three of eleven sectors outpacing the Russell 2000 Index return for the quarter. Similar to large capitalization sectors, defensive sectors were less negative as investors gravitated toward their relative safety and higher yields. Utilities was the least negative sector, returning -12.8%, while healthcare and consumer staples returned -19.2% and -21.5%, respectively. The cyclically oriented energy sector was the largest detractor for the period, posting a disconcerting loss of -62.4% as global energy prices collapsed. Consumer discretionary stocks also fell substantially during the quarter returning -44.3% as consumer activity fell sharply following the decision to impose shelter-in-place orders. Financial stocks, which were down -34.7% for the quarter, were negatively impacted by the Fed's decision to lower interest rates and the significant decline in lending activity. Similar to quarterly performance, the trailing 1-year period returns were broadly negative. Utilities, technology and health care sectors were the down the least, returning -4.9%, -9.7% and -10.5%, respectively.



Source: Morningstar Direct

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



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2020

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	5.09%	0.3%	35.5%	Information Technology
Apple Inc	4.47%	-13.2%	35.6%	Information Technology
Amazon.com Inc	3.48%	5.5%	9.5%	Consumer Discretionary
Facebook Inc A	1.70%	-18.7%	0.1%	Communication Services
Berkshire Hathaway Inc B	1.53%	-19.3%	-9.0%	Financials
Alphabet Inc Class C	1.49%	-13.0%	-0.9%	Communication Services
Johnson & Johnson	1.49%	-9.5%	-3.6%	Health Care
Alphabet Inc A	1.48%	-13.2%	-1.3%	Communication Services
JPMorgan Chase & Co	1.20%	-35.0%	-8.4%	Financials
Visa Inc Class A	1.18%	-14.1%	3.8%	Information Technology

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Teladoc Health Inc	0.77%	85.2%	178.8%	Health Care
NovoCure Ltd	0.40%	-20.1%	39.8%	Health Care
Amedisys Inc	0.40%	10.0%	48.9%	Health Care
Generac Holdings Inc	0.39%	-7.4%	81.9%	Industrials
Lumentum Holdings Inc	0.38%	-7.1%	30.4%	Information Technology
Repligen Corp	0.35%	4.4%	63.4%	Health Care
Haemonetics Corp	0.35%	-13.3%	13.9%	Health Care
ACADIA Pharmaceuticals Inc	0.33%	-1.2%	57.4%	Health Care
Trex Co Inc	0.32%	-10.8%	30.3%	Industrials
Rexford Industrial Realty Inc	0.32%	-9.7%	16.6%	Real Estate

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Moderna Inc	0.03%	53.1%	47.2%	Health Care
Legg Mason Inc	0.02%	37.2%	86.1%	Financials
Taubman Centers Inc	0.01%	36.6%	-15.3%	Real Estate
Virtu Financial Inc A	0.00%	31.9%	-7.8%	Financials
Zscaler Inc	0.02%	30.9%	-14.2%	Information Technology
Regeneron Pharmaceuticals Inc	0.17%	30.0%	18.9%	Health Care
Citrix Systems Inc	0.07%	28.0%	44.0%	Information Technology
RingCentral Inc Class A	0.07%	25.6%	96.6%	Information Technology
NortonLifeLock Inc	0.04%	25.4%	40.9%	Information Technology
Tesla Inc	0.32%	25.3%	87.2%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Waitr Holdings Inc Class A	0.00%	282.0%	-90.0%	Consumer Discretionary
Novavax Inc	0.03%	241.2%	23.3%	Health Care
Vir Biotechnology Inc	0.02%	172.5%	N/A	Health Care
Athersys Inc	0.03%	143.9%	100.0%	Health Care
Forty Seven Inc	0.17%	142.4%	490.5%	Health Care
Kala Pharmaceuticals Inc	0.01%	138.2%	6.3%	Health Care
Aduro Biotech Inc	0.01%	132.2%	-31.2%	Health Care
Tocagen Inc	0.00%	128.8%	-88.8%	Health Care
Inovio Pharmaceuticals Inc	0.05%	125.5%	99.5%	Health Care
Neon Therapeutics Inc	0.00%	123.7%	-59.1%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Centennial Resource Dev. Inc A	0.00%	-94.3%	-97.0%	Energy
Kosmos Energy Ltd	0.00%	-84.0%	-85.0%	Energy
Apache Corp	0.01%	-83.5%	-87.5%	Energy
Transocean Ltd	0.00%	-83.1%	-86.7%	Energy
Apergy Corp	0.00%	-83.0%	-86.0%	Energy
Targa Resources Corp	0.01%	-82.7%	-81.7%	Energy
Norwegian Cruise Line Holdings Ltd	0.01%	-81.2%	-80.1%	Consumer Discretionary
MFA Financial Inc	0.00%	-79.7%	-76.9%	Financials
Chesapeake Energy Corp	0.00%	-79.1%	-94.4%	Energy
Macerich Co	0.00%	-78.4%	-85.6%	Real Estate

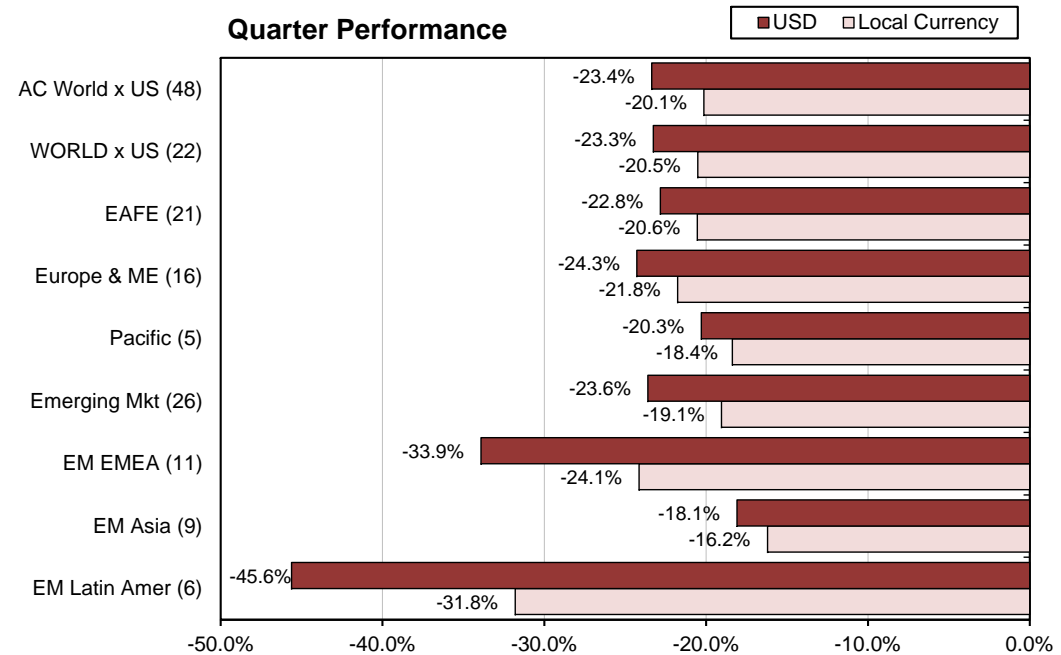
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Independence Contract Drilling Inc	0.00%	-93.0%	-97.5%	Energy
QEP Resources Inc	0.01%	-92.5%	-95.6%	Energy
Whiting Petroleum Corp	0.00%	-90.9%	-97.4%	Energy
Amplify Energy Corp	0.00%	-90.4%	-93.0%	Energy
Penn Virginia Corp	0.00%	-89.8%	-93.0%	Energy
Pacific Drilling SA	0.00%	-89.8%	-97.1%	Energy
Nine Energy Service Inc	0.00%	-89.7%	-96.4%	Energy
Forum Energy Technologies Inc	0.00%	-89.4%	-96.5%	Energy
Oasis Petroleum Inc	0.01%	-89.3%	-94.2%	Energy
SM Energy Co	0.01%	-89.1%	-93.0%	Energy

Source: Morningstar Direct

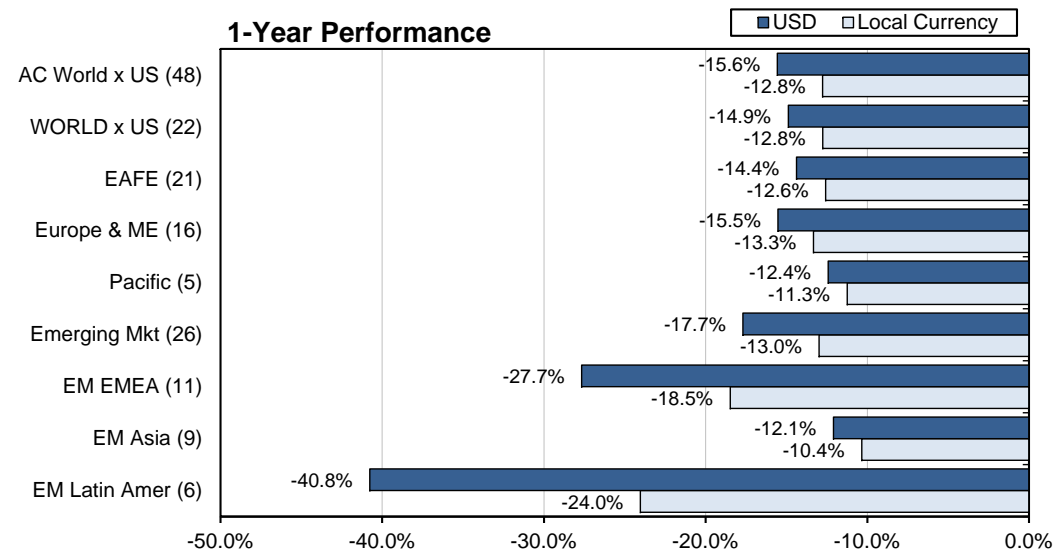


- International equity returns were negative in USD terms for the 1st quarter as markets were negatively impacted by the Coronavirus. In local currency terms, developed and emerging markets performed slightly better due to US dollar (USD) strength against most major currencies which created a significant headwind for US investors. The MSCI ACWI ex US Index lost -20.1% in local currency terms while a USD investor experienced a loss of -23.4% due to the aforementioned currency effect. Similar to US markets, international equity markets were severely impacted by concerns regarding headwinds from slowing economic data. Global central banks reacted by providing additional stimulus measures which are designed to provide the market with liquidity and restore confidence. The European Central Bank (ECB) and the Japanese Central Bank (JCB) announced new programs to purchase securities in an effort to boost markets while the Bank of England (BOE) cut its policy rate to 0.1% and announced additional quantitative easing in an effort to counteract a deterioration in the economy.
- Results for developed market international indices were negative in both local currency terms and USD terms for the 1st quarter. Prior to the onset of the Coronavirus, there were notable developments within the political sphere. The UK formally withdrew from the EU in January. While there remains much uncertainty surrounding what the relationship between the UK and the EU will look like, both sides are continuing to negotiate for a final withdrawal later this year. In Europe, Italy and Spain were hard hit by the Coronavirus. Already beset by relatively low GDP growth in historical terms, the region is expected to experience recession. In Japan, the economy was already under pressure as a result of declining trade with China prior to the onset of the Coronavirus. The Olympics were also rescheduled to 2021 in an effort to reduce the number of potential infections.
- Emerging markets continued their trend from 2019, underperforming relative to developed markets during the 1st quarter. The MSCI Emerging Markets Index fell -23.6% and -19.1% in USD and local currency terms, respectively. The US and China made headway in resolving their trade war by signing the Phase One trade deal in January. Countries with greater sensitivities to commodity prices or a strong USD tended to underperform during the period. Regionally, Asian countries outperformed both EMEA and Latin America, primarily due to their aggressive response to the Coronavirus. Within Latin America, Brazil and Mexico were hard hit as a result of the selloff in oil prices. Argentina underperformed as the country considered delaying the payment of interest on its sovereign debt.

Quarter Performance



1-Year Performance



Source: MSCI Global Index Monitor (Returns are Net)



The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2020

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	-18.0%	-11.5%
Consumer Discretionary	11.1%	-26.8%	-15.0%
Consumer Staples	12.6%	-13.5%	-8.5%
Energy	4.0%	-36.2%	-37.9%
Financials	16.5%	-31.6%	-24.7%
Health Care	14.3%	-8.9%	7.1%
Industrials	14.2%	-26.4%	-16.0%
Information Technology	7.6%	-17.7%	-1.7%
Materials	6.7%	-26.8%	-20.5%
Real Estate	3.3%	-27.6%	-27.1%
Utilities	4.2%	-13.2%	-5.1%
Total	100.0%	-22.8%	-14.4%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.5%	-14.1%	-9.9%
Consumer Discretionary	11.8%	-24.1%	-12.9%
Consumer Staples	10.5%	-14.7%	-9.9%
Energy	5.2%	-38.5%	-37.1%
Financials	19.2%	-31.0%	-24.9%
Health Care	10.5%	-9.2%	4.6%
Industrials	11.4%	-26.2%	-17.1%
Information Technology	10.2%	-17.5%	1.3%
Materials	7.0%	-27.5%	-22.8%
Real Estate	3.0%	-27.6%	-25.9%
Utilities	3.7%	-15.9%	-8.7%
Total	100.0%	-23.4%	-15.6%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	13.1%	-9.6%	-8.2%
Consumer Discretionary	15.4%	-18.1%	-8.3%
Consumer Staples	6.6%	-19.8%	-15.7%
Energy	5.9%	-39.9%	-35.8%
Financials	21.6%	-31.1%	-27.6%
Health Care	3.6%	-8.5%	-8.5%
Industrials	4.9%	-28.0%	-26.5%
Information Technology	16.9%	-17.8%	3.2%
Materials	6.7%	-30.7%	-31.3%
Real Estate	2.9%	-26.7%	-21.5%
Utilities	2.5%	-26.0%	-23.4%
Total	100.0%	-23.6%	-17.7%

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	26.3%	17.4%	-16.8%	-6.7%
United Kingdom	15.1%	10.0%	-28.8%	-23.0%
France	10.8%	7.1%	-27.6%	-17.7%
Switzerland	10.7%	7.1%	-11.5%	3.5%
Germany	8.3%	5.5%	-27.0%	-17.5%
Australia	5.9%	3.9%	-33.3%	-26.3%
Netherlands	4.2%	2.7%	-20.7%	-7.7%
Hong Kong	3.8%	2.5%	-17.3%	-21.1%
Sweden	2.8%	1.8%	-21.4%	-11.2%
Spain	2.6%	1.7%	-29.8%	-26.5%
Denmark	2.2%	1.4%	-8.0%	4.5%
Italy	2.2%	1.4%	-29.3%	-21.4%
Singapore	1.2%	0.8%	-28.2%	-22.3%
Finland	1.0%	0.7%	-19.1%	-18.0%
Belgium	0.9%	0.6%	-32.6%	-30.2%
Israel	0.6%	0.4%	-18.1%	-18.4%
Ireland	0.6%	0.4%	-25.7%	-8.3%
Norway	0.5%	0.4%	-33.4%	-31.3%
New Zealand	0.3%	0.2%	-16.4%	-1.0%
Portugal	0.2%	0.1%	-13.1%	-2.5%
Austria	0.2%	0.1%	-42.9%	-39.7%
Total EAFE Countries	100.0%	66.0%	-22.8%	-14.4%
Canada		6.3%	-27.5%	-19.9%
Total Developed Countries		72.3%	-23.3%	-14.9%
China		11.3%	-10.2%	-5.8%
Taiwan		3.4%	-19.1%	1.3%
Korea		3.3%	-22.5%	-16.8%
India		2.1%	-31.1%	-30.9%
Brazil		1.4%	-50.2%	-41.9%
South Africa		1.0%	-40.3%	-37.1%
Russia		0.9%	-36.4%	-14.4%
Saudi Arabia		0.7%	-24.0%	-28.9%
Thailand		0.6%	-33.8%	-32.5%
Mexico		0.5%	-35.5%	-31.9%
Malaysia		0.5%	-19.2%	-21.1%
Indonesia		0.4%	-39.6%	-36.8%
Qatar		0.3%	-17.3%	-15.1%
Philippines		0.2%	-32.2%	-30.5%
Poland		0.2%	-36.5%	-39.9%
Chile		0.2%	-33.6%	-47.1%
United Arab Emirates		0.2%	-27.1%	-30.3%
Turkey		0.1%	-30.1%	-19.8%
Peru		0.1%	-35.8%	-39.4%
Colombia		0.1%	-49.7%	-47.3%
Hungary		0.1%	-39.0%	-31.3%
Greece		0.1%	-45.2%	-30.4%
Argentina		0.0%	-39.3%	-51.0%
Egypt		0.0%	-27.1%	-10.8%
Czech Republic		0.0%	-38.5%	-38.3%
Pakistan		0.0%	-39.7%	-39.0%
Total Emerging Countries		27.7%	-23.6%	-17.7%
Total ACWixUS Countries		100.0%	-23.4%	-15.6%

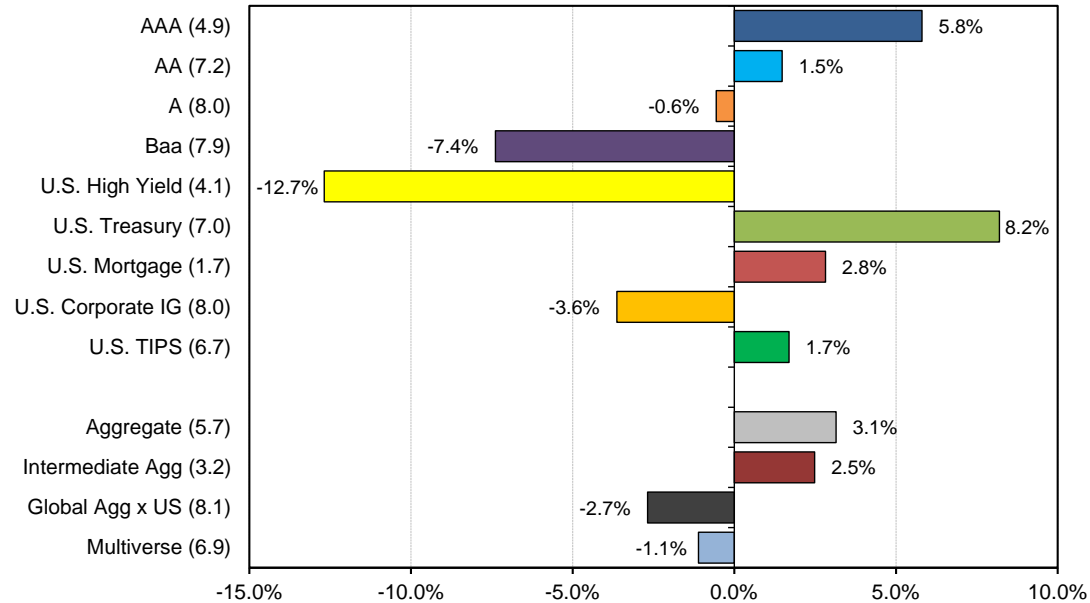
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

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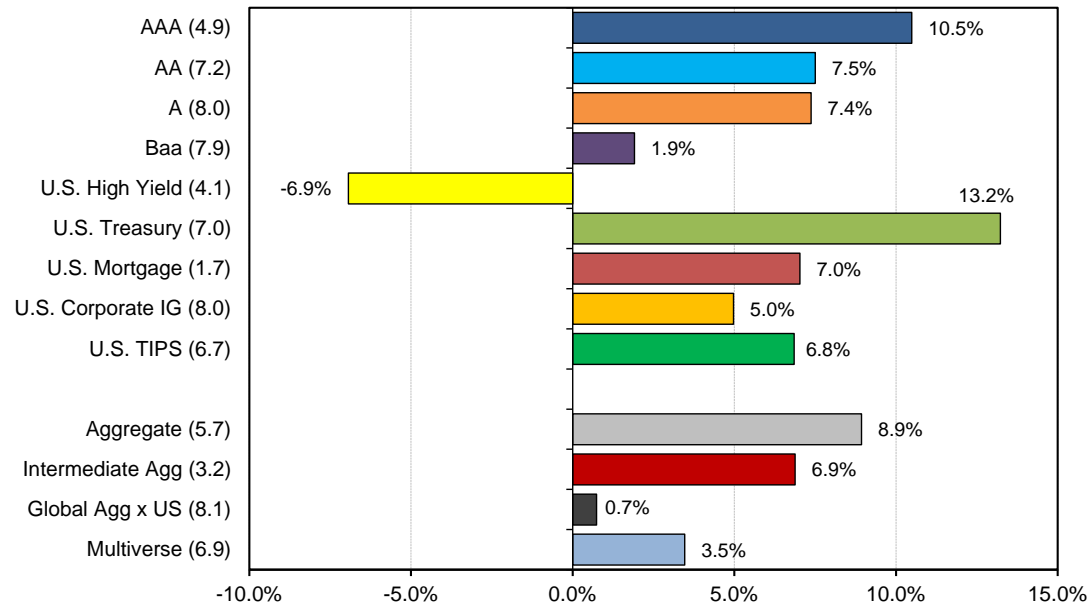


- Fixed income market returns during the 1st quarter were bifurcated between high- and low-quality bonds. Interest rates fell across the US Treasury Yield Curve through the quarter as investors sought safety and lower volatility assets. As a result of the deterioration of the US economy, the Fed took unprecedented action and lowered interest rates to between 0% to 0.25%. As a result, short term interest rates fell dramatically. The benchmark US Treasury 10-Year bond yield fell by more than 120 basis points during the quarter ending the period at a yield of 0.70%. In addition to lowering interest rates, the Fed committed to purchasing near unlimited US Treasury bonds and Agency mortgage bonds while implementing additional programs that allow for the purchase of corporate bonds. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 3.1% and 8.9%, respectively.
- Within investment grade credit, higher quality issues outperformed lower quality issues during the quarter. More specifically, investors rotated out of lower quality issues due to the expectation for deterioration in the economy as a result of shelter-in-place protection measures. On an absolute basis, without negating the duration differences in the sub-indices, high yield credit was the worst performing sector returning -12.7% for the quarter, while AAA was the best performing, returning 5.8%. High yield spreads relative to comparable US Treasury issues widened to their highest levels since the 2008 Financial Crisis at nearly 1,100 basis points. Within investment grade bonds, Baa also underperformed, returning -7.4%. Much has been made in recent years about the growth of Baa bond issues outstanding and the potential for downgrades should a recession ensue. Returns over the 1-year period show generally positive returns with only high yield bonds posting a negative result. Within investment grade bonds, AAA bonds outperformed returning 10.5% compared to 7.5%, 7.4% and 1.9%, respectively, for AA, A and Baa rated issues.
- Within the Bloomberg Barclays US Aggregate Bond Index, defensive US Treasury, government agency and mortgage backed sectors outperformed investment grade corporate issues over the 1-year period. The defensive sectors benefited from the flight to quality as investors preferred lower volatility issues despite their lower relative yields. Over the 1-year period, US Treasury bonds returned 13.2% while US mortgage backed and investment grade corporate issues returned 7.0% versus a 5.0%, respectively. High yield bonds were the only negative performer for the year in the chart primarily due to the quarter's dramatic spread widening and resulting weak performance. Additionally, commodity-related lower quality issues were negatively impacted with the significant decline in oil prices.

