Investment Performance Review
Period Ending June 30, 2020

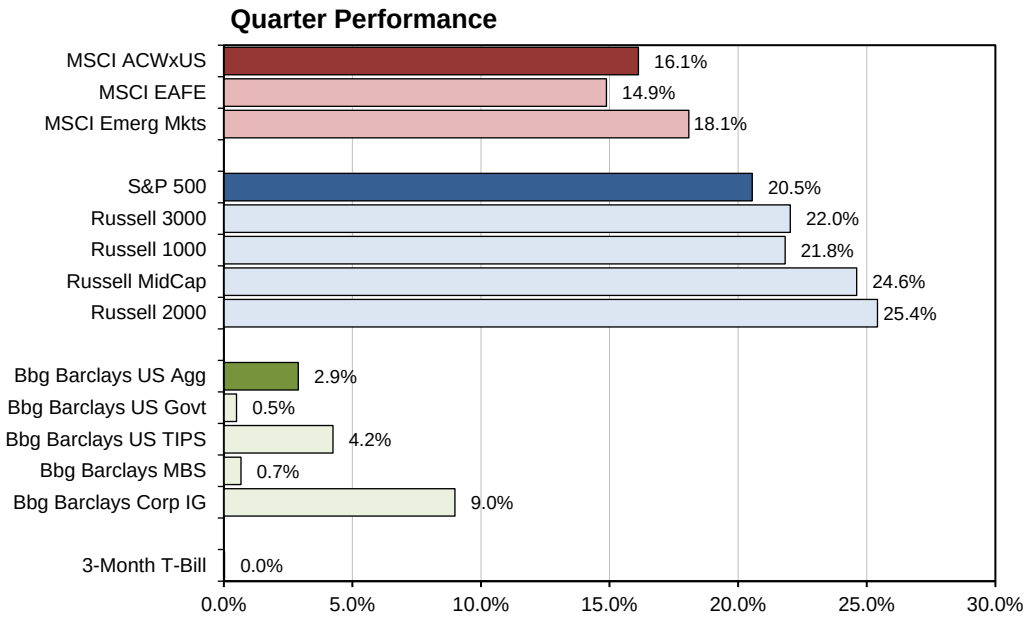
City of Falls Church Police Plan

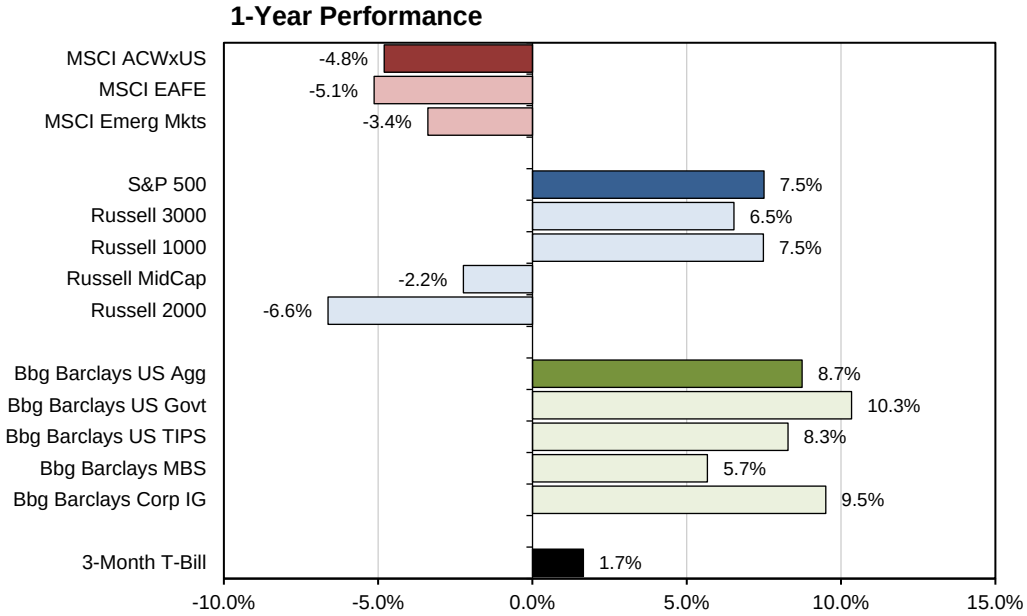
2nd Quarter 2020 Market Environment

- Broad asset class returns rebounded sharply in the 2nd quarter following their harsh drawdown during the 1st quarter. The US government and Federal Reserve Bank (Fed) implemented a myriad of programs designed to provide the economy with liquidity while also mitigating the affects from the shelter-in-place response to the COVID-19 (Coronavirus) pandemic. Despite having officially entered a recession in February, US economic data began to show improvement in May with regards to manufacturing, housing and employment as many States began the process of re-opening. Geopolitical tensions rose during the quarter following the vote by China to impose security measures in Hong Kong. Despite these risks, markets reacted positively to continued monetary easing from the Fed which supported markets directly through bond purchases and a variety of lending facilities. Within domestic equity markets, higher beta small cap stocks outperformed large cap stocks during the quarter with the Russell 2000 Index returning 25.4% versus a 20.5% return for the S&P 500 Index. US stocks also outperformed international stocks during the period. US equity results over the trailing 1-year period tell a different story with large cap stocks, returning 7.5% while mid- and small cap stocks were negative, returning -2.2% and -6.6%, respectively.

- Broad international equity markets posted positive returns for the 2nd quarter. Similar to US markets, international markets benefited from coordinated central bank policies which provided liquidity following the onset of the pandemic and subsequent re-opening of local economies. International returns also benefited from a weakening US dollar (USD) which declined against both the Euro and British pound during the period. Emerging markets outperformed relative to developed markets during the period with the MSCI Emerging Market Index returning 18.1% compared to 14.9% for the MSCI EAFE Index. Both developed and emerging market indices were negative over the 1-year period with the developed market index returning -5.1% and the emerging market index returning -3.4%.