Quarter Performance



1-Year Performance

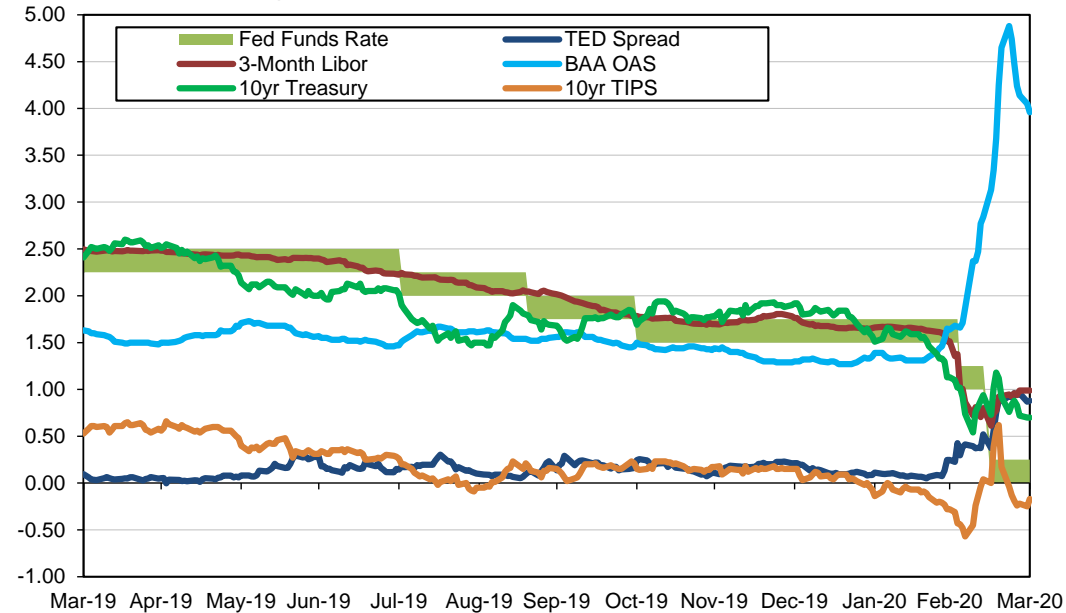


Source: Bloomberg

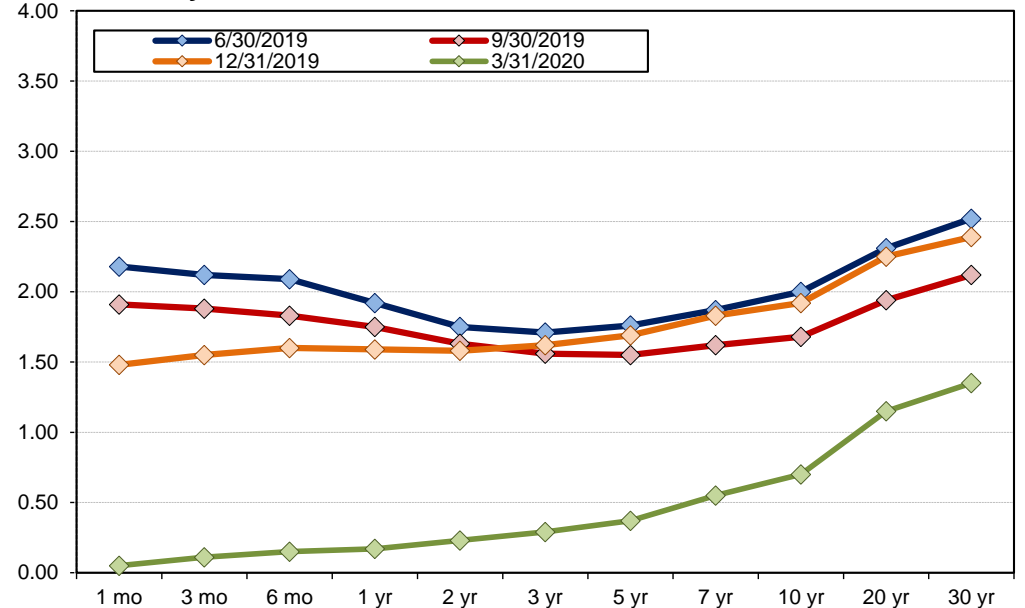


- Global fixed income returns continued their relative underperformance when compared to their domestic counterparts during the 1st quarter. Yields across developed markets fell in the first quarter following the onset of the Coronavirus. While the number of negative yielding bonds has recently subsided, countries such as Germany, Sweden and Switzerland continue to have lower, or in some cases negative yields. As mentioned, the USD appreciated against most developed currencies during the quarter, acting as a headwind to global bond index performance. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -2.7% for the period. Global bonds also trailed over the 1-year period with the Global Aggregate ex US Index returning 0.7% versus 8.9% return for the domestic Bloomberg Barclays Aggregate Index. Global growth is expected to slow considerably in the 1st and 2nd quarters as countries continue to manage through the Coronavirus pandemic. Importantly, global central banks are acting in coordination to provide sufficient liquidity in an effort to calm markets. As a result, interest rates, and bond returns, are expected to remain low until economic activity resumes.
- 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 over the last year, the 10-year Treasury yield (green line) has fallen from roughly 2.5% to roughly 0.7%. 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 1st quarter of 2020 as investors moved to higher quality assets during the quarter's risk-off environment. Prior to that, spreads had remained relatively range bound over the previous three quarters as investors sought out higher relative yields in corporate bonds. The orange line illustrates US Treasury TIPS which reflect investor expectations of future inflation. Over the trailing year, TIPS yields had already been trending generally lower due to concerns about the sustainability of global economic growth. Following the drawdown in the 1st quarter, TIPS yields were negative as investors believed that the US economy would enter a recession.
- 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 US interest rates is clearly visible over the last quarter. The primary driver of this change in the curve was due to the supportive actions taken by the Fed, which reversed recent interest rate increases, and a broad flight to the perceived safety of US Treasury securities.

1-Year Trailing Market Rates



Treasury Yield Curve



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



**Delray Beach Fire Pension Plan
Compliance Checklist**
As of March 31, 2020

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			Great Lakes		
	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.			•			•	•		

	Rhumbline R1000G			Polen LCG			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 March 31, 2020**

	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.			•						

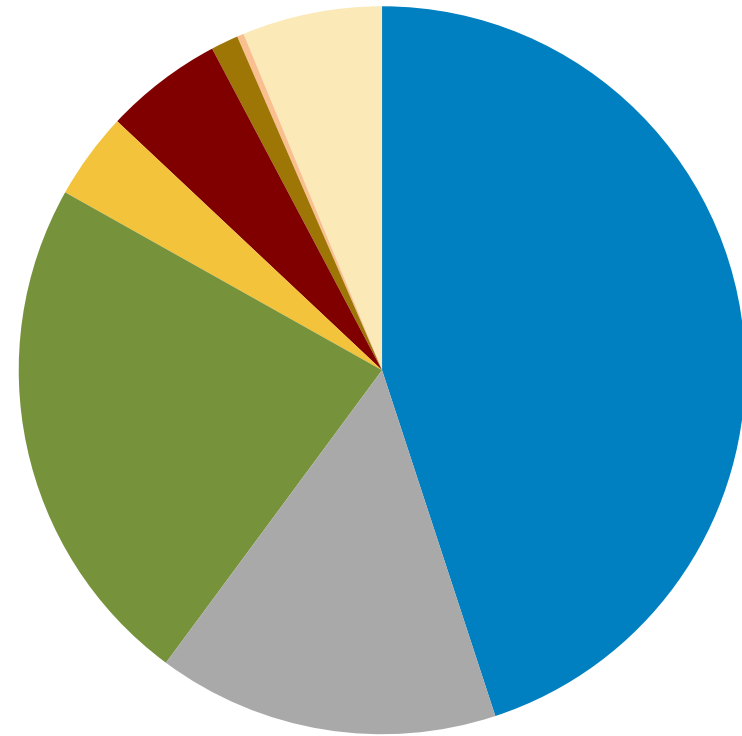
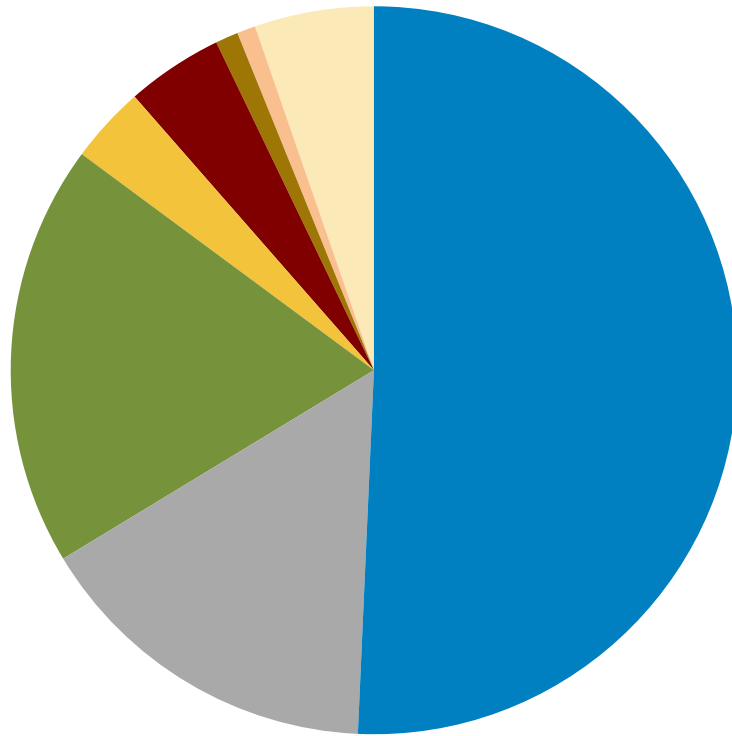
*3 years used when 5 years unavailable



Asset Allocation By Asset Class
Total Fund (Composite)
As of March 31, 2020

December 31, 2019 : \$120,842,379

March 31, 2020 : \$100,344,081



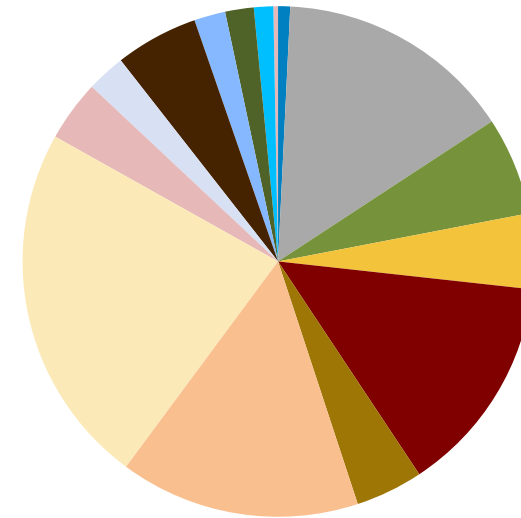
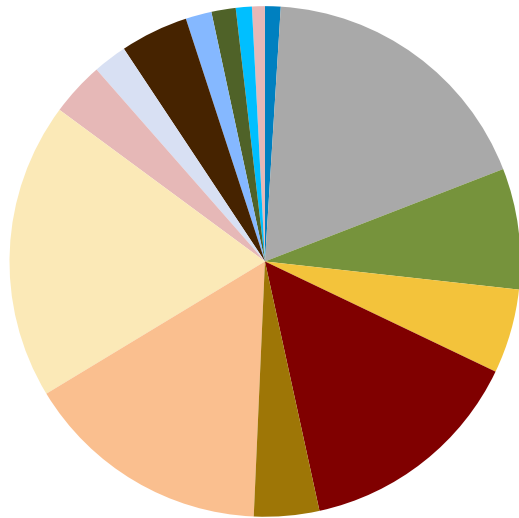
Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ US Equity	61,274,675	50.7	■ US Equity	45,109,737	45.0
■ International Equity	18,891,727	15.6	■ International Equity	15,238,850	15.2
■ US Fixed Income	22,697,277	18.8	■ US Fixed Income	23,067,015	23.0
■ Global Fixed Income	4,133,660	3.4	■ Global Fixed Income	3,879,206	3.9
■ US Private Real Estate	5,205,045	4.3	■ US Private Real Estate	5,270,848	5.3
■ US Real Return	1,225,142	1.0	■ US Real Return	1,225,142	1.2
■ Cash	993,718	0.8	■ Cash	302,388	0.3
■ US Private Equity	6,421,135	5.3	■ US Private Equity	6,250,896	6.2



Asset Allocation By Manager
Total Fund (Composite)
As of March 31, 2020

December 31, 2019 : \$120,842,379

March 31, 2020 : \$100,344,081



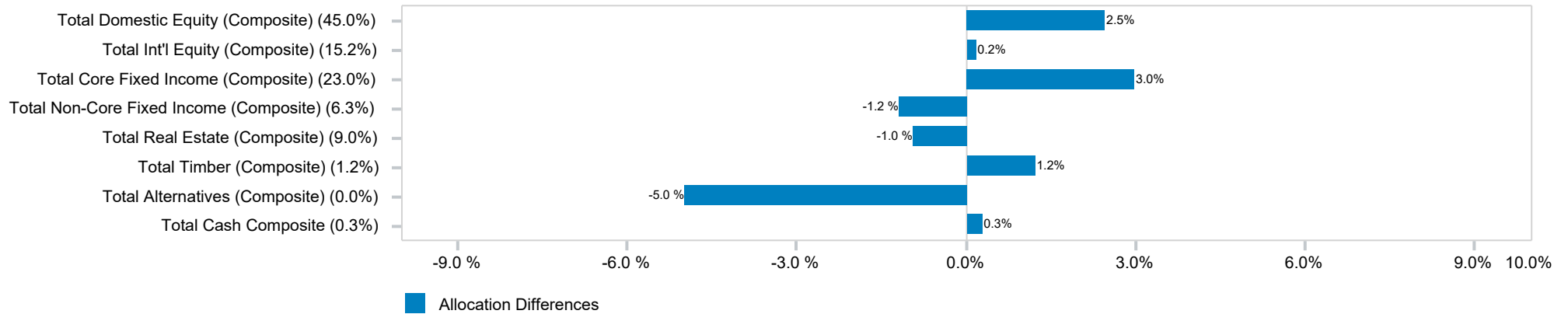
Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard Total Stock Mkt (VTSAX)	1,190,435	1.0	■ Vanguard Total Stock Mkt (VTSAX)	762,653	0.8
■ Boston LCV	21,894,223	18.1	■ Boston LCV	15,049,927	15.0
■ Great Lakes SMid Cap	9,248,928	7.7	■ Great Lakes SMid Cap	6,229,802	6.2
■ Vanguard Mid-Cap Index (VIMAX)	6,452,105	5.3	■ Vanguard Mid-Cap Index (VIMAX)	4,792,554	4.8
■ Polen Capital LCG	17,500,830	14.5	■ Polen Capital LCG	13,986,922	13.9
■ Rhumblin R1000G	4,988,154	4.1	■ Rhumblin R1000G	4,287,879	4.3
■ Harding Loevner Intl Equity (HLIZX)	18,891,727	15.6	■ Harding Loevner Intl Equity (HLIZX)	15,238,850	15.2
■ Garcia Hamilton Fixed Income	22,697,277	18.8	■ Garcia Hamilton Fixed Income	23,067,015	23.0
■ Templeton Global Total Return (FTTRX)	4,133,660	3.4	■ Templeton Global Total Return (FTTRX)	3,879,206	3.9
■ Crescent Direct Lending Levered Fund	2,584,868	2.1	■ Crescent Direct Lending Levered Fund	2,449,590	2.4
■ American Core Realty	5,205,045	4.3	■ American Core Realty	5,270,848	5.3
■ Angelo Gordon Net Lease Realty Fund III, L.P.	1,982,987	1.6	■ Angelo Gordon Net Lease Realty Fund III, L.P.	1,982,987	2.0
■ Dune Real Estate Fund III	1,853,280	1.5	■ Dune Real Estate Fund III	1,818,319	1.8
■ Molpus Woodlands Timber	1,225,142	1.0	■ Molpus Woodlands Timber	1,225,142	1.2
■ Mutual Fund Cash	3,329	0.0	■ Mutual Fund Cash	3,337	0.0
■ R&D	990,389	0.8	■ R&D	299,051	0.3



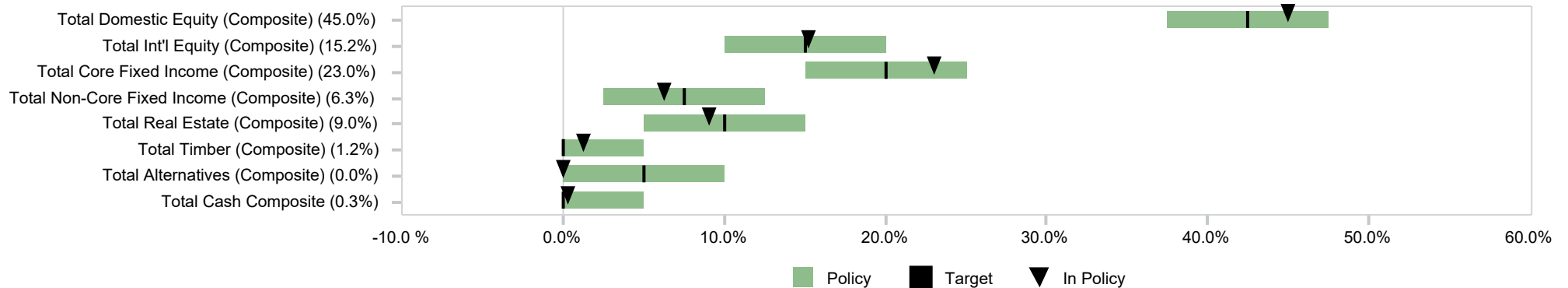
Asset Allocation Compliance
Delray Beach Firefighters' Retirement System Total Fund (Composite)
As of March 31, 2020

Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Differences (%)	Target Rebal. (\$000)
Total Fund (Composite)	100,344,081	100.00	100.00	0.00	-
Total Domestic Equity (Composite)	45,109,737	44.96	42.50	2.46	-2,463,502
Total Int'l Equity (Composite)	15,238,850	15.19	15.00	0.19	-187,237
Total Core Fixed Income (Composite)	23,067,015	22.99	20.00	2.99	-2,998,198
Total Non-Core Fixed Income (Composite)	6,328,796	6.31	7.50	-1.19	1,197,010
Total Real Estate (Composite)	9,072,154	9.04	10.00	-0.96	962,254
Total Timber (Composite)	1,225,142	1.22	0.00	1.22	-1,225,142
Total Alternatives (Composite)	-	0.00	5.00	-5.00	5,017,204
Total Cash Composite	302,388	0.30	0.00	0.30	-302,388



Executive Summary



Comparative Performance
Total Fund Trailing Returns
As of March 31, 2020

Comparative Performance																	
	QTR		YTD		FYTD		1 YR		2 YR		3 YR		5 YR		Inception	Inception Date	
Total Fund (Net)	-15.02	(68)	-15.02	(68)	-9.91	(53)	-5.65	(48)	-0.41	(30)	2.48	(24)	3.17	(19)	4.40	(50)	10/01/2005
Total Fund Policy	-12.24	(35)	-12.24	(35)	-7.41	(22)	-3.35	(20)	1.12	(13)	3.92	(8)	4.65	(4)	5.55	(11)	
Difference	-2.78		-2.78		-2.50		-2.30		-1.53		-1.44		-1.48		-1.15		
IM Mixed-Asset Target Alloc Moderate (MF) Median	-13.55		-13.55		-9.77		-5.89		-1.57		1.42		2.25		4.39		
Total Fund (Gross)	-14.95	(78)	-14.95	(78)	-9.78	(73)	-5.35	(59)	-0.08	(39)	2.82	(53)	3.58	(49)	4.86	(89)	10/01/2005
Total Fund Policy	-12.24	(33)	-12.24	(33)	-7.41	(26)	-3.35	(26)	1.12	(15)	3.92	(19)	4.65	(10)	5.55	(47)	
Difference	-2.71		-2.71		-2.37		-2.00		-1.20		-1.10		-1.07		-0.69		
All Public Plans-Total Fund Median	-13.14		-13.14		-8.52		-4.73		-0.43		2.88		3.52		5.51		
Total Equity	-22.82		-22.82		-15.78		-10.79		-3.12		2.03		3.13		5.32		10/01/2005
Total Equity Policy	-21.47		-21.47		-14.48		-11.21		-3.17		2.36		3.80		5.02		
Difference	-1.35		-1.35		-1.30		0.42		0.05		-0.33		-0.67		0.30		
Total Domestic Equity	-23.92	(63)	-23.92	(63)	-17.22	(60)	-11.25	(50)	-1.48	(40)	2.45	(49)	3.79	(47)	6.16	(51)	10/01/2005
Total Domestic Equity Policy	-20.84	(46)	-20.84	(46)	-13.81	(42)	-9.74	(44)	-0.84	(37)	3.78	(39)	5.54	(31)	7.23	(33)	
Difference	-3.08		-3.08		-3.41		-1.51		-0.64		-1.33		-1.75		-1.07		
IM U.S. All Cap Equity (SA+CF+MF) Median	-21.45		-21.45		-15.65		-11.30		-3.11		2.17		3.43		6.18		
Total Int'l Equity	-19.34	(11)	-19.34	(11)	-11.14	(9)	-9.40	(11)	-7.16	(23)	0.90	(20)	1.12	(23)	2.68	(7)	05/01/2007
Total Int'l Policy	-23.36	(60)	-23.36	(60)	-16.52	(59)	-15.57	(66)	-10.07	(59)	-1.96	(65)	-0.64	(65)	-0.40	(98)	
Difference	4.02		4.02		5.38		6.17		2.91		2.86		1.76		3.08		
IM International Large Cap Core Equity (SA+CF) Median	-22.61		-22.61		-15.57		-13.81		-9.47		-1.50		-0.06		1.18		
Total Fixed Income	0.43	(39)	0.43	(39)	0.88	(36)	4.76	(54)	4.65	(49)	3.88	(42)	3.76	(8)	5.08	(19)	10/01/2005
Total Fixed Policy	3.15	(11)	3.15	(11)	3.33	(9)	8.93	(9)	6.68	(11)	4.82	(12)	3.36	(23)	4.43	(55)	
Difference	-2.72		-2.72		-2.45		-4.17		-2.03		-0.94		0.40		0.65		
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	-0.60		-0.60		-0.10		5.13		4.55		3.58		2.79		4.50		
Total Real Estate	0.89	(61)	0.89	(61)	2.05	(71)	3.70	(80)	6.77	(60)	7.73	(46)	8.74	(58)	4.49	(100)	07/01/2007
NCREIF ODCE	0.90	(61)	0.90	(61)	2.44	(60)	5.25	(64)	6.49	(62)	7.04	(60)	8.74	(58)	5.49	(69)	
Difference	-0.01		-0.01		-0.39		-1.55		0.28		0.69		0.00		-1.00		
IM U.S. Open End Private Real Estate (SA+CF) Median	1.23		1.23		2.87		5.88		7.18		7.56		9.10		5.97		
Total Timber	0.00		0.00		-4.27		-2.95		0.70		-2.85		-0.33		2.41		07/01/2007
NCREIF Timberland Index	0.11		0.11		0.07		1.30		1.84		2.48		2.80		4.87		
Difference	-0.11		-0.11		-4.34		-4.25		-1.14		-5.33		-3.13		-2.46		



**Comparative Performance
Total Fund Trailing Returns**

As of March 31, 2020

	QTR		YTD		FYTD		1 YR		2 YR		3 YR		5 YR		Inception	Inception Date	
Total Domestic Equity (Composite)	-23.92		-23.92		-17.22		-11.25		-1.48		2.45		3.79		6.16	10/01/2005	
Vanguard Total Stock Mkt (VTSAX)	-20.87	(41)	-20.87	(41)	-13.74	(37)	-9.24	(35)	N/A	N/A	N/A	N/A	N/A	N/A	-9.24	(35)	04/01/2019
CRSP U.S. Total Market TR Index	-20.88	(41)	-20.88	(41)	-13.76	(37)	-9.24	(35)	-0.62	(33)	3.99	(31)	5.74	(24)	-9.24	(35)	
Difference	0.01		0.01		0.02		0.00		N/A		N/A		N/A		0.00		
IM U.S. Equity (MF) Median	-23.21		-23.21		-17.64		-14.20		-4.65		-0.07		2.18		-14.20		
Boston LCV	-31.18	(86)	-31.18	(86)	-25.47	(85)	-19.18	(69)	-8.54	(70)	N/A	N/A	N/A	N/A	-8.57	(69)	01/01/2018
Russell 1000 Value Index	-26.73	(57)	-26.73	(57)	-21.30	(59)	-17.17	(58)	-6.44	(50)	-2.18	(63)	1.90	(58)	-6.94	(54)	
Difference	-4.45		-4.45		-4.17		-2.01		-2.10		N/A		N/A		-1.63		
IM U.S. Large Cap Value Equity (SA+CF) Median	-26.27		-26.27		-20.54		-16.16		-6.51		-1.15		2.38		-6.56		
Great Lakes SMid Cap	-32.47	(90)	-32.47	(90)	-28.30	(92)	N/A		N/A		N/A		N/A		-29.00	(89)	08/01/2019
Russell 2500 Index	-29.72	(59)	-29.72	(59)	-23.72	(56)	-22.47	(76)	-10.00	(64)	-3.10	(57)	0.49	(65)	-25.48	(70)	
Difference	-2.75		-2.75		-4.58		N/A		N/A		N/A		N/A		-3.52		
IM U.S. SMID Cap Core Equity (SA+CF) Median	-28.03		-28.03		-22.76		-18.30		-8.45		-2.18		1.82		-23.50		
Total Growth	-13.08 (38)		-13.08 (38)		-3.70 (28)		2.99 (10)		11.43 (2)		11.57 (38)		8.83 (56)		6.06 (94)	07/01/2007	
Russell 1000 Growth Index	-14.10	(60)	-14.10	(60)	-4.98	(45)	0.91	(29)	6.67	(31)	11.32	(41)	10.36	(26)	9.26	(29)	
Difference	1.02		1.02		1.28		2.08		4.76		0.25		-1.53		-3.20		
IM U.S. Large Cap Growth Equity (SA+CF+MF) Median	-13.61		-13.61		-5.36		-0.89		5.38		10.54		9.07		8.68		
Rhumblin R1000G	-14.03	(46)	-14.03	(46)	-4.92	(37)	0.97	(32)	6.69	(36)	N/A	N/A	N/A	N/A	6.59	(43)	01/01/2018
Russell 1000 Growth Index	-14.10	(48)	-14.10	(48)	-4.98	(37)	0.91	(32)	6.67	(36)	11.32	(39)	10.36	(32)	6.57	(44)	
Difference	0.07		0.07		0.06		0.06		0.02		N/A		N/A		0.02		
IM U.S. Large Cap Growth Equity (SA+CF) Median	-14.38		-14.38		-6.14		-1.51		5.47		10.04		9.07		5.91		
Polen Capital LCG	-12.80	(32)	-12.80	(32)	-3.35	(24)	3.58	(9)	N/A		N/A		N/A		16.83	(12)	01/01/2019
Russell 1000 Growth Index	-14.10	(48)	-14.10	(48)	-4.98	(37)	0.91	(32)	6.67	(36)	11.32	(39)	10.36	(32)	13.51	(39)	
Difference	1.30		1.30		1.63		2.67		N/A		N/A		N/A		3.32		
IM U.S. Large Cap Growth Equity (SA+CF) Median	-14.38		-14.38		-6.14		-1.51		5.47		10.04		9.07		11.44		
Vanguard Mid-Cap Index (VIMAX)	-25.72	(26)	-25.72	(26)	-20.61	(24)	-16.65	(21)	-6.01	(19)	-0.26	(14)	N/A	N/A	2.45	(14)	07/01/2015
CRSP U.S. Mid Cap TR Index	-25.74	(27)	-25.74	(27)	-20.64	(25)	-16.65	(21)	-6.01	(18)	-0.25	(13)	2.11	(13)	2.47	(12)	
Difference	0.02		0.02		0.03		0.00		0.00		-0.01		N/A		-0.02		
IM U.S. Mid Cap Core Equity (MF) Median	-28.30		-28.30		-23.24		-19.67		-9.31		-3.64		-0.37		-0.42		
Total Int'l Equity (Composite)	-19.34		-19.34		-11.14		-9.40		-7.16		0.90		1.12		2.68	05/01/2007	
Harding Loevner Intl Equity (HLIZX)	-19.34	(18)	-19.34	(18)	-11.20	(16)	-9.47	(17)	-7.19	(19)	0.88	(20)	N/A	N/A	2.23	(21)	09/01/2016
MSCI AC World ex USA (Net)	-23.36	(47)	-23.36	(47)	-16.52	(50)	-15.57	(47)	-10.07	(37)	-1.96	(43)	-0.64	(45)	0.44	(39)	
Difference	4.02		4.02		5.32		6.10		2.88		2.84		N/A		1.79		
IM International Equity (MF) Median	-23.74		-23.74		-16.56		-15.96		-11.68		-2.51		-0.95		-0.22		



**Comparative Performance
Total Fund Trailing Returns**

As of March 31, 2020

	QTR	YTD	FYTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
Total Core Fixed Income	1.69	1.69	1.66	6.51	5.28	3.90	3.23	4.30	10/01/2005
Core Fixed Policy	3.15	3.15	3.33	8.93	6.68	4.82	3.36	4.37	
Difference	-1.46	-1.46	-1.67	-2.42	-1.40	-0.92	-0.13	-0.07	
Garcia Hamilton Fixed Income	1.69 (51)	1.69 (51)	1.66 (60)	6.51 (77)	5.28 (88)	N/A	N/A	4.43 (77)	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	3.15 (25)	3.15 (25)	3.33 (24)	8.93 (27)	6.68 (37)	4.82 (47)	3.36 (72)	5.23 (37)	
Difference	-1.46	-1.46	-1.67	-2.42	-1.40	N/A	N/A	-0.80	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.73	1.73	1.99	7.83	6.32	4.77	3.47	4.99	
Total Non-Core Fixed Income	-3.86	-3.86	-1.87	-0.93	2.27	3.22	4.45	7.16	07/01/2010
Bloomberg Barclays Global Aggregate	-0.33	-0.33	0.16	4.20	1.88	3.55	2.64	2.54	
Difference	-3.53	-3.53	-2.03	-5.13	0.39	-0.33	1.81	4.62	
Templeton Global Total Return (FTTRX)	-6.16 (70)	-6.16 (70)	-4.39 (63)	-5.99 (96)	-1.89 (92)	-1.15 (98)	0.89 (88)	2.35 (32)	07/01/2011
Blmbg. Barc. Global Multiverse	-1.11 (14)	-1.11 (14)	-0.47 (11)	3.47 (18)	1.57 (34)	3.37 (11)	2.67 (7)	1.77 (51)	
Difference	-5.05	-5.05	-3.92	-9.46	-3.46	-4.52	-1.78	0.58	
IM Global Fixed Income (MF) Median	-3.20	-3.20	-3.28	0.97	0.76	2.28	1.79	1.82	
Total Real Estate (Composite)	0.89	0.89	2.05	3.70	6.77	7.73	8.74	4.49	07/01/2007
American Core Realty	1.54 (27)	1.54 (27)	3.03 (32)	6.11 (42)	7.15 (53)	7.44 (58)	8.45 (62)	5.57 (67)	07/01/2007
NCREIF ODCE	0.90 (61)	0.90 (61)	2.44 (60)	5.25 (64)	6.49 (62)	7.04 (60)	8.74 (58)	5.49 (69)	
Difference	0.64	0.64	0.59	0.86	0.66	0.40	-0.29	0.08	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.23	1.23	2.87	5.88	7.18	7.56	9.10	5.97	
Total Timber (Composite)	0.00	0.00	-4.27	-2.95	0.70	-2.85	-0.33	2.41	07/01/2007
Molpus Woodlands Timber	0.00	0.00	-4.27	-2.95	0.85	-0.37	1.24	2.19	06/01/2008
NCREIF Timberland Index	0.11	0.11	0.07	1.30	1.84	2.48	2.80	3.69	
Difference	-0.11	-0.11	-4.34	-4.25	-0.99	-2.85	-1.56	-1.50	

^ Some products shown on IRR page.



As of March 31, 2020

Comparative Performance - IRR

	QTR	Inception	Inception Date
Molpus Woodlands Timber	0.00	1.98	06/24/2008
Angelo Gordon Net Lease Realty Fund III, L.P.	0.00	6.91	03/10/2014
Dune Real Estate Fund III	0.00	10.67	11/06/2014
Crescent Direct Lending Levered Fund	0.00	7.62	10/09/2014



Comparative Performance
Total Fund Trailing Returns
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Comparative Performance											
	FYTD	Oct-2018 To Sep-2019	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)	-9.91 (53)	4.54 (44)	8.29 (13)	11.09 (29)	8.82 (51)	-1.22 (28)	10.01 (29)	10.96 (41)	16.79 (51)	1.26 (20)	
Total Fund Policy	-7.41 (22)	5.02 (34)	8.59 (12)	11.90 (17)	10.34 (19)	0.55 (5)	10.23 (26)	10.24 (52)	15.21 (75)	2.15 (12)	
Difference	-2.50	-0.48	-0.30	-0.81	-1.52	-1.77	-0.22	0.72	1.58	-0.89	
IM Mixed-Asset Target Alloc Moderate (MF) Median	-9.77	4.00	5.09	10.04	8.82	-2.35	8.37	10.34	16.89	-0.53	
Total Fund (Gross)	-9.78 (73)	4.89 (32)	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	-7.41 (26)	5.02 (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	-2.37	-0.13	0.07	-0.41	-0.93	-1.27	0.35	1.28	2.14	-0.54	
All Public Plans-Total Fund Median	-8.52	4.32	7.13	11.82	9.74	-0.78	9.93	12.02	17.55	0.68	
Total Equity	-15.78	3.19	13.13	16.40	11.59	-3.61	13.96	21.06	25.94	-0.85	
Total Equity Policy	-14.48	1.49	13.60	18.94	13.34	-6.20	11.73	19.62	22.72	-4.71	
Difference	-1.30	1.70	-0.47	-2.54	-1.75	2.59	2.23	1.44	3.22	3.86	
Total Domestic Equity	-17.22 (60)	5.47 (19)	16.10 (45)	14.99 (78)	12.80 (36)	-1.73 (53)	17.23 (34)	22.56 (56)	27.44 (46)	3.01 (15)	
Total Domestic Equity Policy	-13.81 (42)	2.36 (41)	17.73 (32)	18.62 (45)	14.77 (19)	-1.18 (47)	17.67 (29)	22.03 (60)	29.64 (25)	0.48 (32)	
Difference	-3.41	3.11	-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	-15.65	0.96	15.03	18.17	11.44	-1.47	15.77	23.35	26.94	-1.62	
Total Int'l Equity	-11.14 (9)	-3.33 (74)	5.85 (14)	18.68 (69)	7.98 (50)	-8.63 (65)	6.07 (51)	16.67 (89)	21.58 (5)	-10.95 (70)	
Total Int'l Policy	-16.52 (59)	-1.23 (47)	1.76 (60)	19.61 (59)	9.26 (33)	-12.16 (90)	4.77 (64)	16.48 (90)	14.49 (82)	-10.81 (69)	
Difference	5.38	-2.10	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	-15.57	-1.56	2.53	20.30	7.91	-7.16	6.10	22.60	17.31	-9.40	
Total Fixed Income	0.88 (36)	7.91 (77)	0.99 (12)	3.93 (19)	5.81 (48)	2.09 (44)	6.00 (22)	2.81 (8)	11.79 (14)	3.12 (76)	
Total Fixed Policy	3.33 (9)	10.30 (29)	-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	-2.45	-2.39	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	-0.10	9.67	-0.91	1.28	5.71	1.85	4.74	-0.98	7.74	4.40	
Total Real Estate	2.05 (71)	5.87 (74)	10.10 (25)	9.82 (29)	9.06 (91)	14.70 (58)	12.33 (65)	8.10 (98)	13.00 (47)	14.11 (88)	
NCREIF ODCE	2.44 (60)	6.17 (72)	8.82 (55)	7.81 (56)	10.62 (65)	14.71 (58)	12.39 (64)	12.47 (66)	11.77 (64)	18.03 (43)	
Difference	-0.39	-0.30	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	2.87	6.89	8.98	8.05	11.02	15.32	12.63	13.18	12.89	16.62	
Total Timber	-4.27	5.58	-9.38	0.28	6.48	6.70	9.49	4.51	-5.86	3.87	
NCREIF Timberland Index	0.07	2.10	4.00	3.28	3.28	9.26	10.38	9.68	2.25	0.26	
Difference	-4.34	3.48	-13.38	-3.00	3.20	-2.56	-0.89	-5.17	-8.11	3.61	
Total Alternatives	N/A	N/A	4.94	8.16	9.11	-3.68	6.84	-9.88	-8.55	-0.85	
Alternatives Policy	-4.45	7.72	8.07	9.04	10.41	1.09	7.56	-3.91	-2.59	1.58	
Difference	N/A	N/A	-3.13	-0.88	-1.30	-4.77	-0.72	-5.97	-5.96	-2.43	



**Comparative Performance
Total Fund Trailing Returns**

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	FYTD	Oct-2018 To Sep-2019	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)	-17.22	5.47	16.10	14.99	12.80	-1.73	17.23	22.56	27.44	3.01
Vanguard Total Stock Mkt (VTSAX)	-13.74 (37)	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	-13.76 (37)	2.92 (34)	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	0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Equity (MF) Median	-17.64	0.12	13.30	17.48	12.11	-0.92	13.74	22.54	27.33	-1.87
Macquarie (Delaware Value)	N/A	N/A	N/A	12.49 (89)	19.29 (10)	-3.67 (57)	21.59 (17)	24.74 (40)	29.80 (34)	6.36 (8)
Russell 1000 Value Index	-21.30 (59)	4.00 (39)	9.45 (78)	15.12 (76)	16.19 (26)	-4.42 (65)	18.89 (42)	22.30 (60)	30.92 (26)	-1.89 (62)
Difference	N/A	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	-20.54	2.32	11.76	17.92	13.30	-3.29	18.36	23.68	28.16	-0.98
Boston LCV	-25.47 (85)	3.47 (43)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	-21.30 (59)	4.00 (39)	9.45 (78)	15.12 (76)	16.19 (26)	-4.42 (65)	18.89 (42)	22.30 (60)	30.92 (26)	-1.89 (62)
Difference	-4.17	-0.53	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	-20.54	2.32	11.76	17.92	13.30	-3.29	18.36	23.68	28.16	-0.98
Great Lakes SMid Cap	-28.30 (92)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2500 Index	-23.72 (56)	-4.04 (67)	16.19 (57)	17.79 (70)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)	30.93 (41)	-2.22 (71)
Difference	-4.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. SMID Cap Core Equity (SA+CF) Median	-22.76	-2.24	16.28	18.79	12.61	2.28	11.29	30.27	30.24	-0.86
Total Growth	-3.70 (28)	11.18 (5)	22.19 (73)	14.70 (95)	7.63 (88)	4.20 (36)	18.19 (40)	18.74 (62)	29.37 (35)	8.43 (3)
Russell 1000 Growth Index	-4.98 (45)	3.71 (39)	26.30 (38)	21.94 (31)	13.76 (20)	3.17 (48)	19.15 (28)	19.27 (56)	29.19 (37)	3.78 (22)
Difference	1.28	7.47	-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	-5.36	2.74	24.87	20.28	11.16	3.02	17.25	19.76	27.49	0.80
Rhumblin R1000G	-4.92 (37)	3.70 (53)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	-4.98 (37)	3.71 (52)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	0.06	-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	-6.14	3.82	24.44	20.83	11.60	3.53	18.19	20.25	27.69	1.38
Sawgrass Large Cap Growth	N/A	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	-4.98 (37)	3.71 (52)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	N/A	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	-6.14	3.82	24.44	20.83	11.60	3.53	18.19	20.25	27.69	1.38
Polen Capital LCG	-3.35 (24)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	-4.98 (37)	3.71 (52)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)	19.27 (64)	29.19 (39)	3.78 (30)
Difference	1.63	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	-6.14	3.82	24.44	20.83	11.60	3.53	18.19	20.25	27.69	1.38



Comparative Performance
Total Fund Trailing Returns

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	FYTD	Oct-2018 To Sep-2019	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
Lazard SMid Cap Core	N/A	N/A	13.70 (68)	20.53 (24)	10.26 (88)	4.02 (40)	11.99 (36)	31.12 (33)	30.14 (52)	-9.00 (97)
Russell 2500 Index	-23.72 (56)	-4.04 (67)	16.19 (57)	17.79 (70)	14.44 (35)	0.38 (74)	8.97 (72)	29.79 (58)	30.93 (41)	-2.22 (71)
Difference	N/A	N/A	-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	-22.76	-2.24	16.28	18.79	12.61	2.28	11.29	30.27	30.24	-0.86
Vanguard Mid-Cap Index (VIMAX)	-20.61 (24)	3.65 (24)	13.42 (30)	15.30 (49)	12.63 (40)	N/A	N/A	N/A	N/A	N/A
CRSP U.S. Mid Cap TR Index	-20.64 (25)	3.70 (22)	13.44 (30)	15.33 (47)	12.68 (39)	1.76 (22)	15.94 (13)	28.08 (41)	26.23 (50)	-0.18 (22)
Difference	0.03	-0.05	-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	-23.24	1.09	10.84	15.23	11.87	-1.05	12.32	27.52	26.17	-3.68
Total Int'l Equity (Composite)	-11.14	-3.33	5.85	18.68	7.98	-8.63	6.07	16.67	21.58	-10.95
Harding Loevner Intl Equity (HLIZX)	-11.20 (16)	-3.34 (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)	-16.52 (50)	-1.23 (44)	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	5.32	-2.11	4.09	-0.96	N/A	N/A	N/A	N/A	N/A	N/A
IM International Equity (MF) Median	-16.56	-1.94	0.08	19.36	9.32	-8.75	4.26	17.81	16.20	-12.08



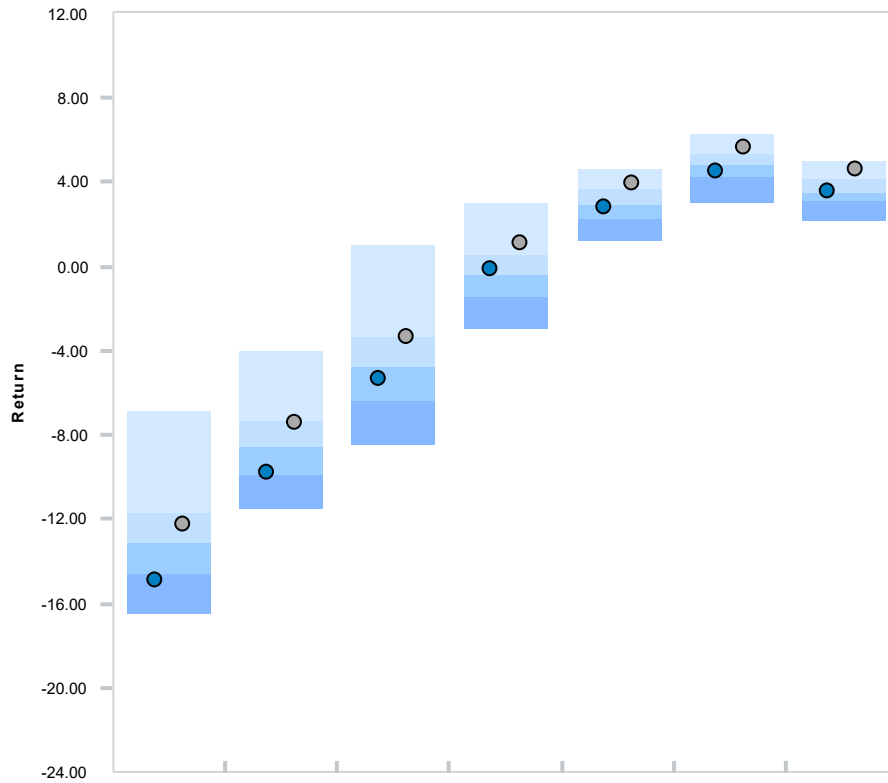
**Comparative Performance
Total Fund Trailing Returns**