- Fixed income returns remained strong during the 2nd quarter as investors benefited from declining interest rates globally. The broad market Bloomberg Barclays (BB) Aggregate Index gained 2.9% for the quarter as the Fed ramped up its purchases of US Treasury and Agency securities to boost market liquidity. In addition, the Fed announced that it would begin purchasing US corporate bonds to keep borrowing costs low and further support liquidity. For the quarter, the BB Corporate Investment Grade Index returned 9.0% as investors continued to seek out higher yielding assets. Over the trailing 1-year period, the bond market outperformed stocks with the BB Aggregate posting a solid return of 8.7%, while corporate bonds posted a higher 9.5%. US TIPS, which have been a laggard for some time, posted a respectable 8.3% over the trailing 1-year period despite low expectations for inflation.





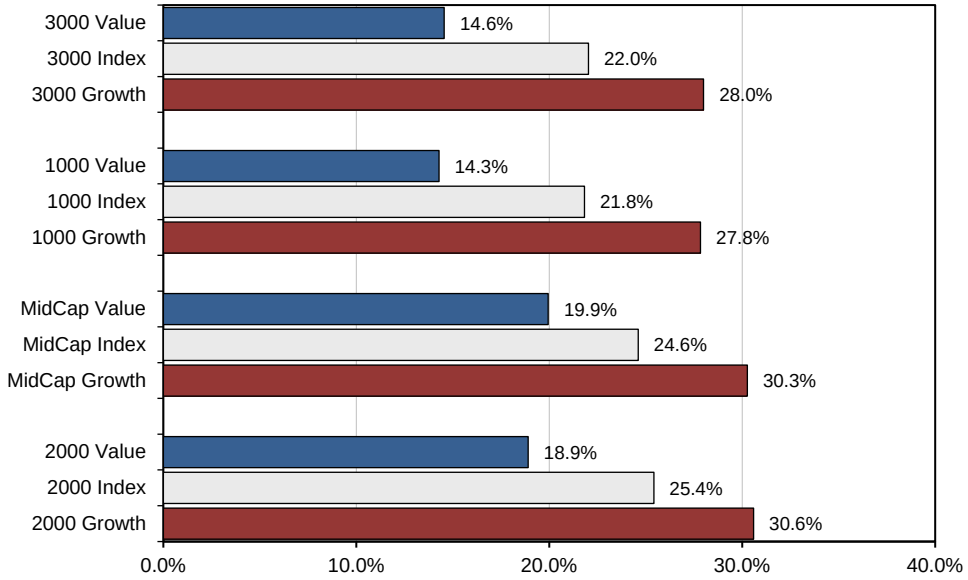
Source: Investment Metrics

- US equity returns were strongly positive during the 2nd quarter, but results varied considerably across the style and capitalization spectrum. Following one of the sharpest drawdowns in history during the previous quarter, various capitalization and style indices experienced their strongest quarterly performance in over 20-years. The US labor market showed dramatic improvement in May and June with more than 7 million jobs added for the period. However, the unemployment rate remained high at 11.1% in June with more than 14.7 million people unemployed. While States have taken steps to re-open by loosening stay-at-home orders, several States such as Florida, Texas, and Arizona, have experienced significant increases in Coronavirus cases since the orders were eased causing many States to consider rollbacks. Several potential treatments and vaccines are in various stages of development that will hopefully prove effective in treating the virus.

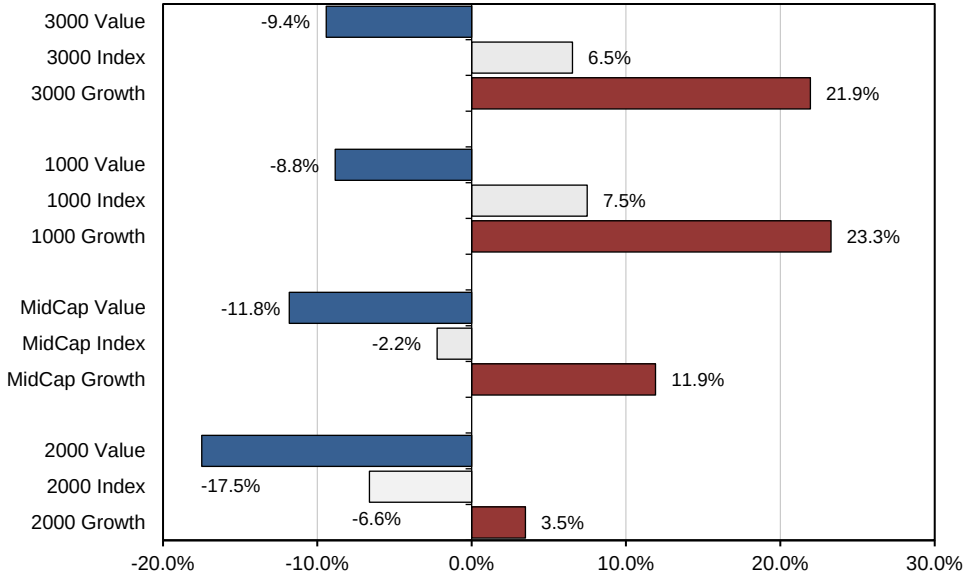
- During the quarter, small capitalization (cap) stocks broadly outperformed large cap stocks across the style spectrum. The small cap Russell 2000 Index gained a stellar 25.4% for the quarter versus a return of 21.8% for the large cap Russell 1000 Index. Investors were attracted to potentially faster growing small cap stocks which were disproportionately sold during the 1st quarter's drawdown. Small cap stocks have historically outperformed when the market enters a recovery phase. When viewed over the most recent 1-year period the trend has reversed with large cap stocks far outpacing their small cap counterparts. The Russell 1000 posted a return of 7.5% over the trailing 1-year relative to a negative return of -6.6% for the Russell 2000.

- Value stocks continued their recent trend of underperformance relative to growth stocks during the 2nd quarter recovery as investors gravitated toward companies perceived to have the potential to grow revenue and earnings faster. Within large cap, growth significantly outperformed value due to favorable weightings to the strong-performing technology and consumer discretionary sectors. The small cap Russell 2000 Growth Index was the best performing style index for the quarter, returning an outsized 30.6%. At the other extreme, the large cap value index posted the quarter's weakest relative style performance with a still solid 14.3% return. Results over the 1-year period also reflect the strength of the "growth over value" trend with value benchmarks posting negative results across the capitalization spectrum with a range of relative underperformance to growth of greater than 20% at each level.