As of March 31, 2020

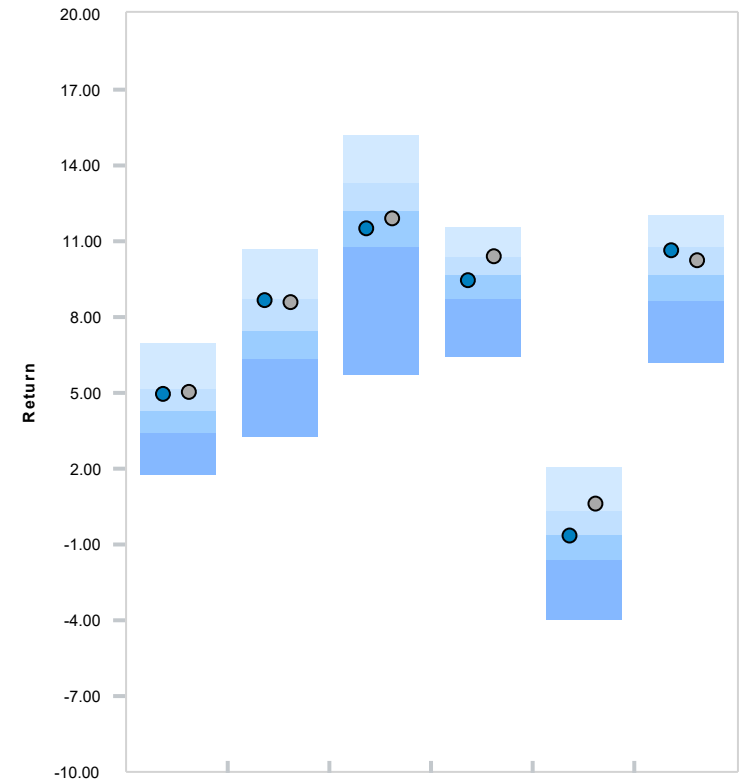
	FYTD	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014	Oct-2012 To Sep-2013	Oct-2011 To Sep-2012	Oct-2010 To Sep-2011
Total Core Fixed Income	1.66	8.74	-0.67	0.82	5.78	3.88	4.40	-1.26	7.71	4.42
Core Fixed Policy	3.33	10.30	-1.22	0.07	5.19	2.94	3.96	-1.68	5.16	5.26
Difference	-1.67	-1.56	0.55	0.75	0.59	0.94	0.44	0.42	2.55	-0.84
Garcia Hamilton Fixed Income	1.66 (60)	8.74 (96)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate Index	3.33 (24)	10.30 (70)	-1.22 (87)	0.07 (84)	5.19 (80)	2.94 (62)	3.96 (80)	-1.68 (78)	5.16 (89)	5.26 (50)
Difference	-1.67	-1.56	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	1.99	10.43	-0.75	0.61	5.66	3.02	4.45	-1.27	6.60	5.26
Mutual of America Core Fixed	N/A	N/A	N/A	0.82 (39)	5.78 (43)	3.88 (7)	4.43 (51)	-1.01 (38)	7.24 (37)	N/A
Blmbg. Barc. U.S. Aggregate Index	3.33 (24)	10.30 (70)	-1.22 (87)	0.07 (84)	5.19 (80)	2.94 (62)	3.96 (80)	-1.68 (78)	5.16 (89)	5.26 (50)
Difference	N/A	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	1.99	10.43	-0.75	0.61	5.66	3.02	4.45	-1.27	6.60	5.26
Total Non-Core Fixed Income	-1.87	5.13	4.97	11.18	6.07	-2.56	9.33	11.74	24.76	-3.22
Bloomberg Barclays Global Aggregate	0.16	7.60	-1.31	-1.26	8.83	-3.26	1.19	-2.64	5.07	4.00
Difference	-2.03	-2.47	6.28	12.44	-2.76	0.70	8.14	14.38	19.69	-7.22
Templeton Global Total Return (FTTRX)	-4.39 (63)	2.50 (99)	-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	-0.47 (11)	7.54 (51)	-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	-3.92	-5.04	-0.58	14.38	-6.59	-4.67	4.31	7.51	10.33	N/A
IM Global Fixed Income (MF) Median	-3.28	7.65	-1.29	1.02	7.42	-3.85	3.37	-1.81	7.17	1.74
Total Real Estate (Composite)	2.05	5.87	10.10	9.82	9.06	14.70	12.33	8.10	13.00	14.11
American Core Realty	3.03 (32)	6.81 (52)	8.50 (61)	7.52 (63)	9.04 (91)	13.98 (65)	12.49 (60)	12.27 (69)	11.56 (66)	16.11 (63)
NCREIF ODCE	2.44 (60)	6.17 (72)	8.82 (55)	7.81 (56)	10.62 (65)	14.71 (58)	12.39 (64)	12.47 (66)	11.77 (64)	18.03 (43)
Difference	0.59	0.64	-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	2.87	6.89	8.98	8.05	11.02	15.32	12.63	13.18	12.89	16.62
Total Timber (Composite)	-4.27	5.58	-9.38	0.28	6.48	6.70	9.49	4.51	-5.86	3.87
Amsouth Timber Fund	N/A	N/A	-15.26	-0.52	6.12	11.73	7.98	3.85	-1.33	2.00
NCREIF Timberland Index	0.07	2.10	4.00	3.28	3.28	9.26	10.38	9.68	2.25	0.26
Difference	N/A	N/A	-19.26	-3.80	2.84	2.47	-2.40	-5.83	-3.58	1.74
Molpus Woodlands Timber	-4.27	5.90	-2.66	1.18	6.08	1.64	10.96	5.25	-10.32	5.68
NCREIF Timberland Index	0.07	2.10	4.00	3.28	3.28	9.26	10.38	9.68	2.25	0.26
Difference	-4.34	3.80	-6.66	-2.10	2.80	-7.62	0.58	-4.43	-12.57	5.42
Alternatives										
Westwood Income Opportunity Fund (WHGIX)	N/A	N/A	4.94 (36)	8.14 (60)	9.20 (40)	-3.83 (46)	N/A	N/A	N/A	N/A
Alternatives Policy	-4.45 (11)	7.72 (15)	8.07 (18)	9.04 (50)	10.41 (24)	1.09 (11)	7.56 (55)	-3.91 (95)	-2.59 (100)	1.58 (24)
Difference	N/A	N/A	-3.13	-0.90	-1.21	-4.92	N/A	N/A	N/A	N/A
IM Flexible Portfolio (MF) Median	-11.36	2.59	3.38	9.02	8.55	-4.23	7.99	8.17	15.66	-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)	-14.95 (78)	-9.78 (73)	-5.35 (59)	-0.08 (39)	2.82 (53)	4.53 (66)	3.58 (49)
● Total Fund Policy	-12.24 (33)	-7.41 (26)	-3.35 (26)	1.12 (15)	3.92 (19)	5.68 (18)	4.65 (10)
Median	-13.14	-8.52	-4.73	-0.43	2.88	4.83	3.52



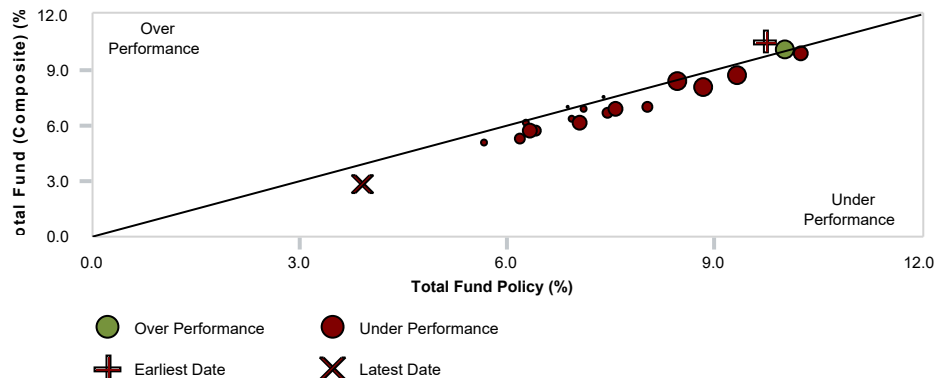
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Total Fund (Composite)	4.89 (32)	8.66 (26)	11.49 (62)	9.41 (58)	-0.72 (53)	10.58 (31)
● Total Fund Policy	5.02 (29)	8.59 (28)	11.90 (54)	10.34 (26)	0.55 (21)	10.23 (39)
Median	4.32	7.45	12.17	9.68	-0.62	9.65

Comparative Performance

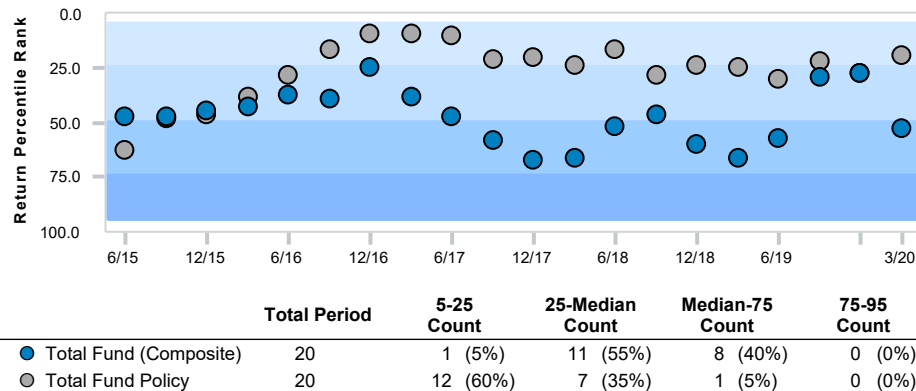
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Total Fund (Composite)	6.07 (15)	0.79 (55)	4.09 (3)	8.82 (40)	-8.13 (65)	3.54 (13)
Total Fund Policy	5.50 (38)	0.94 (42)	3.41 (31)	8.94 (33)	-7.65 (52)	3.50 (14)
All Public Plans-Total Fund Median	5.23	0.84	3.26	8.43	-7.54	2.58



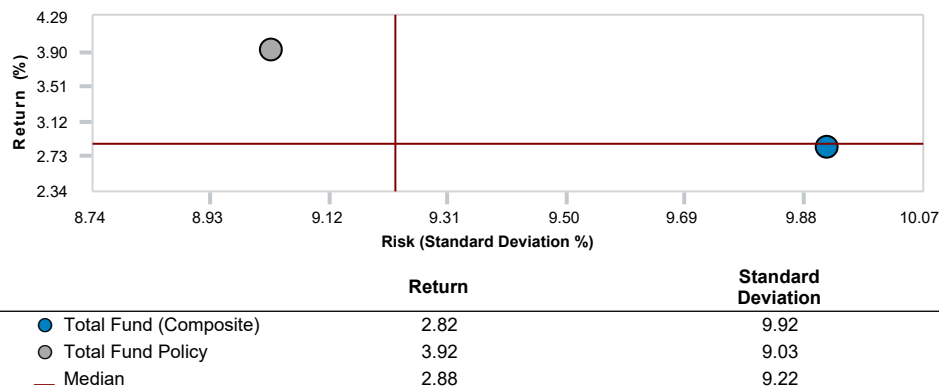
3 Yr Rolling Under/Over Performance - 5 Years



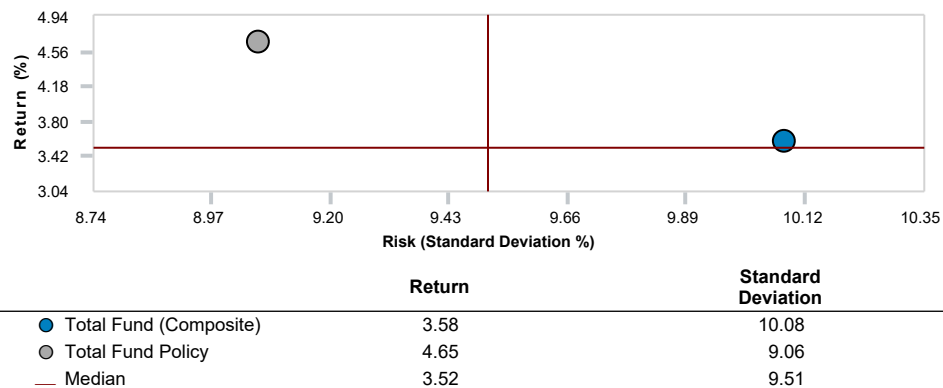
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

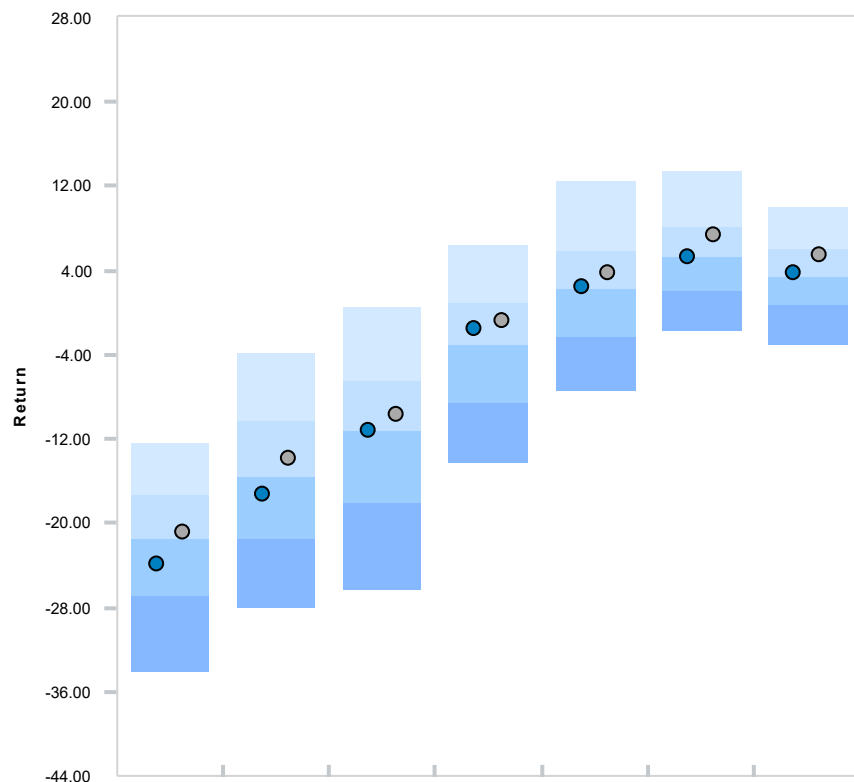
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.47	100.08	110.21	-1.35	-0.66	0.15	1.09	8.01
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.27	1.00	7.03

Historical Statistics - 5 Years

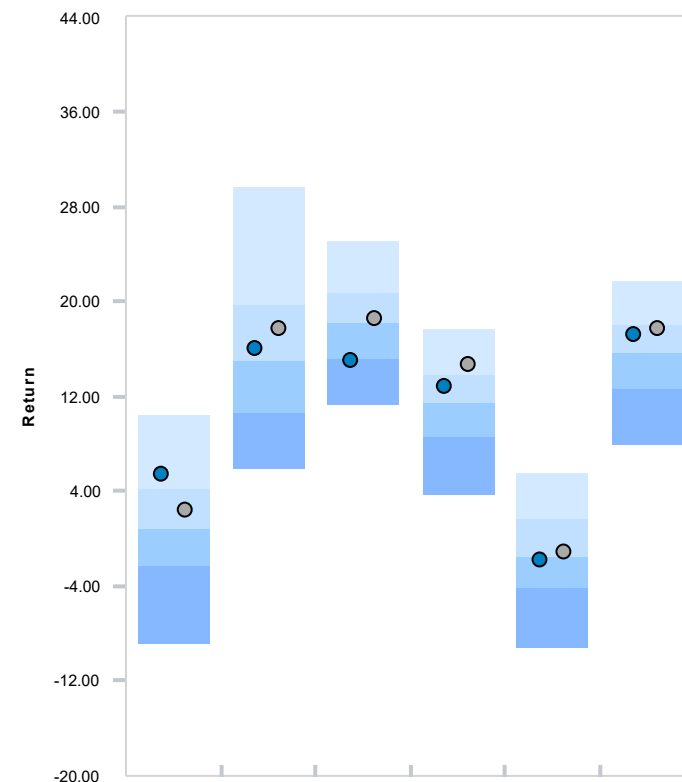
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Composite)	1.53	98.12	115.24	-1.45	-0.61	0.29	1.10	7.90
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.42	1.00	6.69



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	23.92 (63)	17.22 (60)	-11.25 (50)	-1.48 (40)	2.45 (49)	5.31 (51)	3.79 (47)
● Total Domestic Equity Policy	20.84 (46)	13.81 (42)	-9.74 (44)	-0.84 (37)	3.78 (39)	7.28 (34)	5.54 (31)
Median	21.45	15.65	-11.30	-3.11	2.17	5.31	3.43



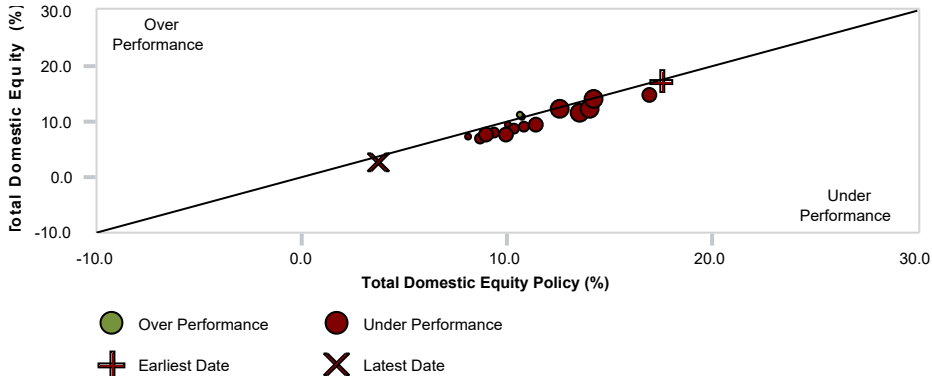
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Total Domestic Equity	5.47 (19)	16.10 (45)	14.99 (78)	12.80 (36)	-1.73 (53)	17.23 (34)
● Total Domestic Equity Policy	2.36 (41)	17.73 (32)	18.62 (45)	14.77 (19)	-1.18 (47)	17.67 (29)
Median	0.96	15.03	18.17	11.44	-1.47	15.77

Comparative Performance

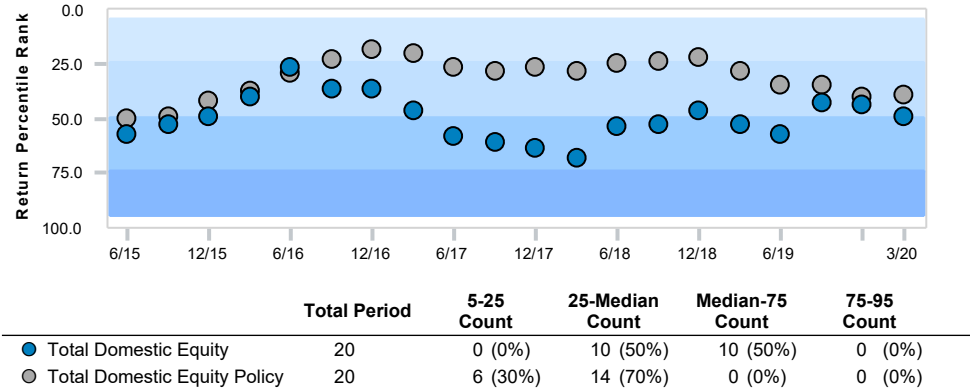
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Total Domestic Equity	8.81 (38)	1.48 (27)	5.64 (17)	14.32 (42)	-13.94 (34)	6.44 (44)
Total Domestic Equity Policy	8.88 (37)	0.75 (48)	3.94 (50)	14.23 (43)	-14.43 (43)	7.06 (32)
IM U.S. All Cap Equity (SA+CF+MF) Median	8.16	0.67	3.93	13.67	-14.88	5.91



3 Yr Rolling Under/Over Performance - 5 Years



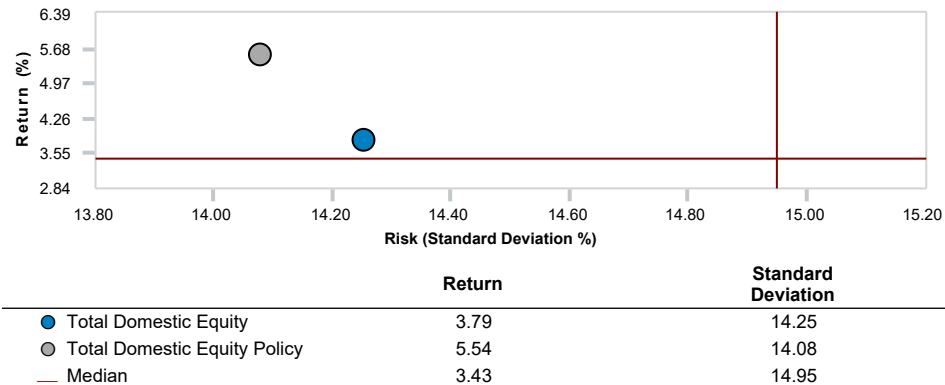
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

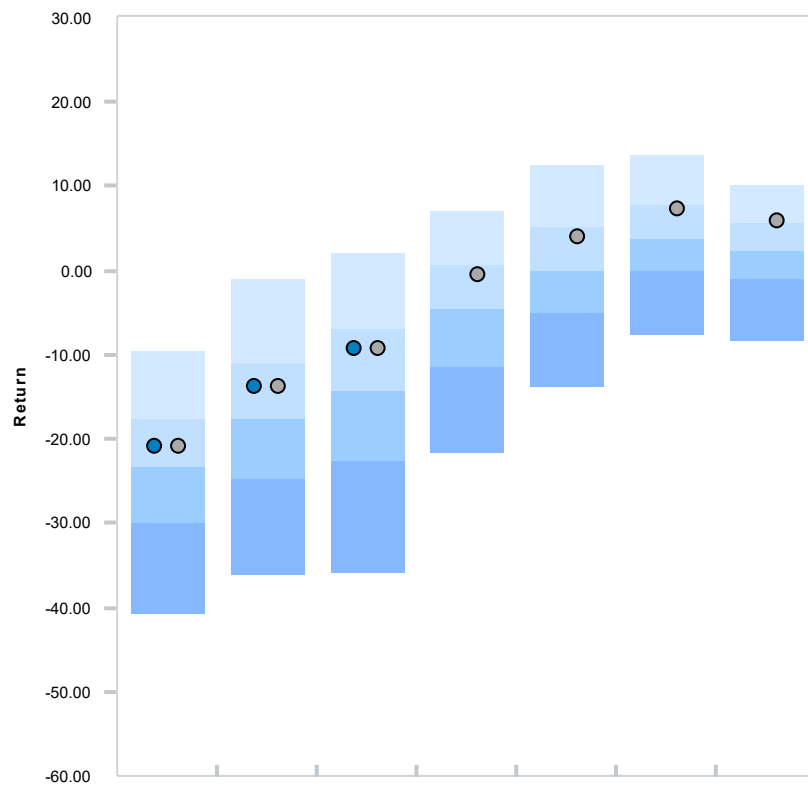
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	2.23	98.26	104.17	-1.34	-0.51	0.12	1.04	13.44
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.20	1.00	12.45

Historical Statistics - 5 Years

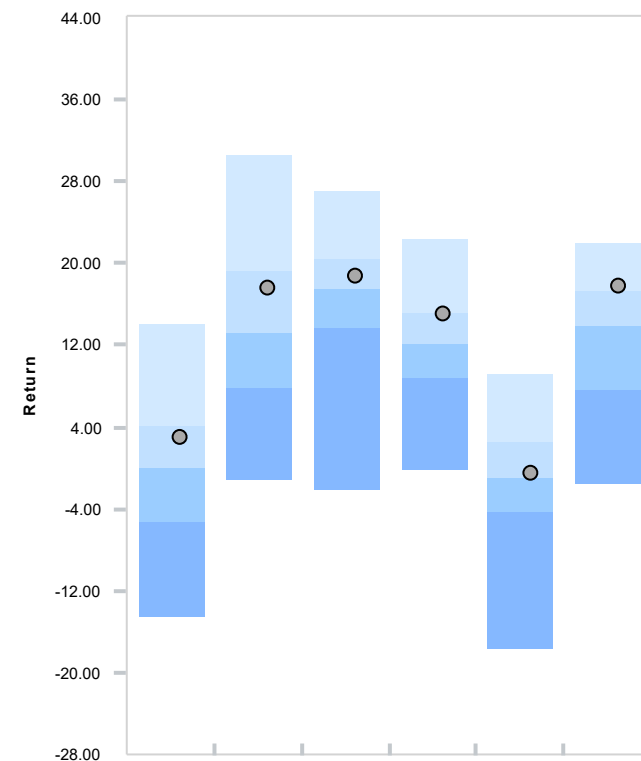
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Equity	2.29	93.00	101.00	-1.62	-0.72	0.25	1.00	11.12
Total Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.37	1.00	10.54



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Vanguard Tot Stock Mkt (VTSAX)	20.87 (41)	13.74 (37)	-9.24 (35)	N/A	N/A	N/A	N/A
● CRSP U.S. Total Market TR Indx	20.88 (41)	13.76 (37)	-9.24 (35)	-0.62 (33)	3.99 (31)	7.35 (28)	5.74 (24)
Median	23.21	17.64	14.20	-4.65	-0.07	3.64	2.18



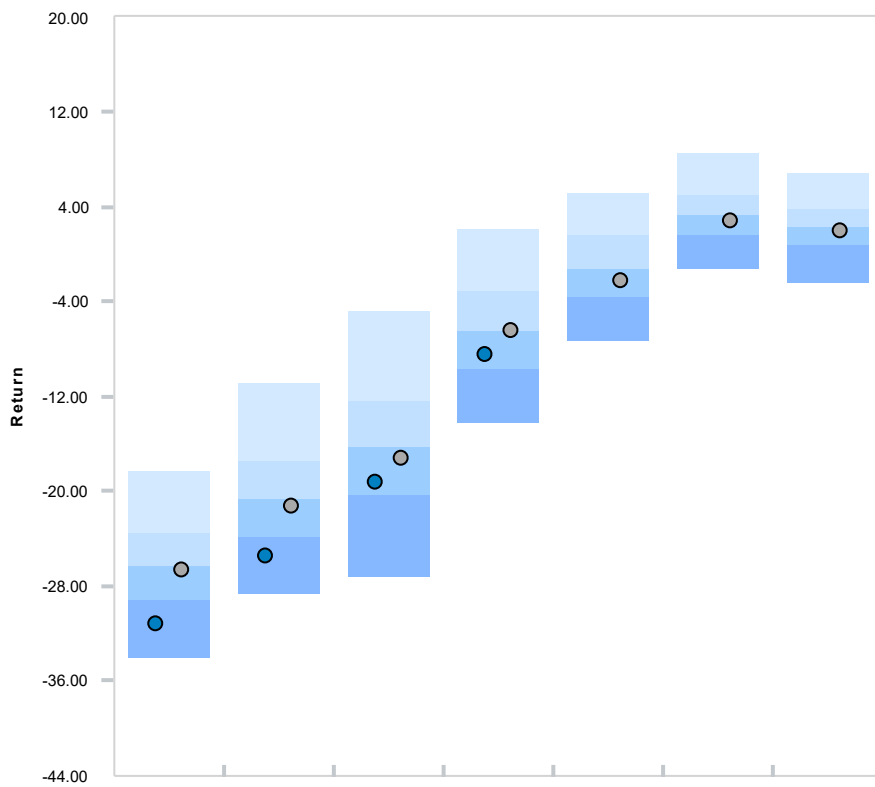
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Vanguard Tot Stock Mkt (VTSAX)	N/A	N/A	N/A	N/A	N/A	N/A
● CRSP U.S. Total Market TR Indx	2.92 (34)	7.62 (31)	8.64 (40)	4.99 (27)	-0.55 (46)	7.77 (23)
Median	0.12	3.30	7.48	2.11	-0.92	3.74

Comparative Performance

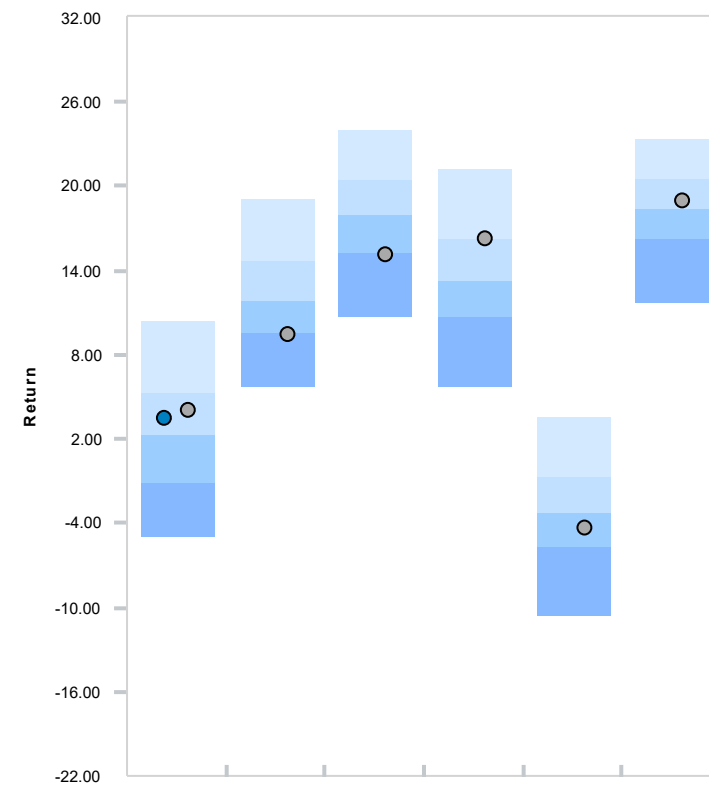
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Vanguard Tot Stock Mkt (VTSAX)	9.01 (33)	1.09 (38)	4.09 (40)	N/A	N/A	N/A
CRSP U.S. Total Market TR Indx	9.00 (33)	1.11 (38)	4.08 (40)	14.06 (46)	-14.26 (41)	7.08 (30)
IM U.S. Equity (MF) Median	7.91	0.38	3.52	13.62	-15.37	5.33



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	-31.18 (86)	-25.47 (85)	-19.18 (69)	-8.54 (70)	N/A	N/A	N/A
● Russell 1000 Value Index	-26.73 (57)	-21.30 (59)	-17.17 (58)	-6.44 (50)	-2.18 (63)	2.78 (62)	1.90 (58)
Median	-26.27	-20.54	-16.16	-6.51	-1.15	3.37	2.38



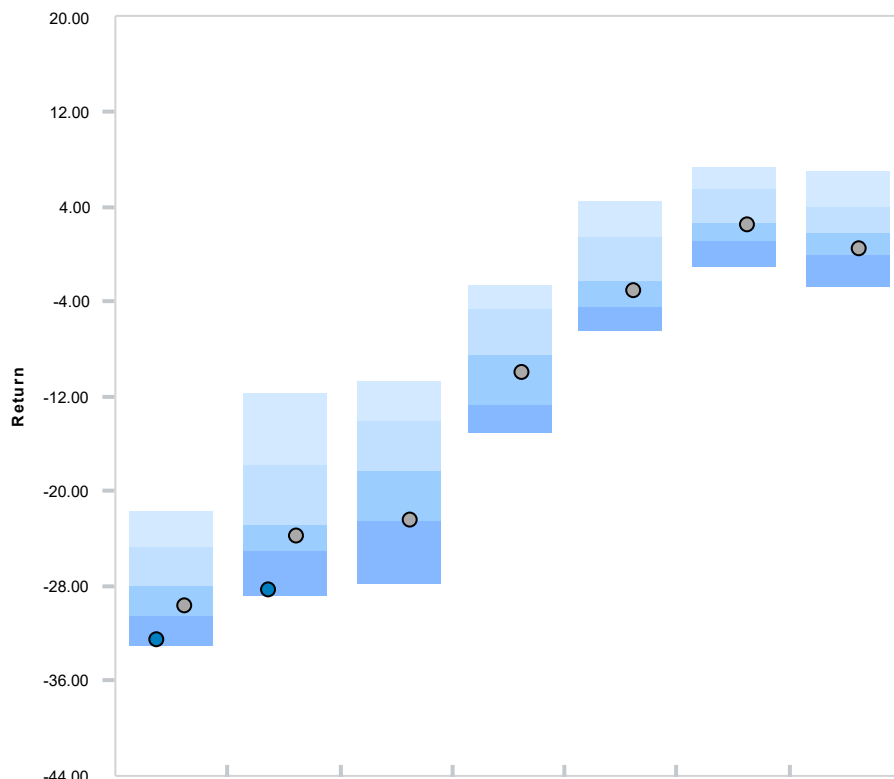
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Boston LCV	3.47 (43)	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Value Index	4.00 (39)	9.45 (78)	15.12 (76)	16.19 (26)	-4.42 (65)	18.89 (42)
Median	2.32	11.76	17.92	13.30	-3.29	18.36

Comparative Performance

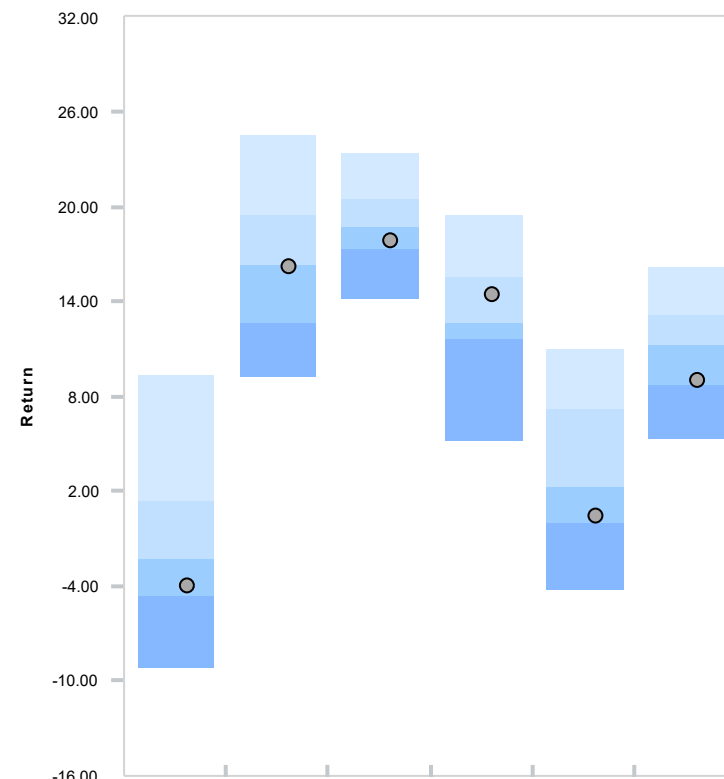
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Boston LCV	8.30 (39)	2.78 (21)	5.51 (13)	10.75 (72)	-13.85 (58)	6.11 (41)
Russell 1000 Value Index	7.41 (60)	1.36 (60)	3.84 (53)	11.93 (45)	-11.72 (31)	5.70 (51)
IM U.S. Large Cap Value Equity (SA+CF) Median	7.90	1.67	3.96	11.74	-13.40	5.71



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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Great Lakes SMid Cap	-32.47 (90)	-28.30 (92)	N/A	N/A	N/A	N/A	N/A
● Russell 2500 Index	-29.72 (59)	-23.72 (56)	-22.47 (76)	-10.00 (64)	-3.10 (57)	2.54 (51)	0.49 (65)
Median	-28.03	-22.76	-18.30	-8.45	-2.18	2.64	1.82



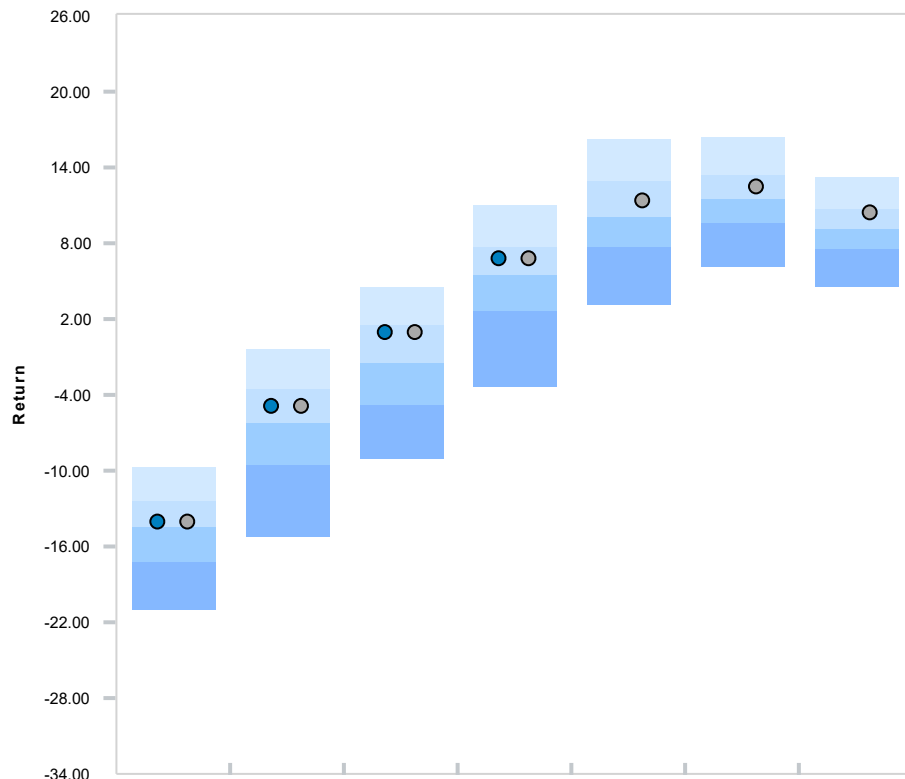
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Great Lakes SMid Cap	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 2500 Index	-4.04 (67)	16.19 (57)	17.79 (70)	14.44 (35)	0.38 (74)	8.97 (72)
Median	-2.24	16.28	18.79	12.61	2.28	11.29

Comparative Performance

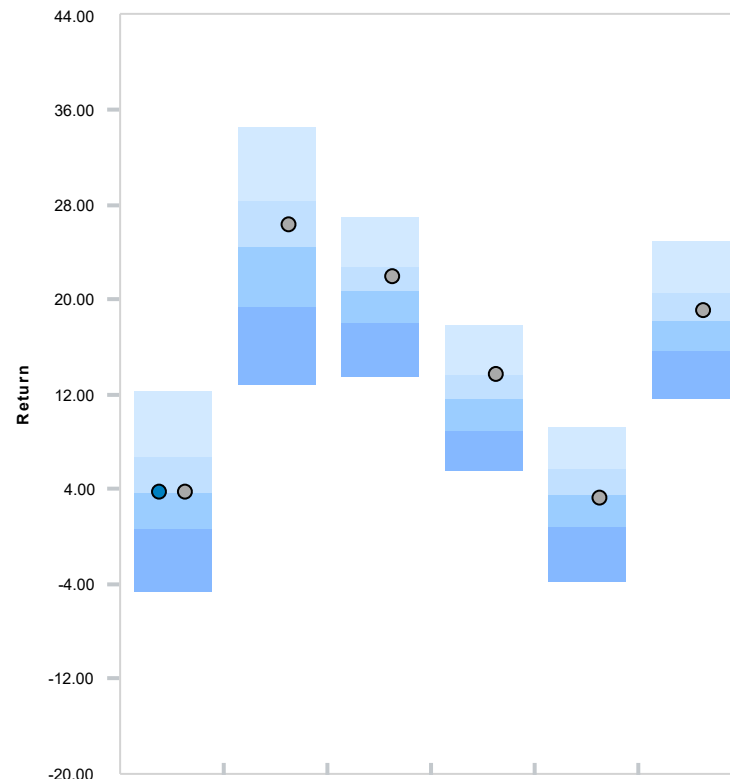
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Great Lakes SMid Cap	6.18 (85)	N/A	N/A	N/A	N/A	N/A
Russell 2500 Index	8.54 (33)	-1.28 (74)	2.96 (80)	15.82 (30)	-18.49 (67)	4.70 (54)
IM U.S. SMID Cap Core Equity (SA+CF) Median	8.07	0.03	4.36	15.11	-18.14	4.75



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	-14.03 (46)	-4.92 (37)	0.97 (31)	6.69 (35)	N/A	N/A	N/A
● Russell 1000 Growth I	-14.10 (48)	-4.98 (37)	0.91 (31)	6.67 (36)	11.32 (38)	12.41 (37)	10.36 (32)
Median	-14.38	-6.14	-1.51	5.47	10.04	11.51	9.07



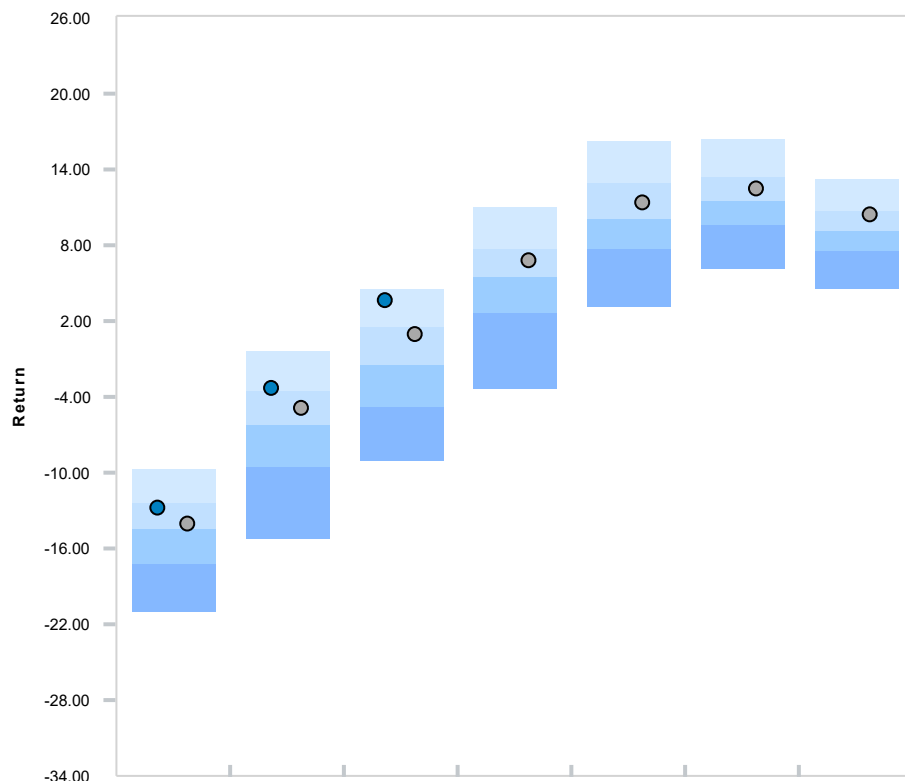
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Rhumblin R1000G	3.70 (53)	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	3.71 (52)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)
Median	3.82	24.44	20.83	11.60	3.53	18.19

Comparative Performance

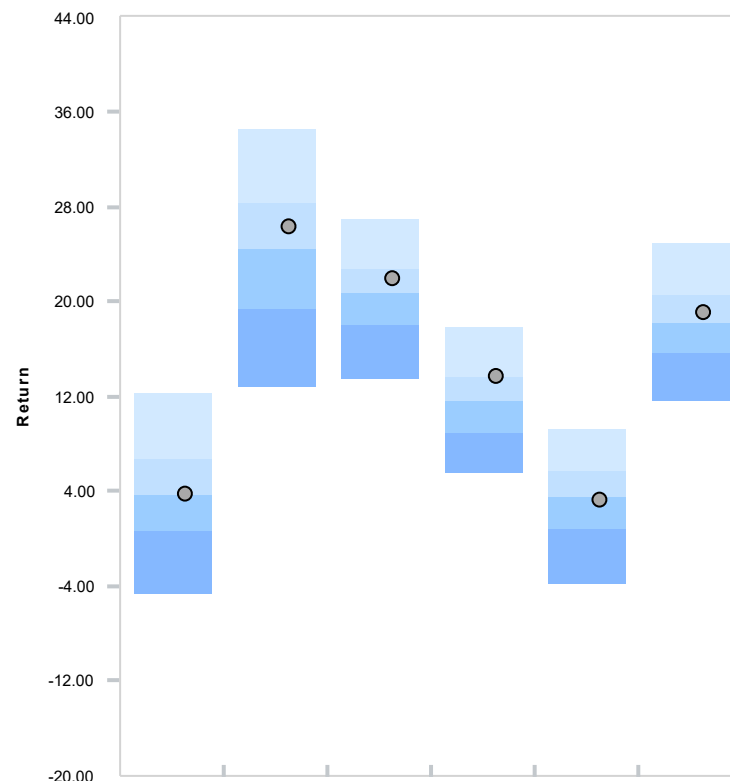
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Rhumblin R1000G	10.60 (26)	1.49 (28)	4.63 (57)	16.08 (48)	-15.87 (61)	9.16 (23)
Russell 1000 Growth Index	10.62 (26)	1.49 (28)	4.64 (57)	16.10 (47)	-15.89 (61)	9.17 (22)
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.59	0.61	4.91	15.98	-15.31	8.12



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	-12.80 (31)	-3.35 (24)	3.58 (9)	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	-14.10 (48)	-4.98 (37)	0.91 (31)	6.67 (36)	11.32 (38)	12.41 (37)	10.36 (32)
Median	-14.38	-6.14	-1.51	5.47	10.04	11.51	9.07