Quarter Performance - Russell Style Series



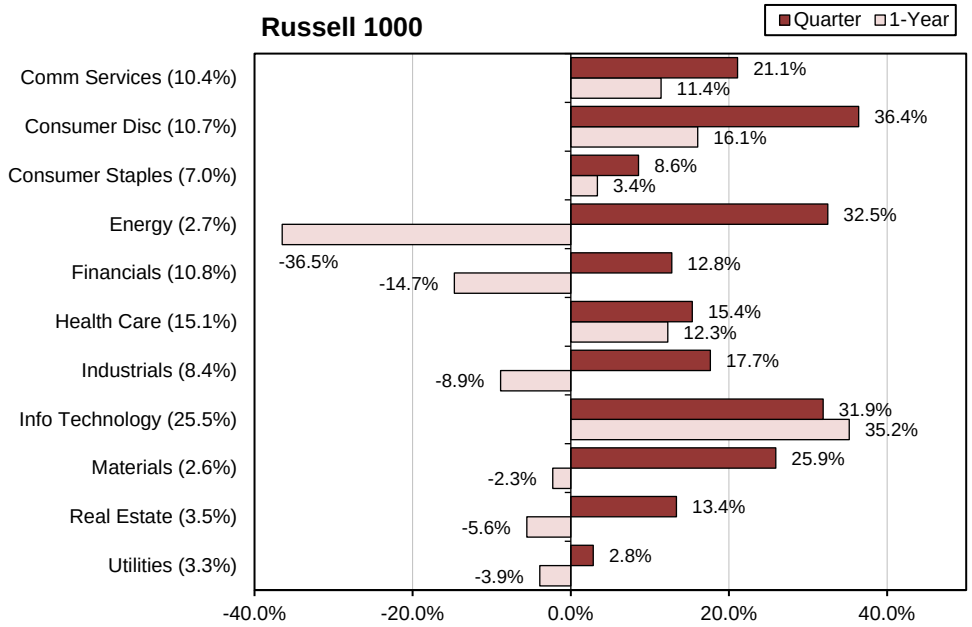
1-Year Performance - Russell Style Series

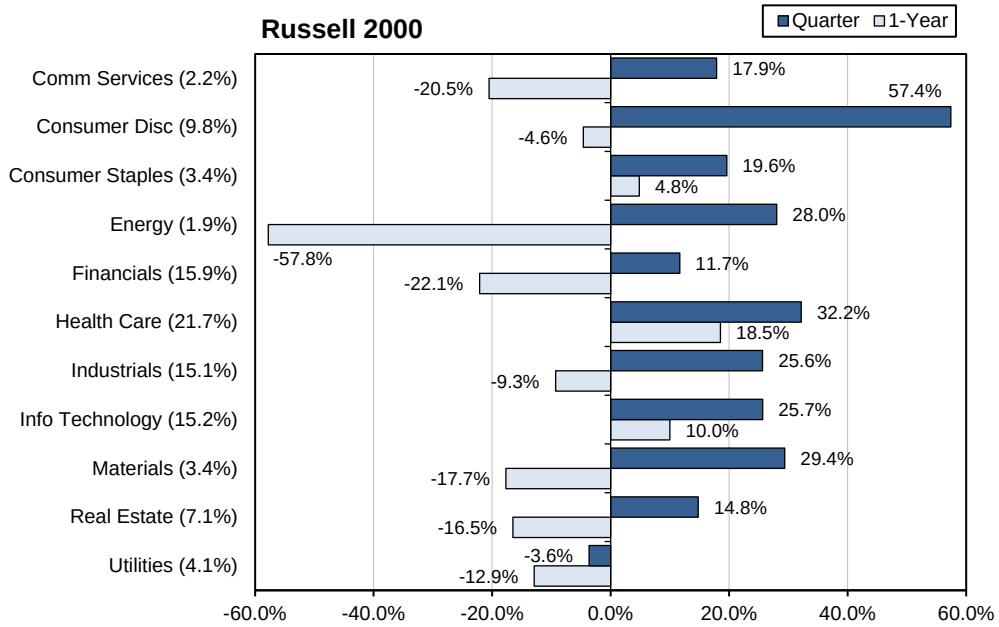


Source: Investment Metrics

- All eleven economic sectors within the large cap Russell 1000 Index were positive for the 2nd quarter with four sectors outpacing the return of the broad index. Growth-oriented sectors such as consumer discretionary and technology were some of the best performers for the quarter returning 36.4% and 32.5%, respectively. The energy sector, which had lagged considerably during the 1st quarter sell-off, also posted a strong return of 32.5% for the quarter as oil prices recovered on expectations of future economic growth. Defensive sectors such as consumer staples and utilities were the lowest performers during the period, but still posted positive returns of 8.6% and 2.8%, respectively. Traditional growth sectors also showed their dominance in the trailing 1-year period. The technology, consumer discretionary, health care and communication services sectors returned 35.2%, 16.1%, 15.4% and 11.4%, respectively, versus the core Russell 1000 index return of 7.5%. In contrast, traditional value sectors such as energy and financials, posted returns of -36.5% and -14.7%, respectively, for the trailing 1-year period.

- Ten of eleven small cap sectors posted results of greater than 10% for the 2nd quarter with only the utilities sector falling into negative territory with a return of -3.6%. In addition, seven of eleven economic sectors in the small cap index outpaced their respective large cap sector performance. While ten small cap sectors posting returns of more than 10% would be impressive in any period, six of them managed to exceed the 25.4% return of the broad Russell 2000 index. Like large caps, sectors sensitive to the consumer and economic growth were the strongest performers as investors gravitated toward those companies with the highest growth potential. Performance in consumer discretionary and health care sectors was particularly impressive with returns of 57.4% and 32.2% respectively for the quarter. Within the health care sector, many biotechnology stocks rose on hopes and speculation regarding potentially viable treatments or vaccines for the Coronavirus. Over the trailing 1-year period, the majority of small cap sector returns were negative with only three sectors contributing positive absolute performance. The traditional growth sectors also led the small cap index's performance over the trailing 1-year period with health care posting 18.5% and the technology sector returning 10%. On the opposite end of the spectrum, while the energy sector's 28.0% return for the quarter is certainly an impressive recovery, the sector led the 1-year trailing sector performance declines with the return of -57.8%.