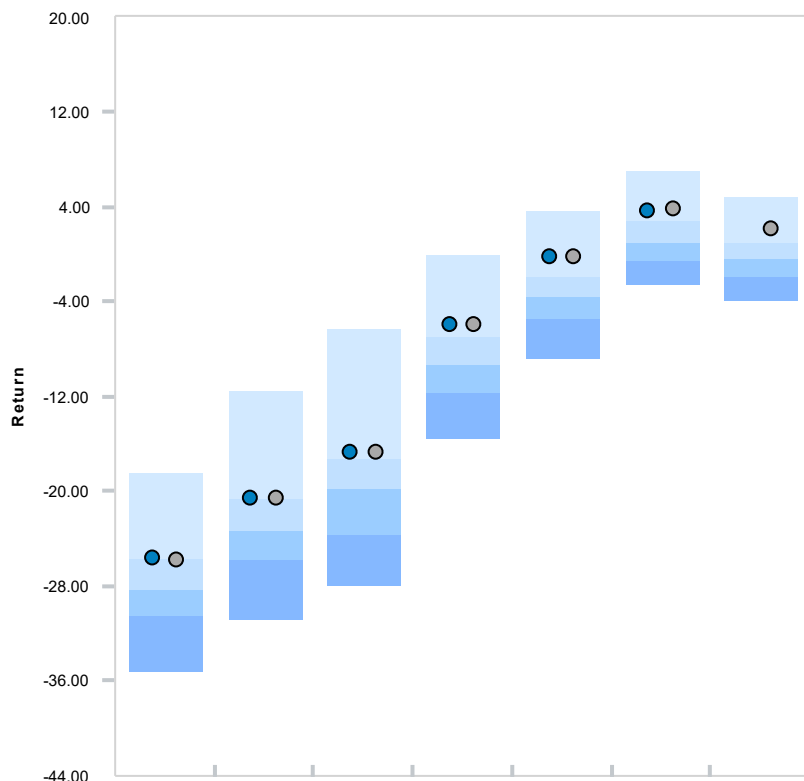
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Polen Capital LCG	N/A	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth I	3.71 (52)	26.30 (37)	21.94 (38)	13.76 (23)	3.17 (54)	19.15 (40)
Median	3.82	24.44	20.83	11.60	3.53	18.19

Comparative Performance

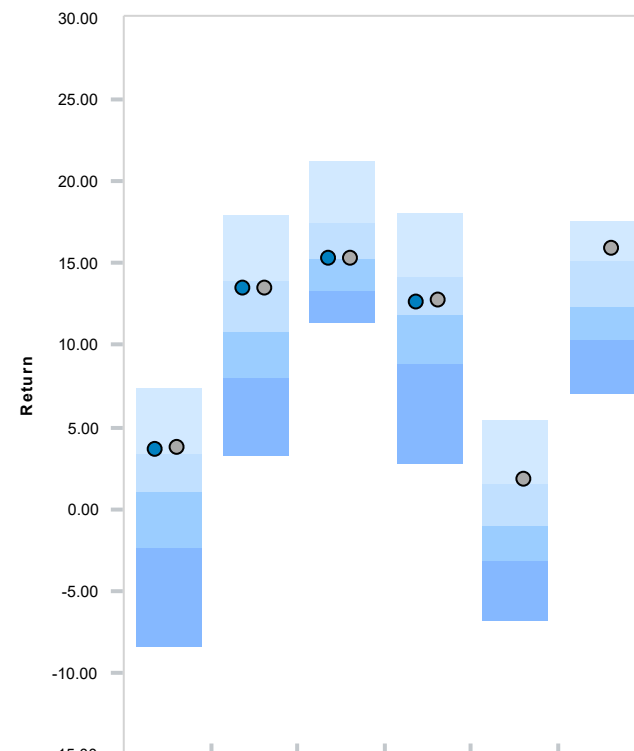
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Polen Capital LCG	10.84 (22)	0.96 (43)	6.15 (23)	17.27 (28)	N/A	N/A
Russell 1000 Growth Index	10.62 (26)	1.49 (28)	4.64 (57)	16.10 (47)	-15.89 (61)	9.17 (22)
IM U.S. Large Cap Growth Equity (SA+CF) Median	9.59	0.61	4.91	15.98	-15.31	8.12



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)	25.72 (26)	20.61 (24)	16.65 (21)	-6.01 (19)	-0.26 (14)	3.74 (16)	N/A
● CRSP U.S. Mid Cap TR Index	25.74 (27)	20.64 (25)	16.65 (21)	-6.01 (18)	-0.25 (13)	3.76 (15)	2.11 (13)
Median	28.30	23.24	19.67	-9.31	-3.64	0.94	-0.37



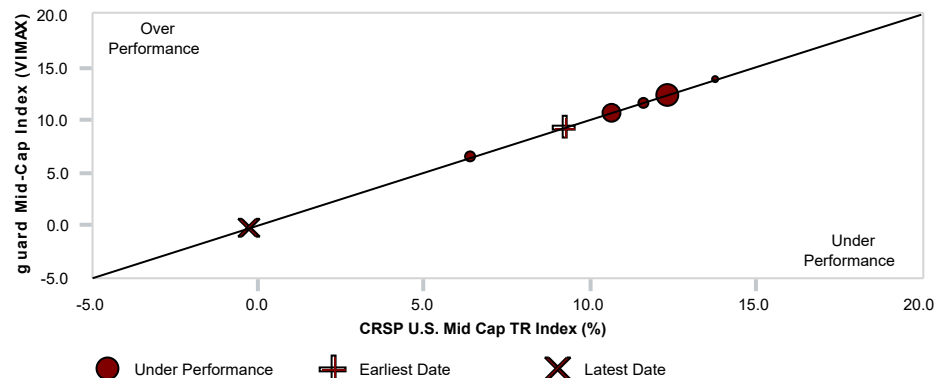
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Vanguard Mid-Cap Index (VIMAX)	3.65 (24)	3.42 (30)	5.30 (49)	2.63 (40)	N/A	N/A
● CRSP U.S. Mid Cap TR Index	3.70 (22)	3.44 (30)	5.33 (47)	2.68 (39)	1.76 (22)	5.94 (13)
Median	1.09	0.84	5.23	1.87	-1.05	2.32

Comparative Performance

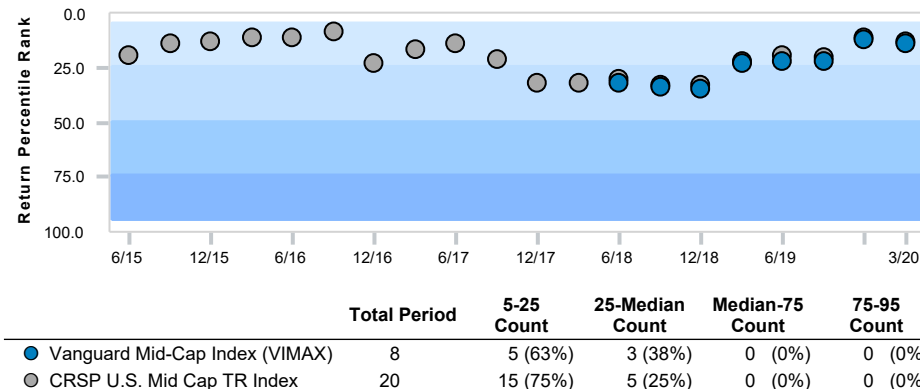
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Vanguard Mid-Cap Index (VIMAX)	6.88 (50)	0.61 (62)	4.36 (41)	16.77 (8)	-15.46 (45)	4.66 (42)
CRSP U.S. Mid Cap TR Index	6.88 (50)	0.62 (61)	4.37 (40)	16.79 (6)	-15.46 (45)	4.65 (42)
IM U.S. Mid Cap Core Equity (MF) Median	6.85	0.98	4.14	14.57	-15.85	4.20



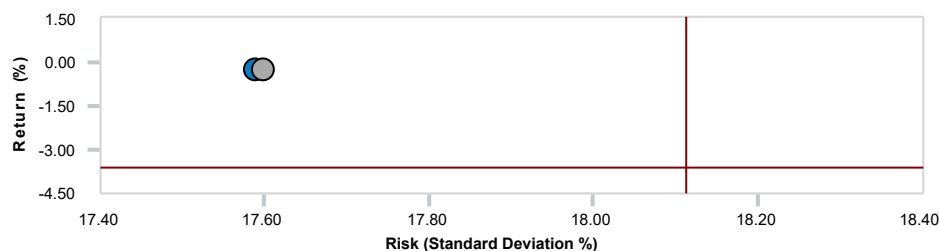
3 Yr Rolling Under/Over Performance - 5 Years



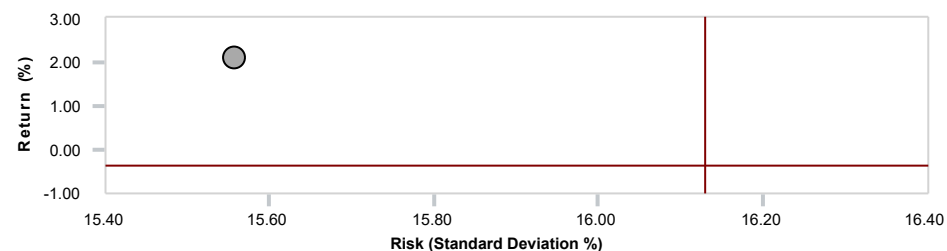
3 Yr Rolling Percentile Ranking - 5 Years



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)	0.03	99.96	100.05	-0.02	-0.66	-0.02	1.00	14.65
CRSP U.S. Mid Cap TR Index	0.00	100.00	100.00	0.00	N/A	-0.02	1.00	14.66

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	0.14	1.00	12.33



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 : \$47,640 Million
 Portfolio Turnover : 16%

Portfolio Assets : \$115,437 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

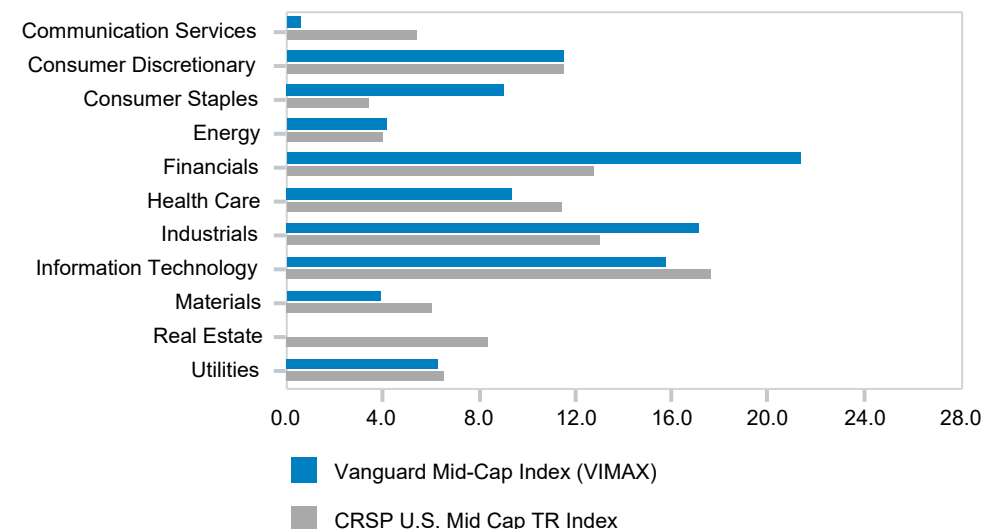
Portfolio Characteristics As of 11/30/2019

	Portfolio	Benchmark
Total Securities	350	344
Avg. Market Cap (\$)	17,723,234,994	13,984,478,420
Price/Earnings (P/E)	30.31	22.18
Price/Book (P/B)	6.05	3.13
Dividend Yield	2.22	1.60
Annual EPS	24.56	4.18
5 Yr EPS	13.43	11.66
3 Yr EPS Growth	18.53	N/A
Beta (3 Years, Monthly)	1.00	1.00

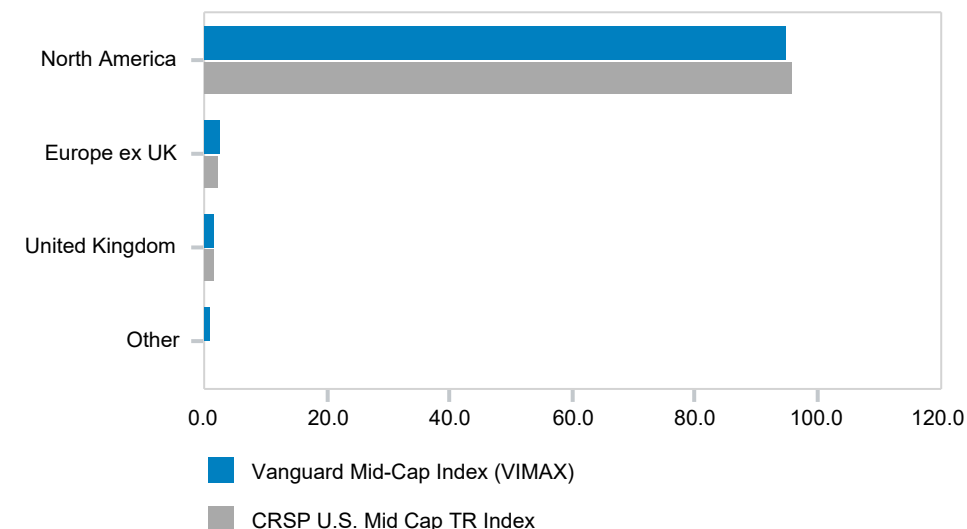
Top Ten Securities As of 11/30/2019

Advanced Micro Devices Inc ORD	1.0 %
Newmont Goldcorp Corp ORD	0.7 %
Amphenol Corp ORD	0.7 %
ONEOK Inc ORD	0.7 %
TransDigm Group Inc ORD	0.7 %
WEC Energy Group Inc ORD	0.6 %
Motorola Solutions Inc ORD	0.6 %
IHS Markit Ltd ORD	0.6 %
Eversource Energy ORD	0.6 %
SBA Communications Corp ORD	0.6 %

Sector Weights As of 11/30/2019



Region Weights As of 11/30/2019



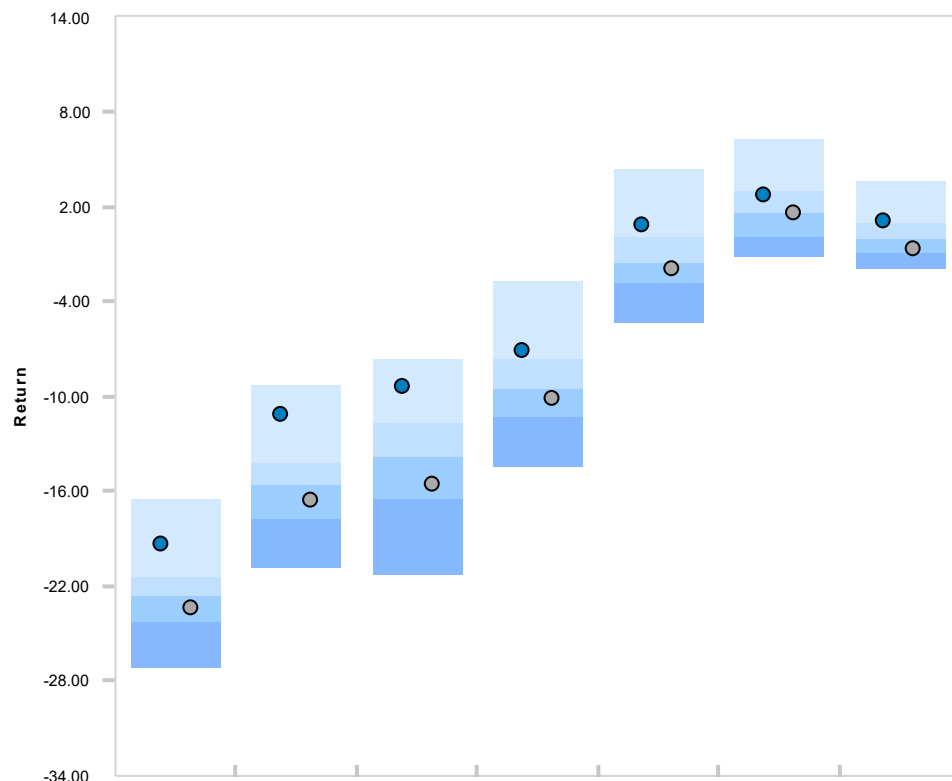
Statistics provided by Lipper. Most recent available data shown.



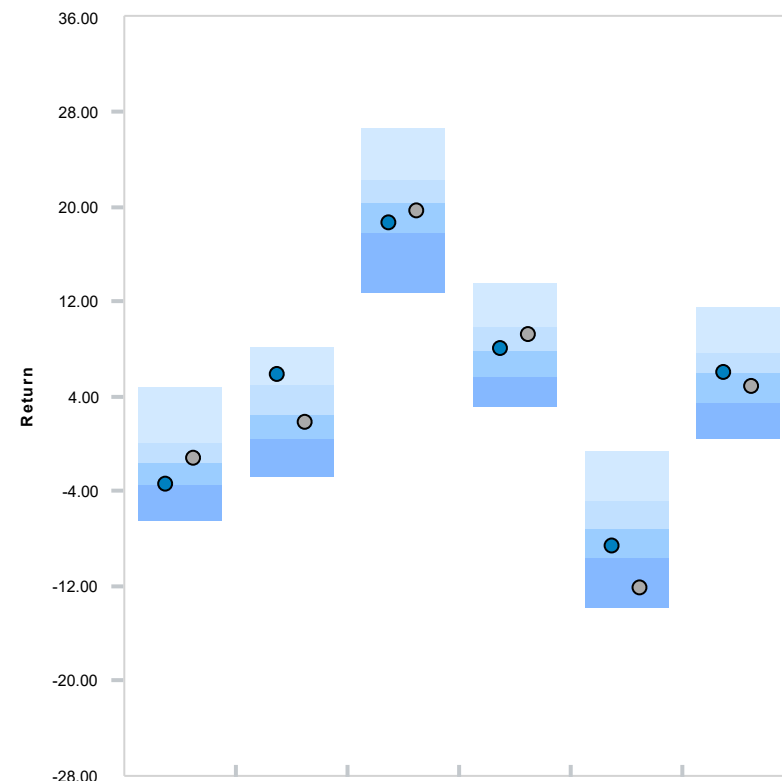
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Peer Group Analysis - IM International Large Cap Core Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Int'l Equity	-19.34 (11)	-11.14 (9)	-9.40 (11)	-7.16 (23)	0.90 (20)	2.76 (27)	1.12 (23)
● Total Int'l Policy	-23.36 (60)	-16.52 (59)	-15.57 (66)	-10.07 (59)	-1.96 (65)	1.61 (49)	-0.64 (65)
Median	-22.61	-15.57	-13.81	-9.47	-1.50	1.60	-0.06



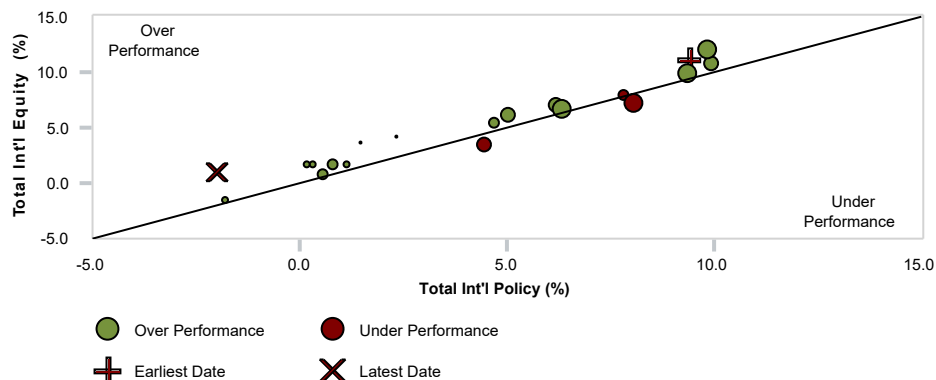
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Total Int'l Equity	-3.33 (74)	5.85 (14)	18.68 (69)	7.98 (50)	-8.63 (65)	6.07 (51)
● Total Int'l Policy	-1.23 (47)	1.76 (60)	19.61 (59)	9.26 (33)	-12.16 (90)	4.77 (64)
Median	-1.56	2.53	20.30	7.91	-7.16	6.10

Comparative Performance

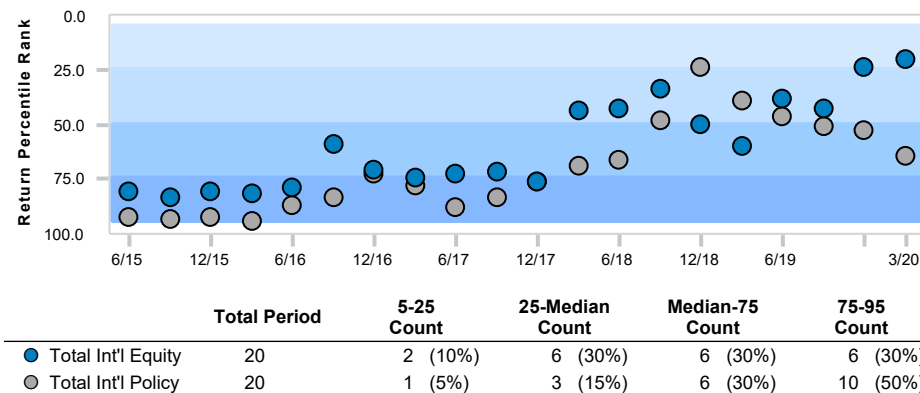
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Total Int'l Equity	10.15 (20)	-2.38 (85)	4.45 (22)	11.60 (35)	-15.04 (86)	1.67 (31)
Total Int'l Policy	8.92 (52)	-1.80 (63)	2.98 (64)	10.31 (62)	-11.46 (21)	0.71 (62)
IM International Large Cap Core Equity (SA+CF) Median	8.99	-1.47	3.58	10.86	-13.16	1.01



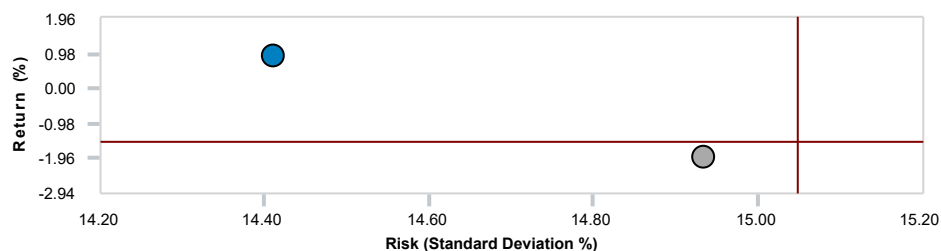
3 Yr Rolling Under/Over Performance - 5 Years



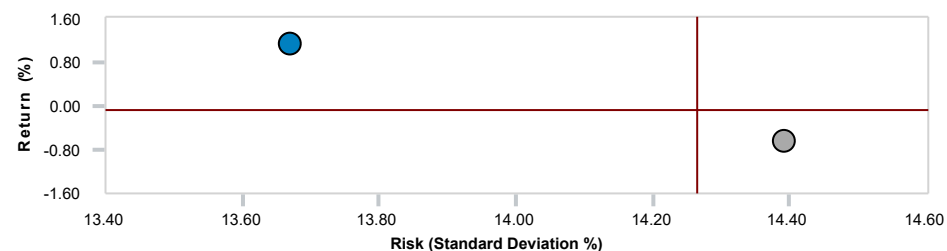
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