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

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

As of June 30, 2020

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	5.30%	29.4%	53.8%	Information Technology
Apple Inc	5.19%	43.8%	86.5%	Information Technology
Amazon.com Inc	4.07%	41.5%	45.7%	Consumer Discretionary
Facebook Inc A	1.90%	36.1%	17.7%	Communication Services
Alphabet Inc A	1.48%	22.0%	31.0%	Communication Services
Alphabet Inc Class C	1.46%	21.6%	30.8%	Communication Services
Johnson & Johnson	1.29%	8.0%	3.8%	Health Care
Berkshire Hathaway Inc Class B	1.21%	-2.4%	-16.3%	Financials
Visa Inc Class A	1.13%	20.1%	12.0%	Information Technology
Procter & Gamble Co	1.01%	9.4%	11.8%	Consumer Staples

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Deckers Outdoor Corp	0.31%	46.6%	11.6%	Consumer Discretionary
LHC Group Inc	0.30%	24.3%	45.8%	Health Care
BJ's Wholesale Club Holdings Inc	0.29%	46.3%	41.2%	Consumer Staples
Churchill Downs Inc	0.29%	29.3%	16.2%	Consumer Discretionary
Novavax Inc	0.27%	513.8%	1322.4%	Health Care
MyoKardia Inc	0.27%	106.1%	92.7%	Health Care
Helen Of Troy Ltd	0.27%	30.9%	44.4%	Consumer Discretionary
SiteOne Landscape Supply Inc	0.27%	54.8%	64.5%	Industrials
EastGroup Properties Inc	0.26%	14.3%	4.9%	Real Estate
Ultragenyx Pharmaceutical Inc	0.25%	76.1%	23.2%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Fastly Inc	0.02%	348.5%	319.8%	Information Technology
Wayfair Inc Class A	0.05%	269.8%	35.3%	Consumer Discretionary
Apache Corp	0.02%	223.9%	-51.9%	Energy
Targa Resources Corp	0.02%	192.7%	-44.7%	Energy
Etsy Inc	0.04%	176.4%	73.1%	Consumer Discretionary
Bill.com Holdings Inc Ordinary Shares	0.01%	163.8%	N/A	Information Technology
Livongo Health Inc	0.01%	163.5%	N/A	Health Care
Immunomedics Inc	0.03%	162.9%	155.5%	Health Care
Antero Midstream Corp	0.01%	159.5%	-45.7%	Energy
Thor Industries Inc	0.02%	156.2%	87.0%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Workhorse Group Inc	0.06%	860.8%	491.5%	Consumer Discretionary
Veritone Inc	0.02%	537.8%	77.8%	Information Technology
Novavax Inc	0.27%	513.8%	1322.4%	Health Care
Overstock.com Inc	0.06%	469.7%	109.0%	Consumer Discretionary
Vaxart Inc	0.02%	400.0%	1220.7%	Health Care
U.S. Auto Parts Network Inc	0.01%	394.9%	592.8%	Consumer Discretionary
Camping World Holdings Inc Class A	0.05%	380.5%	131.4%	Consumer Discretionary
Macrogenics Inc	0.08%	379.7%	64.5%	Health Care
Aspira Womens Health Inc	0.01%	361.3%	331.5%	Health Care
Retractable Technologies Inc	0.01%	350.0%	868.9%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Empire State Realty Trust Inc Class A	0.00%	-20.7%	-50.8%	Real Estate
Xerox Holdings Corp	0.01%	-18.0%	-54.8%	Information Technology
Hawaiian Electric Industries Inc	0.01%	-15.5%	-14.7%	Utilities
Biogen Inc	0.15%	-15.4%	14.4%	Health Care
Cincinnati Financial Corp	0.03%	-14.3%	-36.6%	Financials
General Electric Co	0.21%	-13.8%	-34.7%	Industrials
Coty Inc Class A	0.00%	-13.4%	-65.5%	Consumer Staples
EchoStar Corp	0.00%	-12.5%	-24.3%	Information Technology
NovoCure Ltd	0.02%	-11.9%	-6.2%	Health Care
Molson Coors Beverage Co B	0.02%	-11.9%	-36.5%	Consumer Staples

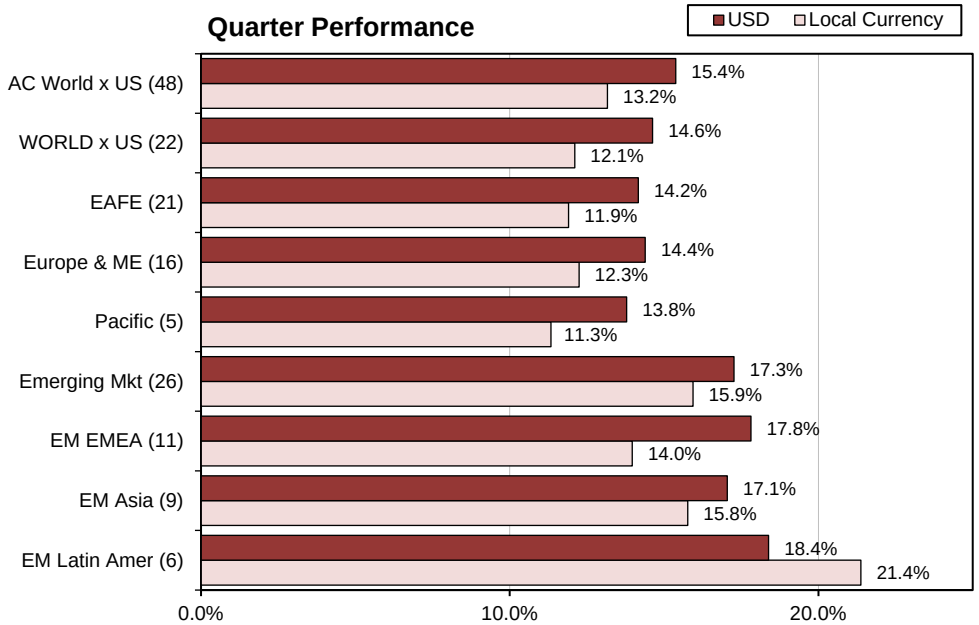
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Chesapeake Energy Corp	0.00%	-85.8%	-98.7%	Energy
Hertz Global Holdings Inc	0.01%	-77.2%	-91.2%	Industrials
SeaChange International Inc	0.00%	-59.4%	5.6%	Information Technology
CorEnergy Infrastructure Trust Inc	0.01%	-50.0%	-75.6%	Real Estate
Evofem Biosciences Inc	0.01%	-46.8%	-57.4%	Health Care
Recro Pharma Inc	0.00%	-44.3%	-48.6%	Health Care
NextCure Inc	0.02%	-42.2%	43.1%	Health Care
NeuroBo Pharmaceuticals Inc	0.00%	-42.1%	-60.2%	Health Care
LendingClub Corp	0.02%	-42.0%	-72.3%	Financials
ProAssurance Corp	0.04%	-41.9%	-58.6%	Financials

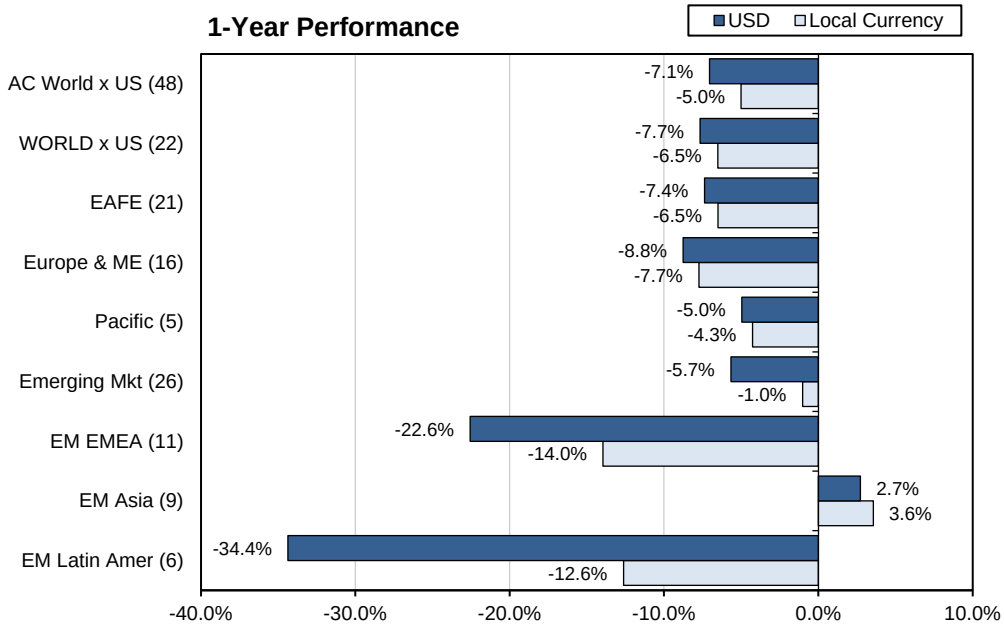
Source: Morningstar Direct

International and Regional Market Index Performance (Country Count)

As June 30, 2020

- Broad international equity index returns were positive in US dollar (USD) and local currency terms for the 2nd quarter as international markets rebounded following the meaningful drawdown during the previous period. USD denominated international equity index performance also benefited from a weakening USD which fell against most major currencies during the period. The MSCI ACWI ex US Index posted a return of 15.4% in USD and a slightly lower 13.2% in local currency terms. Like US equity market performance, international equity benchmarks also benefited from a strong monetary policy response from central banks in reaction to the Coronavirus. Since the virus ravaged Asia and Europe earlier than the US, many countries also began the process of re-opening their respective economies earlier than the US, resulting in improving economic datapoints. Both the ECB and Bank of Japan committed to significant lending programs designed to provide the capital markets with liquidity while continuing to purchase bonds under their existing economic recovery programs.
- Results for developed market international indices were strongly positive in both USD and local currency terms during the 2nd quarter. The MSCI EAFE Index returned 14.2% in USD and 11.0% in local currency terms. The spread of the pandemic slowed in Europe during the quarter allowing countries like Austria and Italy to begin the process of re-opening. ECB President Christine Lagarde announced that the bank was expanding its bond purchase program to $1.5 trillion, and in the UK, the Bank of England increased its bond purchasing program by roughly $125 billion. Both measures were targeted at providing the capital markets with liquidity.
- Emerging markets outperformed developed markets by just over 3% during the 2nd quarter. The MSCI Emerging Markets Index rose by 17.3% in USD terms and 15.9% in local currency. Emerging markets benefited relative to developed markets during the quarter as global economic activity increased despite increased geopolitical tensions from China's new security measures in Hong Kong. The rebound in commodity prices in anticipation of future economic growth was particularly beneficial to the emerging countries dependent on export demand.
- In contrast to the strong 2nd quarter returns, the 1-year trailing performance of international equity indices was broadly negative with only the Emerging Market Asia Index posting a positive return of 2.7% in USD for the period. The 1-year trailing currency impact on international index performance also contrasts with the 2nd quarter's USD weakness. Persistent strength of the USD over the 1-year period was a drag on the results realized by domestic holders of international equities for each of the indices tracked in the graph. This USD strength is particularly visible in the Emerging Market Middle East & Africa (EMEA) Index and Emerging Market Latin America Index.