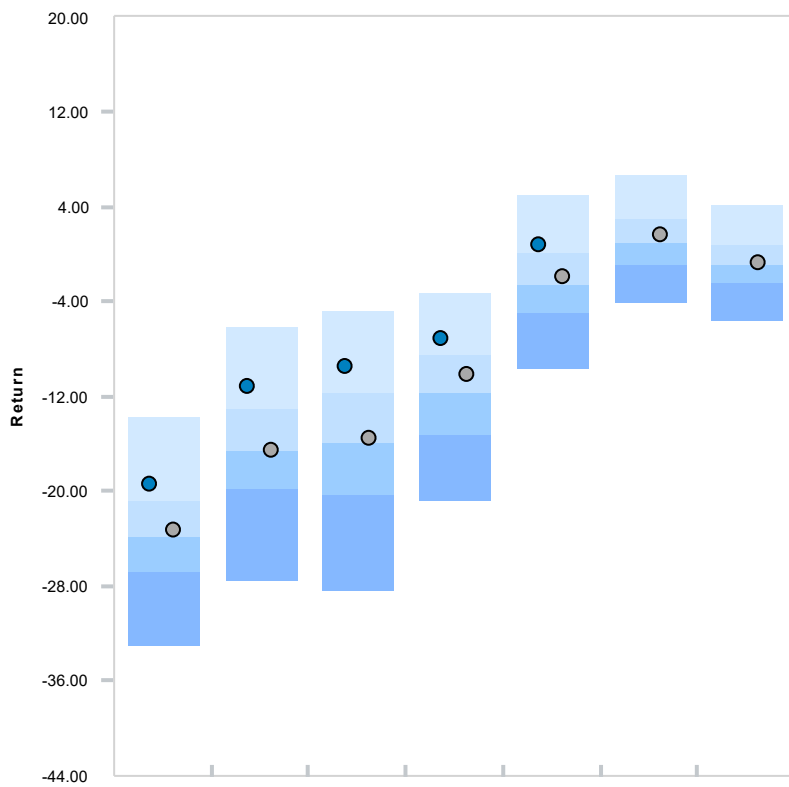
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.33	102.55	88.55	2.77	0.84	0.01	0.94	11.19
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	-0.18	1.00	12.17

Historical Statistics - 5 Years

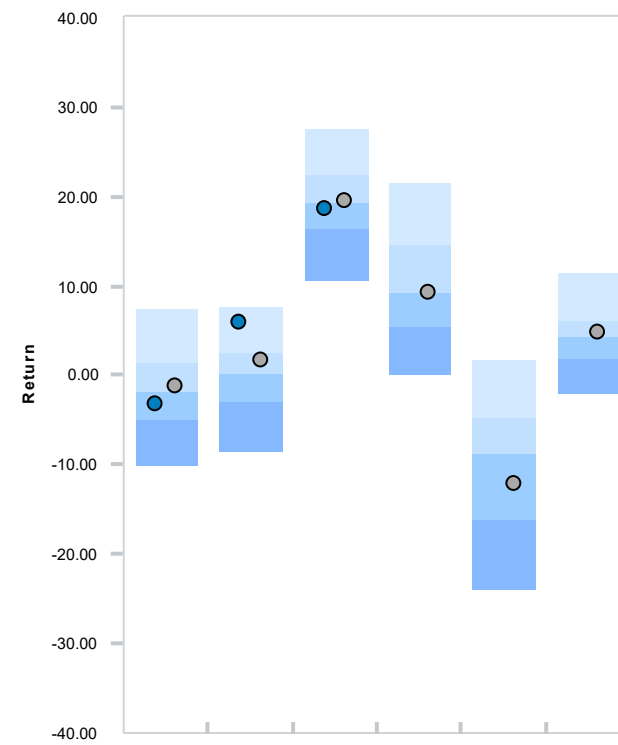
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Equity	3.86	97.98	89.32	1.70	0.43	0.07	0.92	10.13
Total Int'l Policy	0.00	100.00	100.00	0.00	N/A	-0.05	1.00	10.98



Peer Group Analysis - IM International Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Harding Loevner Intl Equity (HLIZX)	19.34 (18)	11.20 (16)	-9.47 (17)	-7.19 (19)	0.88 (20)	N/A	N/A
● MSCI AC World ex USA (Net)	23.36 (47)	16.52 (50)	15.57 (47)	10.07 (37)	-1.96 (43)	1.61 (40)	-0.64 (45)
Median	23.74	16.56	15.96	11.68	-2.51	0.99	-0.95



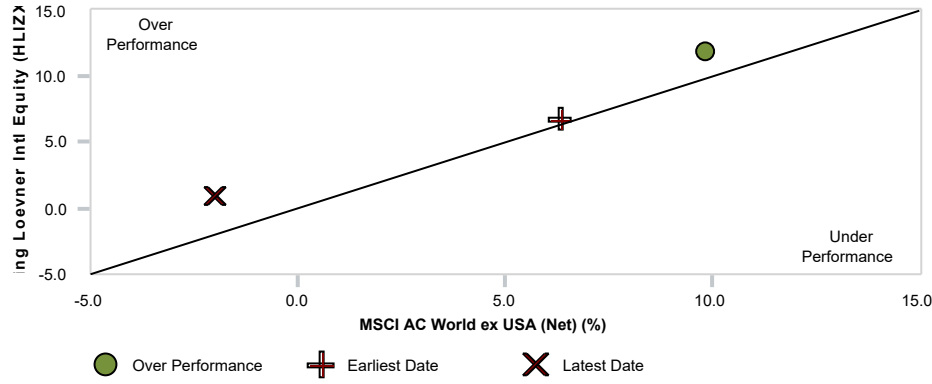
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Harding Loevner Intl Equity (HLIZX)	3.34 (62)	5.85 (10)	8.65 (58)	N/A	N/A	N/A
● MSCI AC World ex USA (Net)	1.23 (44)	1.76 (34)	9.61 (48)	9.26 (51)	2.16 (64)	4.77 (43)
Median	1.94	0.08	9.36	9.32	8.75	4.26

Comparative Performance

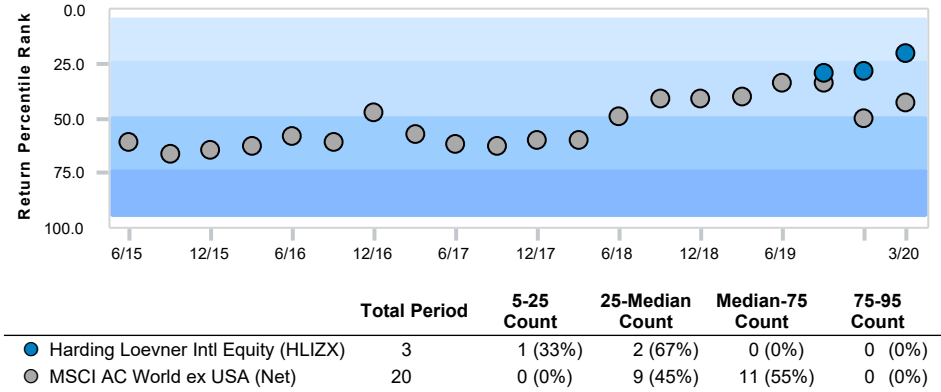
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Harding Loevner Intl Equity (HLIZX)	10.09 (42)	-2.40 (61)	4.45 (18)	11.60 (35)	-15.04 (81)	1.67 (13)
MSCI AC World ex USA (Net)	8.92 (62)	-1.80 (47)	2.98 (43)	10.31 (54)	-11.46 (44)	0.71 (31)
IM International Equity (MF) Median	9.60	-1.90	2.58	10.54	-12.22	-0.27



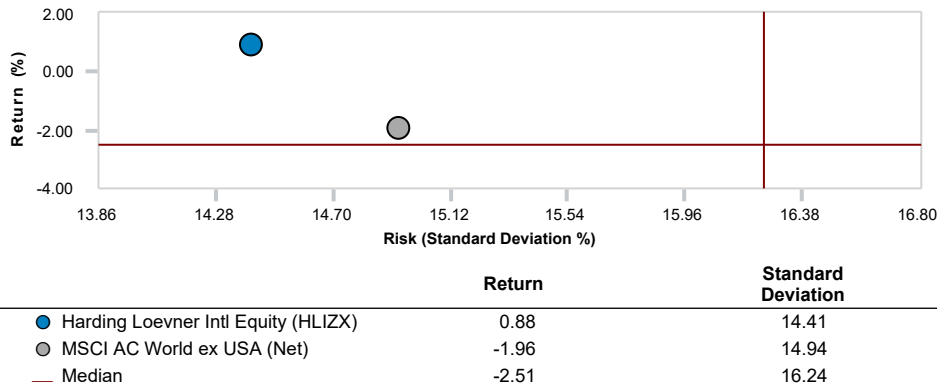
3 Yr Rolling Under/Over Performance - 5 Years



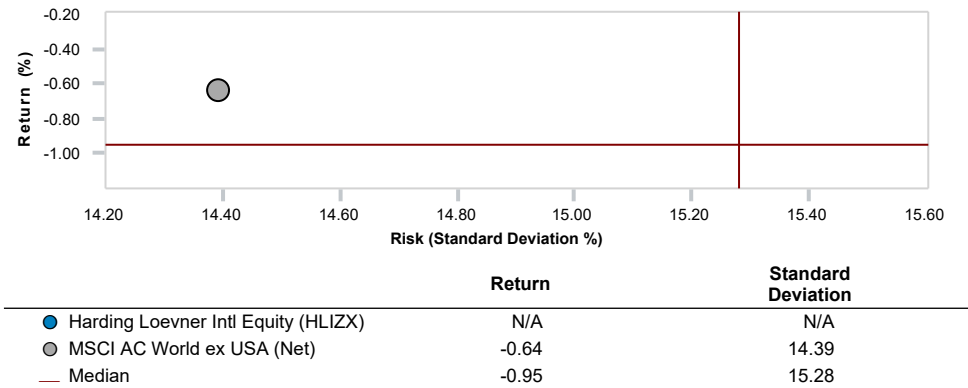
3 Yr Rolling Percentile Ranking - 5 Years



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
Harding Loevner Intl Equity (HLIZX)	3.33	102.46	88.57	2.75	0.83	0.01	0.94	11.19
MSCI AC World ex USA (Net)	0.00	100.00	100.00	0.00	N/A	-0.18	1.00	12.17

Historical Statistics - 5 Years

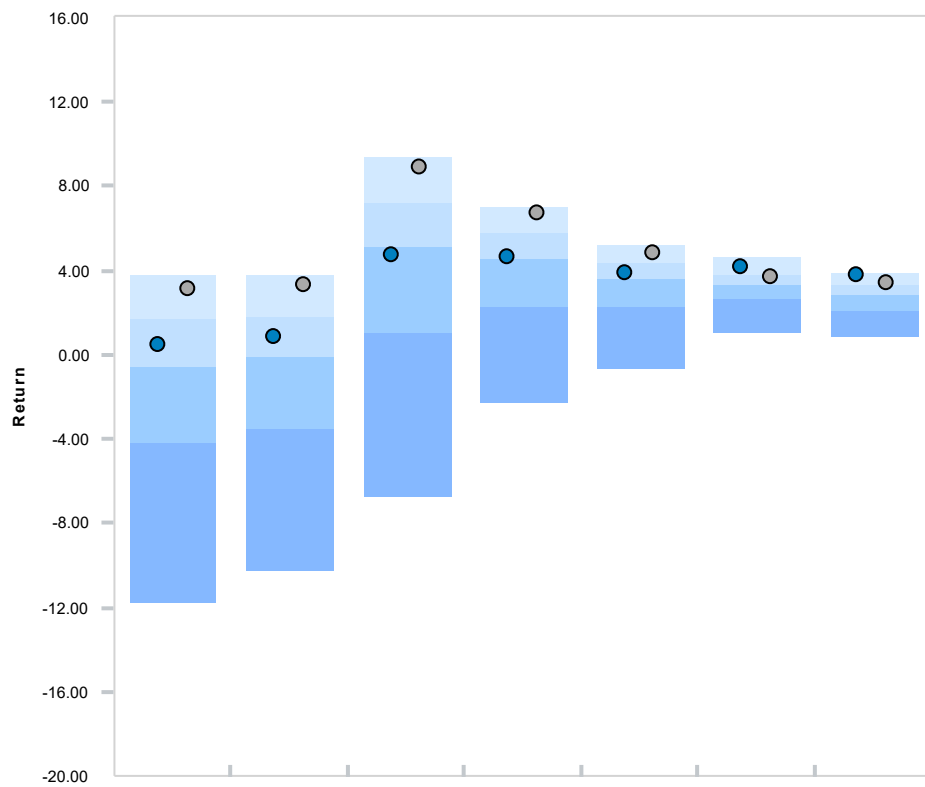
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Harding Loevner Intl Equity (HLIZX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	0.00	100.00	100.00	0.00	N/A	-0.05	1.00	10.98



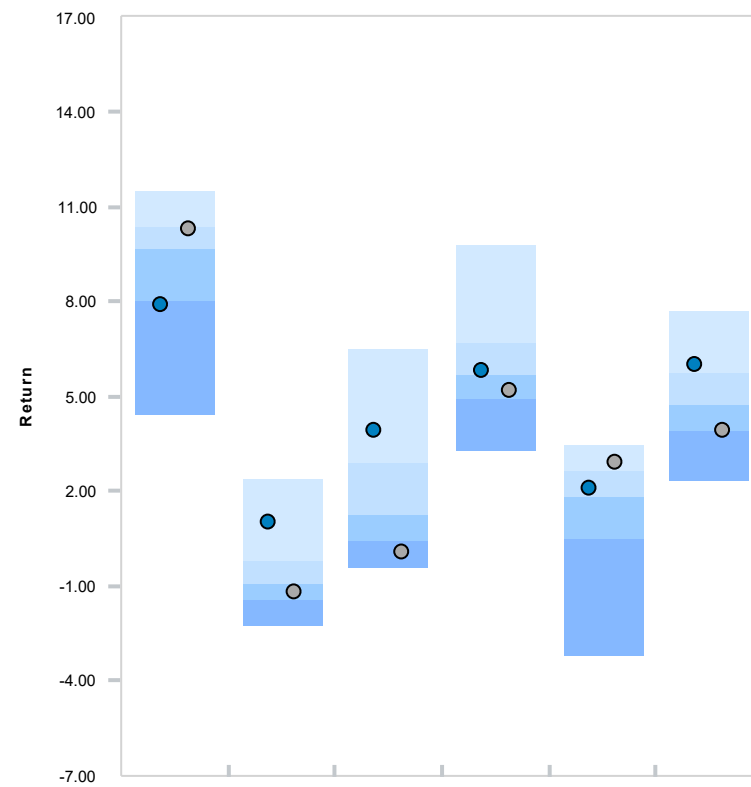
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Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF+MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fixed Income	0.43 (39)	0.88 (36)	4.76 (54)	4.65 (49)	3.88 (42)	4.16 (13)	3.76 (8)
● Total Fixed Policy	3.15 (11)	3.33 (9)	8.93 (9)	6.68 (11)	4.82 (12)	3.71 (31)	3.36 (23)
Median	-0.60	-0.10	5.13	4.55	3.58	3.29	2.79



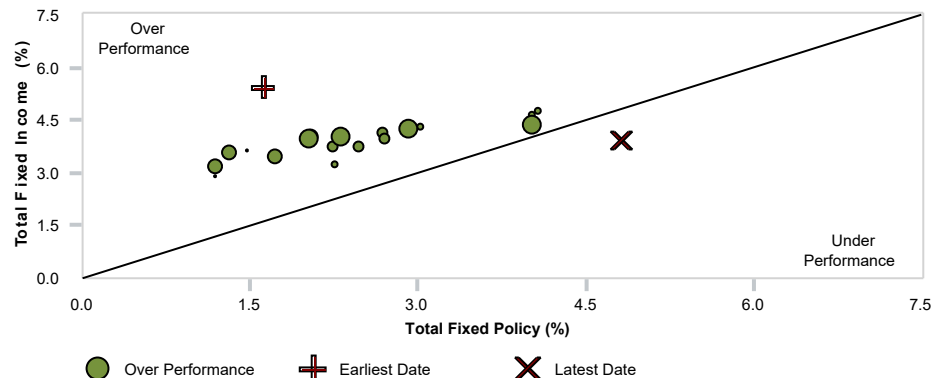
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Total Fixed Income	7.91 (77)	0.99 (12)	3.93 (19)	5.81 (48)	2.09 (44)	6.00 (22)
● Total Fixed Policy	10.30 (29)	-1.22 (64)	0.07 (84)	5.19 (68)	2.94 (17)	3.96 (74)
Median	9.67	-0.91	1.28	5.71	1.85	4.74

Comparative Performance

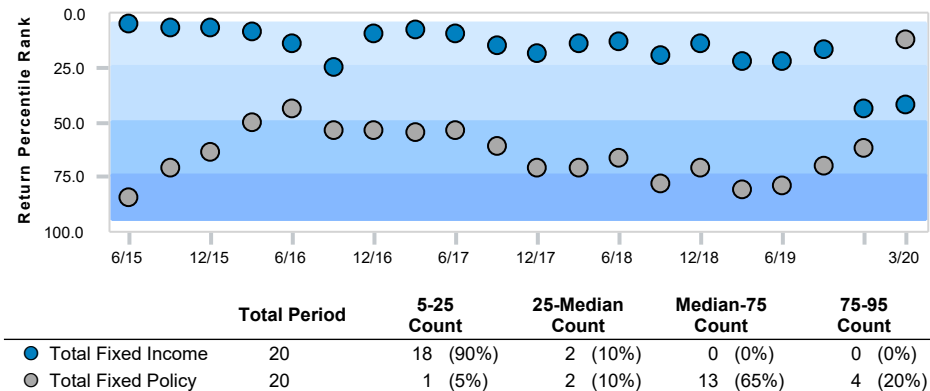
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Total Fixed Income	0.45 (44)	1.57 (75)	2.23 (89)	2.36 (93)	1.53 (15)	0.46 (35)
Total Fixed Policy	0.18 (67)	2.27 (35)	3.08 (46)	2.94 (79)	1.64 (9)	0.02 (79)
IM U.S. Broad Market Fixed Income (SA+CF+MF) Median	0.36	2.12	3.04	3.42	0.72	0.26



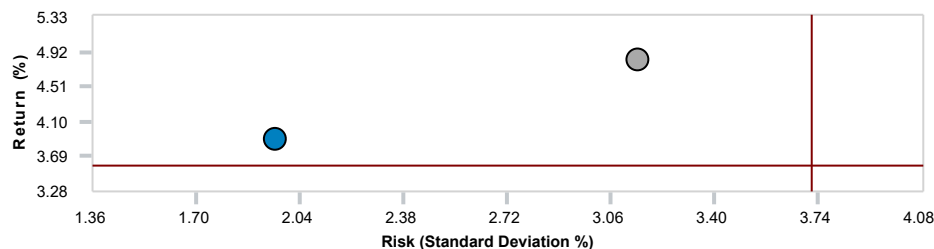
3 Yr Rolling Under/Over Performance - 5 Years



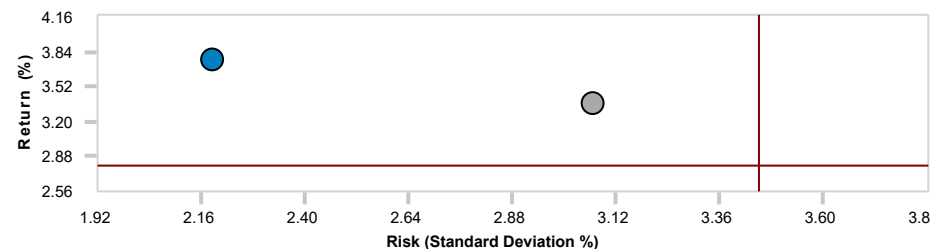
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



Historical Statistics - 3 Years

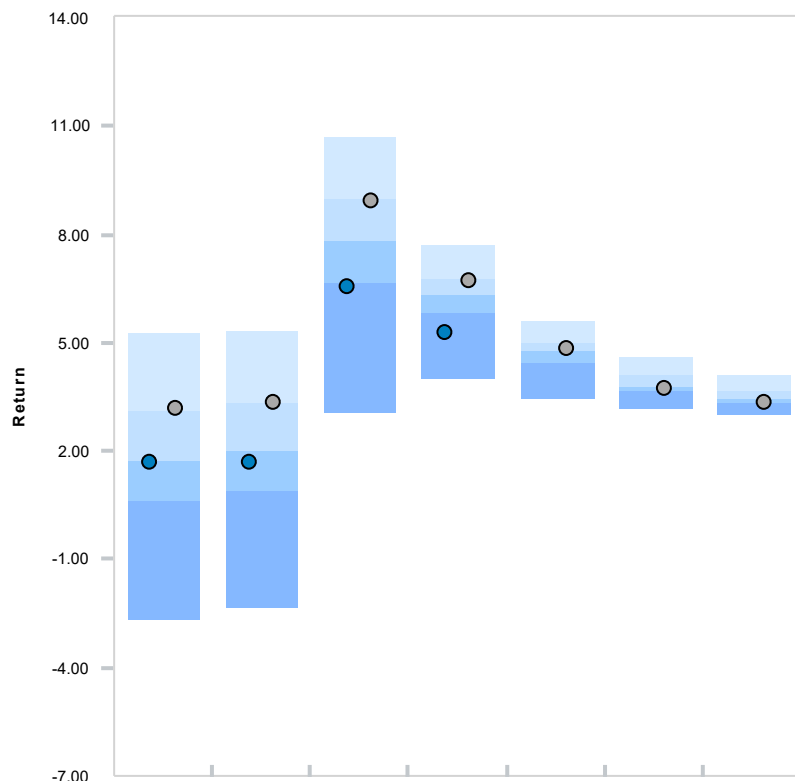
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.94	63.79	26.69	1.44	-0.48	1.03	0.50	1.03
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.95	1.00	1.26

Historical Statistics - 5 Years

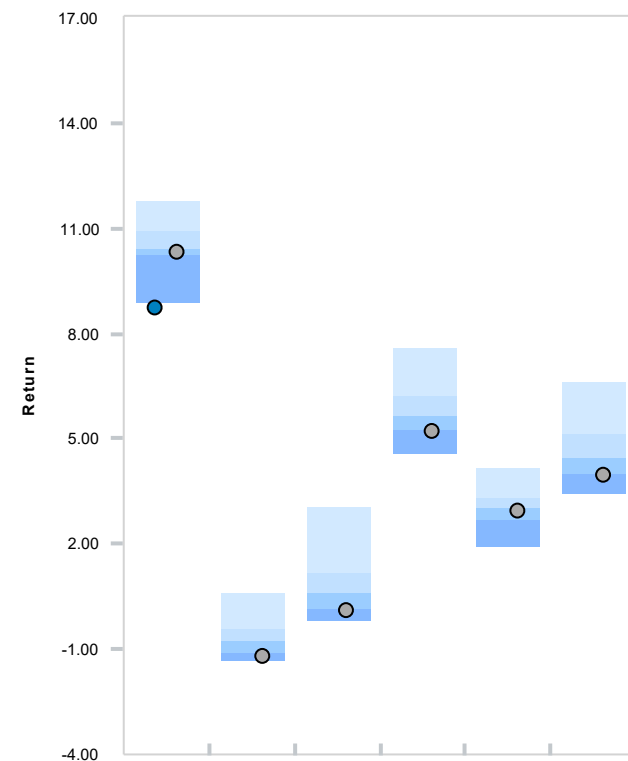
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fixed Income	1.98	74.61	24.66	1.90	0.18	1.17	0.55	1.15
Total Fixed Policy	0.00	100.00	100.00	0.00	N/A	0.73	1.00	1.58