Source: MSCI Global Index Monitor (Returns are Net)

US Dollar International Index Attribution & Country Detail

As of June 30, 2020

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	12.3%	-6.5%
Consumer Discretionary	11.3%	17.6%	-6.9%
Consumer Staples	12.0%	8.5%	-3.8%
Energy	3.4%	-1.5%	-41.3%
Financials	16.1%	12.6%	-20.4%
Health Care	14.5%	13.8%	17.6%
Industrials	14.5%	17.5%	-8.0%
Information Technology	8.3%	23.0%	12.4%
Materials	7.3%	22.7%	-8.6%
Real Estate	3.2%	7.9%	-21.4%
Utilities	4.0%	11.4%	2.4%
Total	**100.0%**	**14.2%**	**-7.4%**

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.6%	16.9%	2.6%
Consumer Discretionary	12.6%	19.8%	-0.6%
Consumer Staples	10.0%	9.4%	-4.8%
Energy	4.8%	8.5%	-34.5%
Financials	18.1%	10.3%	-22.4%
Health Care	10.7%	16.0%	18.3%
Industrials	11.4%	17.1%	-8.9%
Information Technology	11.0%	24.1%	19.2%
Materials	7.6%	24.6%	-8.7%
Real Estate	2.8%	6.8%	-21.4%
Utilities	3.5%	10.3%	-3.2%
Total	**100.0%**	**15.4%**	**-7.1%**

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	13.5%	22.6%	14.2%
Consumer Discretionary	17.4%	22.1%	12.7%
Consumer Staples	6.5%	12.6%	-9.1%
Energy	6.0%	21.6%	-25.3%
Financials	19.1%	6.6%	-27.4%
Health Care	4.3%	37.1%	33.5%
Industrials	4.7%	16.0%	-15.9%
Information Technology	16.9%	19.9%	21.3%
Materials	6.9%	23.3%	-16.2%
Real Estate	2.6%	3.6%	-20.3%
Utilities	2.3%	9.2%	-20.3%
Total	**100.0%**	**17.3%**	**-5.7%**

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	25.4%	16.5%	11.5%	0.9%
United Kingdom	14.1%	9.1%	7.4%	-20.8%
France	10.9%	7.1%	15.3%	-11.4%
Switzerland	10.3%	6.7%	9.7%	3.8%
Germany	9.3%	6.0%	24.5%	-4.4%
Australia	6.7%	4.4%	28.6%	-14.6%
Netherlands	4.3%	2.8%	24.0%	7.1%
Hong Kong	3.4%	2.2%	7.7%	-17.4%
Sweden	3.1%	2.0%	19.5%	0.8%
Spain	2.4%	1.6%	9.6%	-22.5%
Denmark	2.3%	1.5%	18.8%	20.7%
Italy	2.3%	1.5%	15.0%	-13.1%
Singapore	1.1%	0.7%	7.3%	-23.8%
Finland	1.0%	0.7%	18.6%	-3.6%
Belgium	0.9%	0.6%	11.9%	-23.3%
Ireland	0.6%	0.4%	19.6%	3.6%
Israel	0.6%	0.4%	20.0%	0.8%
Norway	0.5%	0.3%	13.2%	-25.1%
New Zealand	0.3%	0.2%	28.0%	19.6%
Austria	0.2%	0.1%	20.6%	-28.2%
Portugal	0.2%	0.1%	9.2%	4.2%
Total EAFE Countries	**100.0%**	**64.9%**	**14.2%**	**-7.4%**
Canada		6.5%	19.4%	-10.5%
Total Developed Countries		**71.4%**	**14.6%**	**-7.7%**
China		11.7%	14.2%	11.2%
Taiwan		3.5%	20.8%	17.8%
Korea		3.3%	19.3%	-1.4%
India		2.3%	20.4%	-18.2%
Brazil		1.5%	22.6%	-35.3%
South Africa		1.1%	25.8%	-26.9%
Russia		0.9%	17.6%	-17.7%
Saudi Arabia		0.8%	12.2%	-22.7%
Thailand		0.7%	22.4%	-25.8%
Malaysia		0.5%	12.6%	-14.8%
Mexico		0.5%	10.6%	-26.8%
Indonesia		0.4%	22.4%	-26.0%
Philippines		0.2%	19.3%	-21.4%
Qatar		0.2%	6.7%	-13.1%
Poland		0.2%	20.8%	-31.2%
Chile		0.2%	13.5%	-36.9%
United Arab Emirates		0.2%	14.4%	-21.7%
Turkey		0.1%	18.3%	-8.5%
Peru		0.1%	5.5%	-35.7%
Hungary		0.1%	14.1%	-18.3%
Colombia		0.1%	7.2%	-43.6%
Argentina		0.0%	43.7%	-47.0%
Greece		0.0%	9.6%	-35.1%
Czech Republic		0.0%	24.1%	-26.8%
Egypt		0.0%	4.9%	-13.7%
Pakistan		0.0%	11.7%	-17.3%
Total Emerging Countries		**28.6%**	**17.3%**	**-5.7%**
Total ACWIxUS Countries		**100.0%**	**15.4%**	**-7.1%**

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

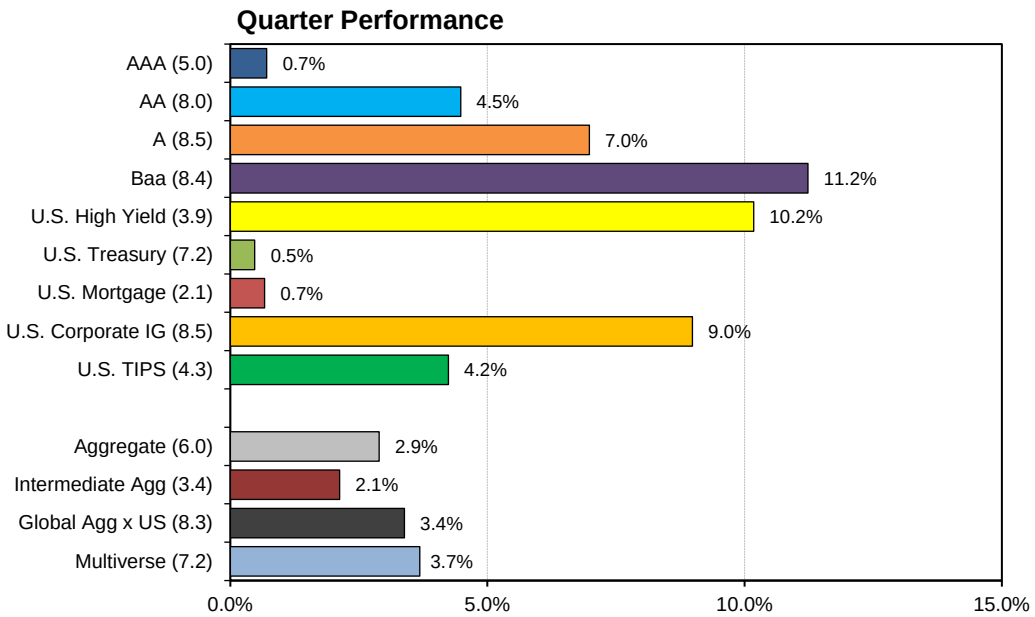
Domestic Bond Sector & Broad/Global Bond Market Performance (Duration)

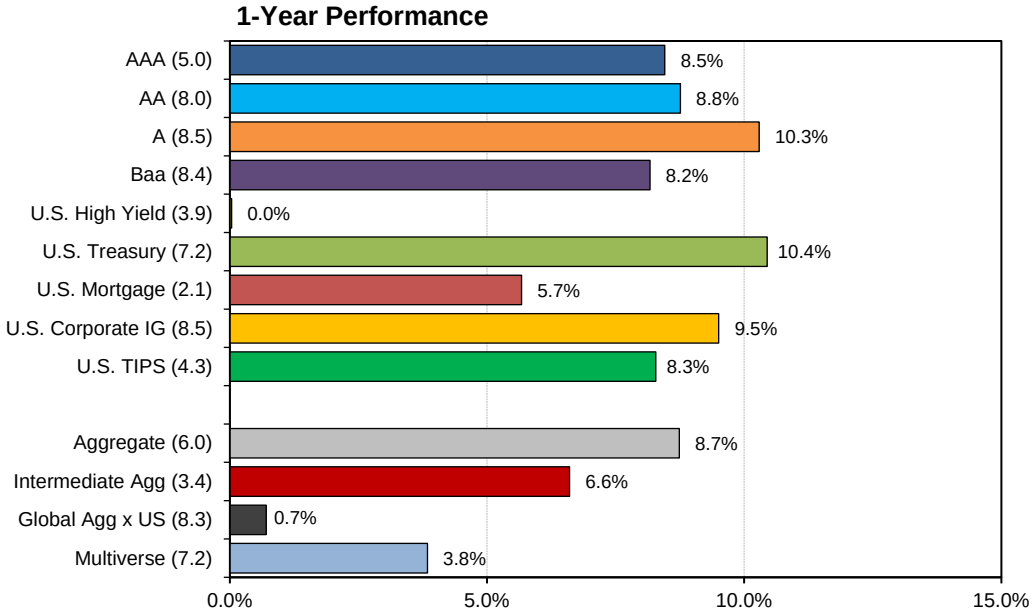
As of June 30, 2020

- Broad fixed income benchmarks rose sharply in the 2nd quarter as interest rates fell globally in response to the economic implications of the pandemic. The Fed continued purchasing bonds under programs announced during the first quarter to support capital markets and mitigate the damage to the economy. With US interest rates already near zero, the Fed announced several additional lending facilities to bridge the gap until economic activity picks up. These combined programs swelled the Fed's balance sheet to $7.0 trillion, an increase of more than $3 trillion since the beginning of the year. Late in the quarter the Fed commented that the economy faces a number of future challenges and expects interest rates to remain low for a prolonged period of time. Last August, the US Treasury yield curve inverted with the 2-year yield briefly surpassing the 10-year yield. Historically, a 2-10 inversion in the yield curve has preceded a US recession within the next 6-24 months. Recently, the National Bureau of Economic Research reported that the US economy entered a recession in February. While long-term US interest rates have moved lower recently, the Treasury yield curve has actually steepened which historically portends better economic growth.

- During the quarter, the Bloomberg Barclays (BB) US Aggregate Index returned 2.9%. Within the broad BB US Aggregate index, the US Treasury and mortgage-backed segments dramatically underperformed the corporate bond sector during the 2nd quarter. Investment grade corporate credit returned a strong 9.0% due to narrowing credit spreads and a high demand for yield. In contrast, over the 1-year period, US Treasuries outpaced both corporate and mortgage-backed issues with US Treasuries posting 10.4% versus returns of 9.5% and 5.7% for corporate and mortgage bonds, respectively. Outside of domestic markets, the BB Global Aggregate ex US Index increased by 3.4% for the quarter and 0.7% for the year.

- Within investment grade credit, lower quality issues outperformed higher quality issues during the 2nd quarter. Lower quality issues benefitted from both spread compression and investors seeking out higher yields when compared to US Treasury or mortgage bonds. On an absolute basis without adjusting for the duration differences in the sub-indices, Baa rated credit was the best performing investment grade (IG) segment, returning 11.2% for the quarter. AAA issues were the worst performing IG credit segment, returning just 0.7%. Despite a much lower duration, the high yield index returned 10.2% for the quarter. These issues benefited from credit spreads narrowing significantly following the drawdown in the first quarter. Outside of high yield performance, which was flat on the year, credit returns were all impressive with each segment returning greater than 8% for the period.