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	1.69 (51)	1.66 (60)	6.51 (77)	5.28 (88)	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate Index	3.15 (25)	3.33 (24)	8.93 (27)	6.68 (37)	4.82 (47)	3.71 (69)	3.36 (72)
Median	1.73	1.99	7.83	6.32	4.77	3.80	3.47



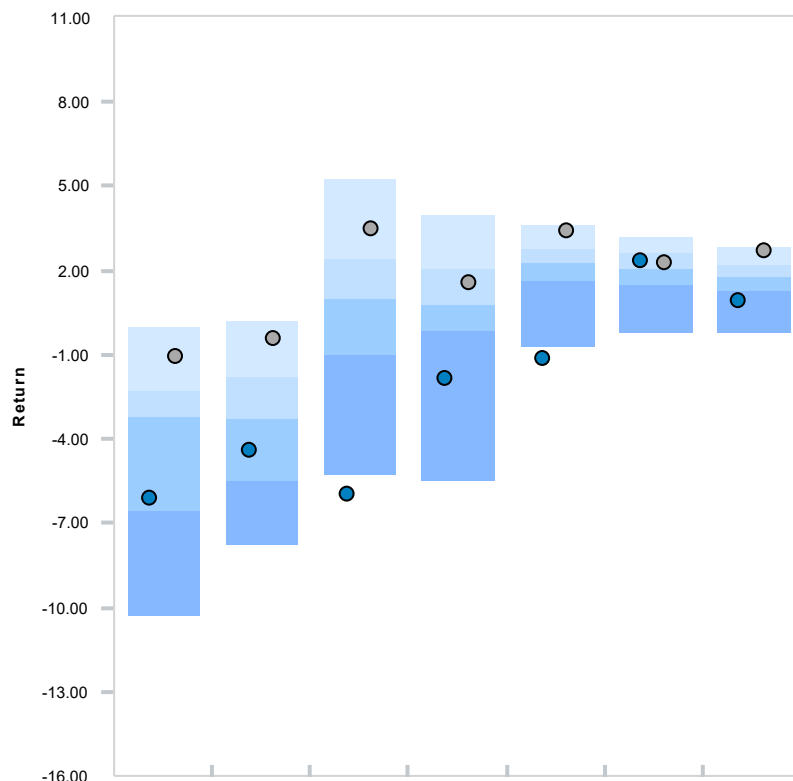
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Garcia Hamilton Fixed Income	8.74 (96)	N/A	N/A	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate Index	0.30 (70)	-1.22 (87)	0.07 (84)	5.19 (80)	2.94 (62)	3.96 (80)
Median	0.43	0.75	0.61	5.66	3.02	4.45

Comparative Performance

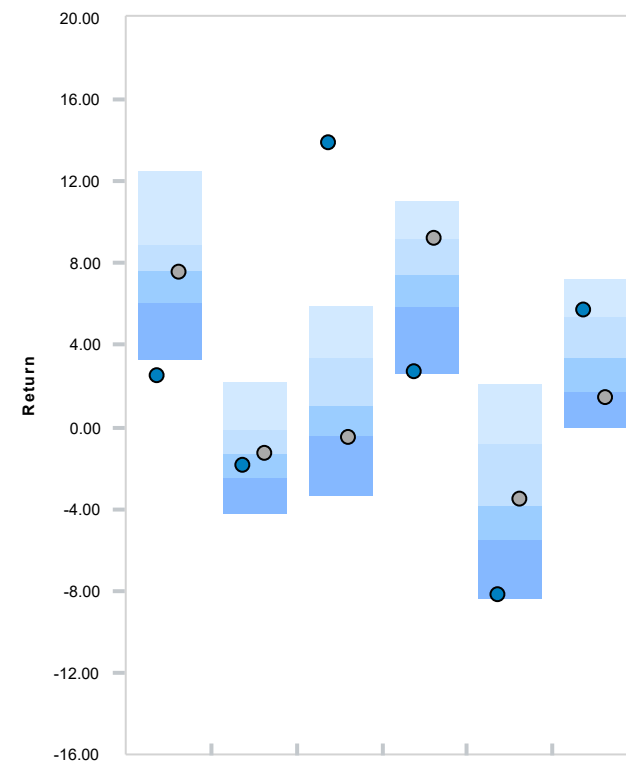
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Garcia Hamilton Fixed Income	-0.02 (88)	2.37 (41)	2.34 (96)	2.50 (96)	1.25 (66)	-0.19 (95)
Blmbg. Barc. U.S. Aggregate Index	0.18 (58)	2.27 (70)	3.08 (70)	2.94 (83)	1.64 (25)	0.02 (84)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.22	2.33	3.12	3.23	1.40	0.18



Peer Group Analysis - IM Global Fixed Income (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Templeton Global Tol Rtn (FTTRX)	-6.16 (70)	-4.39 (63)	-5.99 (96)	-1.89 (92)	-1.15 (98)	2.31 (35)	0.89 (88)
● Blmbg. Barc. Global Multiverse	-1.11 (14)	-0.47 (11)	3.47 (18)	1.57 (34)	3.37 (11)	2.25 (37)	2.67 (7)
Median	-3.20	-3.28	0.97	0.76	2.28	2.03	1.79



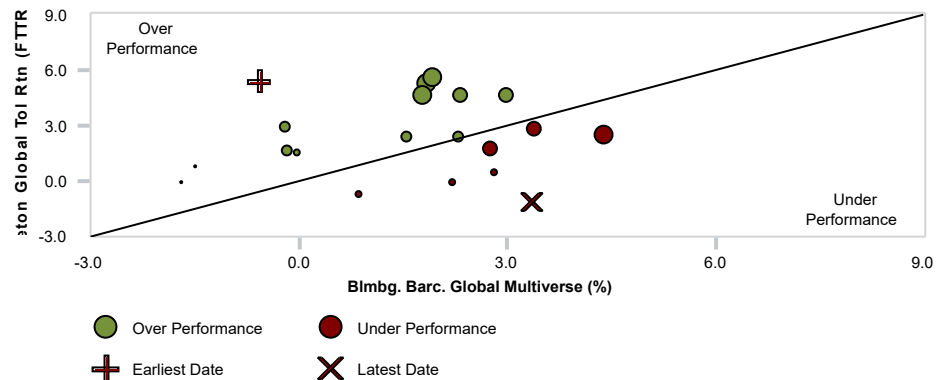
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
● Templeton Global Tol Rtn (FTTRX)	2.50 (99)	1.90 (66)	3.82 (1)	2.64 (94)	8.23 (95)	5.71 (22)
● Blmbg. Barc. Global Multiverse	7.54 (51)	1.32 (51)	0.56 (77)	9.23 (25)	3.56 (42)	1.40 (79)
Median	7.65	-1.29	1.02	7.42	3.85	3.37

Comparative Performance

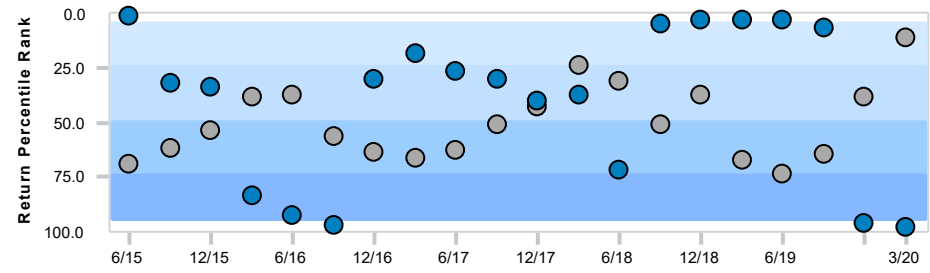
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
Templeton Global Tol Rtn (FTTRX)	1.88 (7)	-3.09 (100)	1.46 (98)	1.94 (87)	2.26 (2)	1.38 (5)
Blmbg. Barc. Global Multiverse	0.64 (57)	0.63 (58)	3.31 (55)	2.39 (76)	1.02 (23)	-0.80 (66)
IM Global Fixed Income (MF) Median	0.74	1.01	3.37	3.10	0.35	-0.39



3 Yr Rolling Under/Over Performance - 5 Years

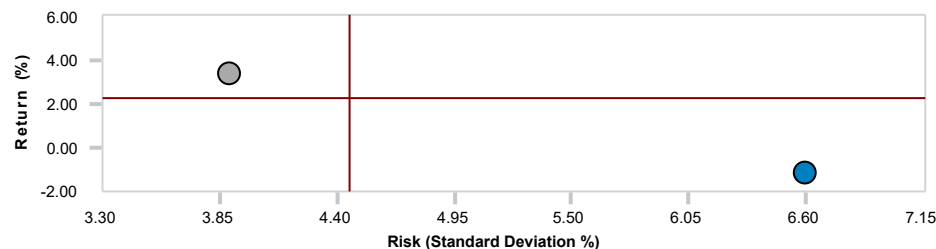


3 Yr Rolling Percentile Ranking - 5 Years



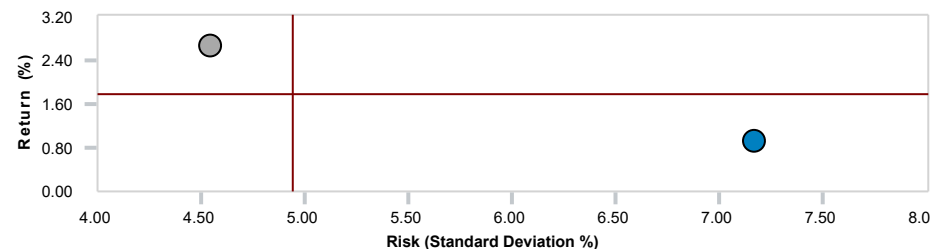
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Templeton Global Tol Rtn (FTTRX)	20	7 (35%)	7 (35%)	1 (5%)	5 (25%)
● Blmbg. Barc. Global Multiverse	20	2 (10%)	6 (30%)	12 (60%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Templeton Global Tol Rtn (FTTRX)	-1.15	6.60
● Blmbg. Barc. Global Multiverse	3.37	3.89
— Median	2.28	4.46

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Templeton Global Tol Rtn (FTTRX)	0.89	7.17
● Blmbg. Barc. Global Multiverse	2.67	4.55
— Median	1.79	4.94

Historical Statistics - 3 Years

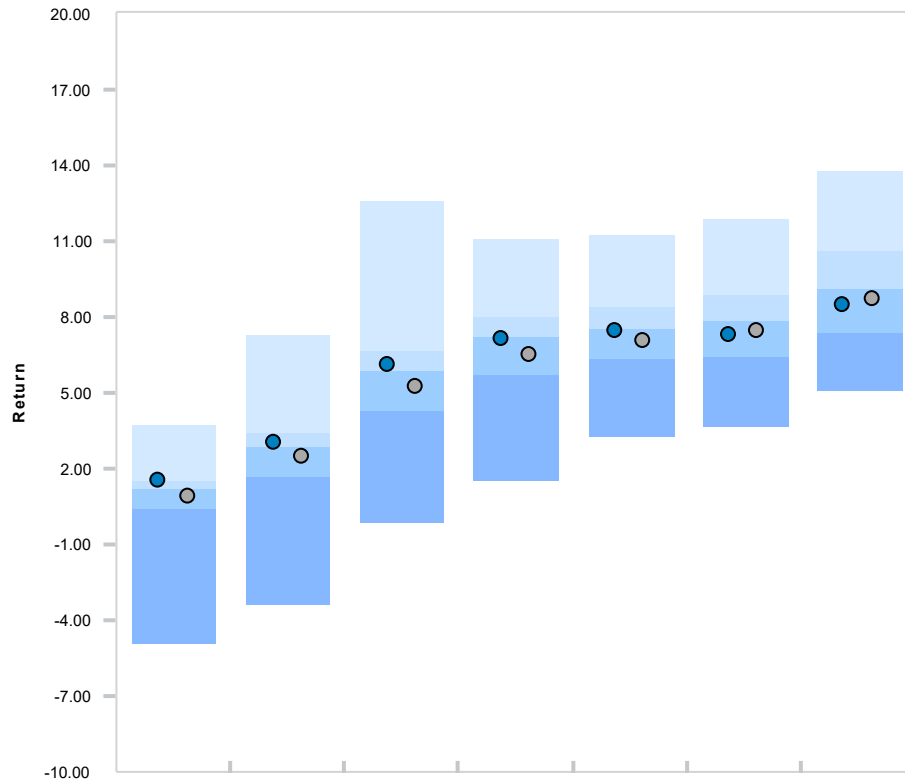
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Rtn (FTTRX)	7.47	-14.53	-3.70	-1.26	-0.58	-0.41	0.10	5.29
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.40	1.00	2.33

Historical Statistics - 5 Years

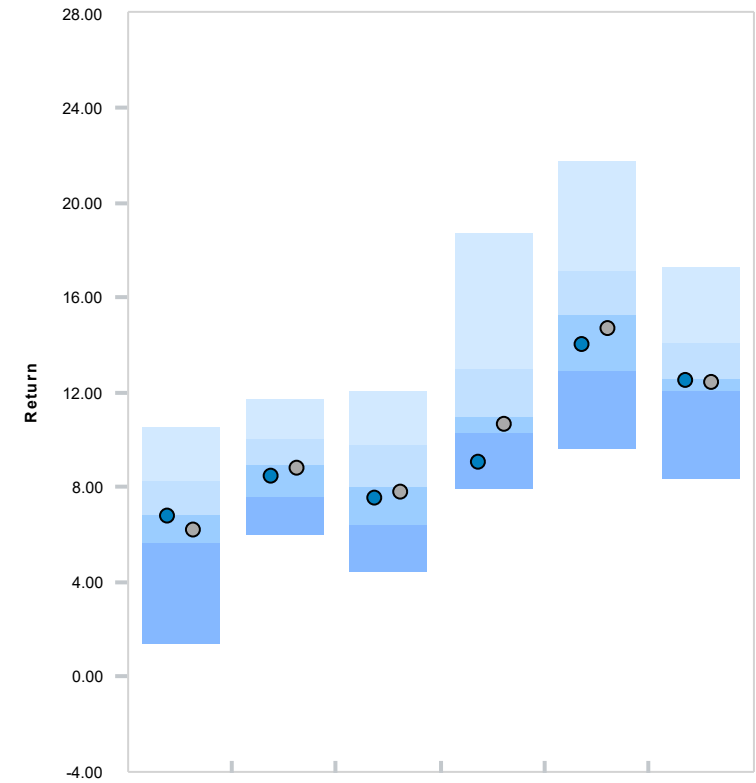
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton Global Tol Rtn (FTTRX)	8.59	-10.70	-39.90	1.27	-0.19	0.00	-0.04	5.05
Blmbg. Barc. Global Multiverse	0.00	100.00	100.00	0.00	N/A	0.35	1.00	3.04



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	1.54 (27)	3.03 (32)	6.11 (42)	7.15 (53)	7.44 (58)	7.26 (62)	8.45 (62)
NCREIF ODCE	0.90 (61)	2.44 (60)	5.25 (64)	6.49 (62)	7.04 (60)	7.44 (59)	8.74 (58)
Median	1.23	2.87	5.88	7.18	7.56	7.86	9.10



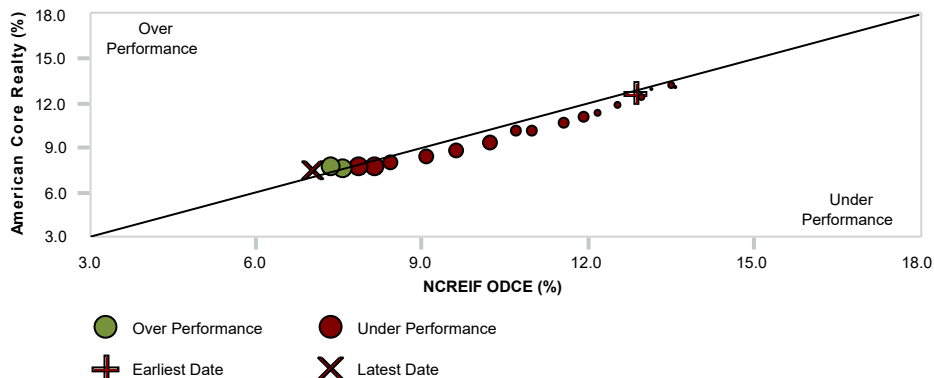
	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016	Oct-2014 To Sep-2015	Oct-2013 To Sep-2014
American Core Realty	6.81 (52)	8.50 (61)	7.52 (63)	9.04 (91)	13.98 (65)	12.49 (60)
NCREIF ODCE	6.17 (72)	8.82 (55)	7.81 (56)	10.62 (65)	14.71 (58)	12.39 (64)
Median	6.89	8.98	8.05	11.02	15.32	12.63

Comparative Performance

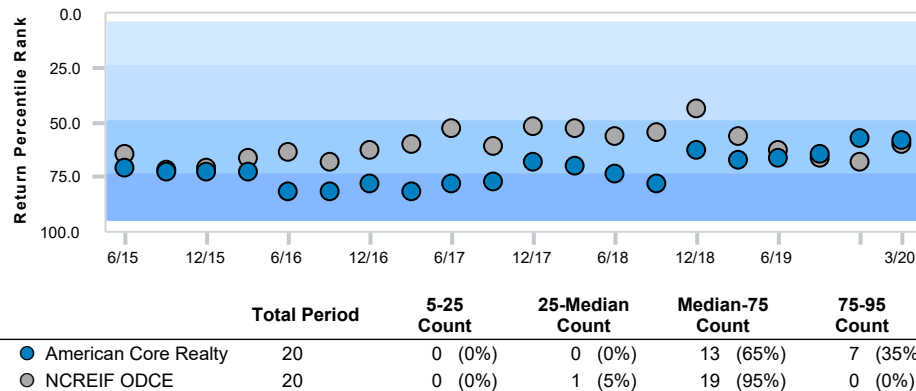
	1 Qtr Ending Dec-2019	1 Qtr Ending Sep-2019	1 Qtr Ending Jun-2019	1 Qtr Ending Mar-2019	1 Qtr Ending Dec-2018	1 Qtr Ending Sep-2018
American Core Realty	1.46 (71)	1.44 (71)	1.53 (26)	1.74 (72)	1.94 (25)	2.19 (43)
NCREIF ODCE	1.53 (63)	1.39 (75)	1.34 (57)	1.69 (76)	1.62 (58)	2.09 (51)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.65	1.75	1.41	1.99	1.73	2.09



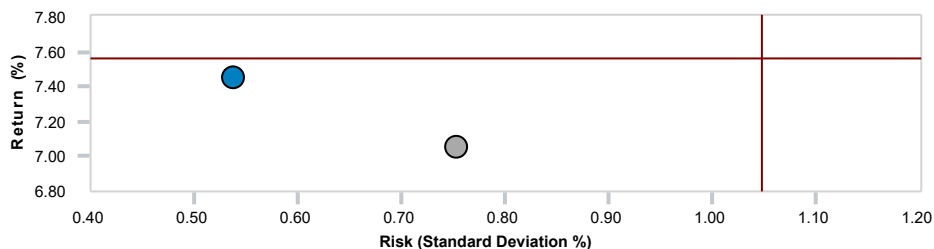
3 Yr Rolling Under/Over Performance - 5 Years



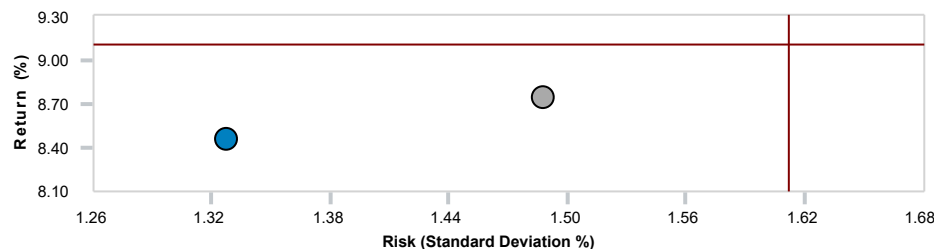
3 Yr Rolling Percentile Ranking - 5 Years



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	0.51	105.50	N/A	0.24	0.74	1.82	1.02	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	1.75	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	0.80	96.84	N/A	0.28	-0.33	1.95	0.94	0.00
NCREIF ODCE	0.00	100.00	N/A	0.00	N/A	1.93	1.00	0.00



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Delray Beach Firefighters' Retirement System
Illiquid Investments
March 31, 2020

	Market Value	Uncalled Capital Commitment	QTD IRR	Inception IRR	Inception Date	Expected Termination
*Angelo Gordon Net Lease Realty Fund III, L.P.	\$1,974,273.00	\$84,111	0	6.91	3/10/2014	4/1/2027
*Crescent Direct Lending Levered Fund	\$2,817,878.00	\$668,697	0	7.62	10/9/2014	12/1/2022
*Dune Real Estate Fund III	\$1,853,280	\$135,491	0.88	10.67	11/6/2014	12/1/2024
*Molpus Woodlands Timber	\$1,325,625.00	\$0	0	1.98	6/24/2008	5/2018-5/2022

* Market Value as of 12-31-2019
Market Value includes contributions & distributions since end of period.



Benchmark History
Investment Policy Benchmarks
As of March 31, 2020

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 March 31, 2020

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 March 31, 2020

	Market Value (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)	Fee Schedule
Vanguard Total Stock Mkt (VTSAX)	762,653	305	0.04	0.04 % of Assets
Boston LCV	15,049,927	82,775	0.55	0.55 % of First \$25 M 0.45 % of Next \$25 M 0.35 % of Next \$50 M 0.25 % Thereafter
Great Lakes SMid Cap	6,229,802	-		
Rhumblin R1000G	4,287,879	1,715	0.04	0.04 % of Assets
Polen Capital LCG	13,986,922	83,922	0.60	0.60 % of Assets
Vanguard Mid-Cap Index (VIMAX)	4,792,554	3,834	0.08	0.08 % of Assets
Harding Loevner Intl Equity (HLIZX)	15,238,850	128,006	0.84	0.84 % of Assets
Garcia Hamilton Fixed Income	23,067,015	57,668	0.25	0.25 % of Assets
Templeton Global Total Return (FTTRX)	3,879,206	25,991	0.67	0.67 % of Assets
American Core Realty	5,270,848	57,979	1.10	1.10 % of Assets
Total Fund (Composite)	100,344,081	442,194	0.44	



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.



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

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