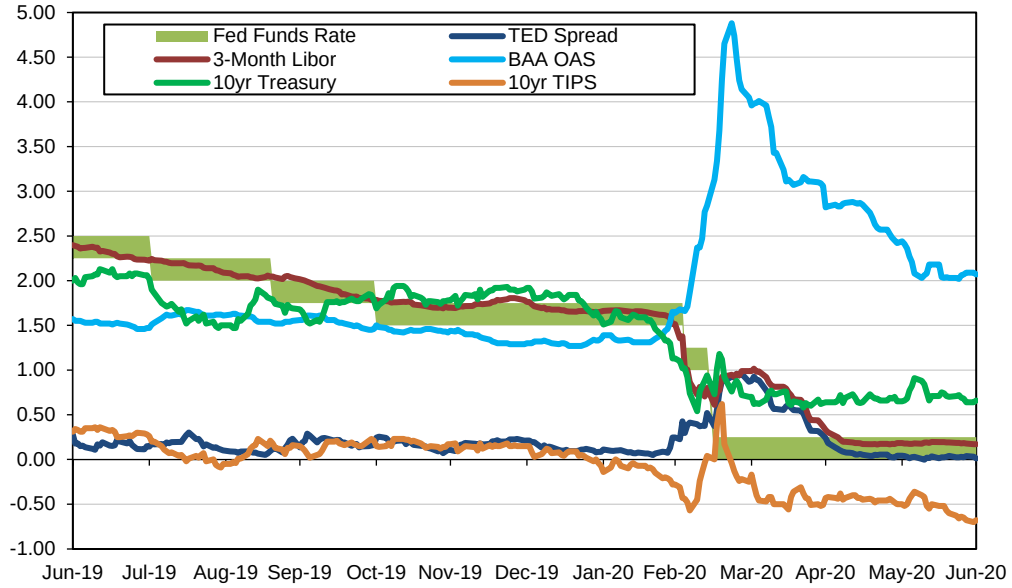


Source: Bloomberg

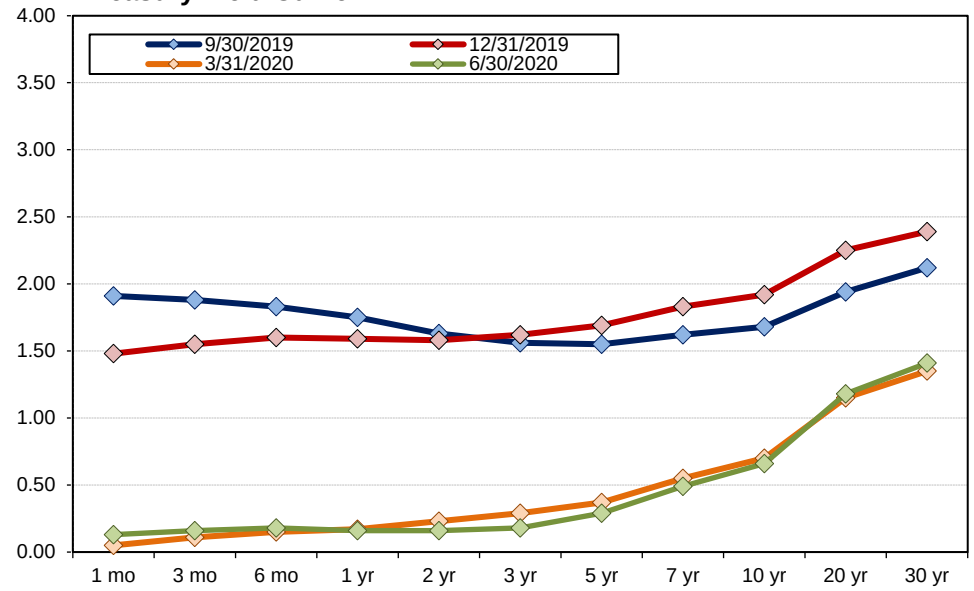
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the yield graph to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) fell from yields of greater than 2.0%, to a low of roughly 0.5% before ending the quarter at 0.66%. A decrease in yields provides a boost to bond performance. 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 investment grade issues. This line illustrates an abrupt increase in credit spreads beginning in early 2020 as investors moved to higher quality assets during the quarter's risk-off environment. Spreads increased dramatically in February following the US onset of the pandemic, reaching a high of 4.88% on March 23rd. Since then, spreads have steadily declined as markets stabilized following the aggressive actions taken by the Treasury and Fed. During the quarter, the BAA OAS spread fell by 1.98%. Similar to Treasury yield declines, spread tightening in corporate bonds is equivalent to an interest rate decrease, which causes bond prices to rise. This compression produces an additional tailwind for corporate bond index returns. The green band across the graph illustrates the decrease in the Fed Funds Rate range due to the recent US monetary policy easing. The Fed began the year with a rate range of 1.50%-1.75%, which it aggressively cut to a range of 0.00%-0.25% during the 1st quarter, where it remained at the end of the quarter.

- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The higher yields and curve inversion experienced in the 2nd half of 2019 have given way to 2020's extremely low interest rate environment. The curve continued to flatten during the 2nd quarter, particularly between the 1- and 5-year maturities. On the longer end of the curve, rates rose slightly during the period as the US Treasury issued longer-dated bonds to lock in low borrowing costs. An increase in Treasury supply, in conjunction with concerns about the potential for rising inflation, resulted in slightly higher yields during the quarter.

1-Year Trailing Market Rates



Treasury Yield Curve



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

Police - 1 Quarter

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
32,029,471	-232,810	4,561,996	81,076	36,358,657	14.25

Basic - 1 Quarter

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
98,703,040	-1,196,722	14,251,506	235,728	111,757,823	14.44

OPEB - 1 Quarter

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
14,023,561	-	2,297,560	68,658	16,321,121	16.38

Police - 1 Year

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
36,332,052	-1,263,252	1,289,857	742,825	36,358,657	3.63

Basic - 1 Year

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
113,093,035	-5,206,280	3,871,069	1,664,787	111,757,823	3.61

OPEB - 1 Year

Beginning Market Value $	Net Cash Flow $	Gain/Loss $	Income $	Ending Market Value $	Gross Return
15,764,250	-	556,871	318,842	16,321,121	3.53

1 Quarter	Market Value 04/01/2020	Net Flows	Return On Investment	Market Value 06/30/2020
Police Total Fund	**32,029,471**	**-232,810**	**4,561,996**	**36,358,657**
Total Domestic Equity	**15,464,399**	**-244,629**	**3,403,997**	**18,623,768**
SKBA	317	-317	-	-
JPM Equity Inc (OIEJX)	2,771,246	-	367,791	3,139,037
Vanguard Equity Inc (VEIRX)	2,806,191	-	355,502	3,161,694
MFS Growth	6,424,009	-244,312	1,584,454	7,764,151
Principal Mid Cap	1,270,612	-	315,898	1,586,511
Summit Creek	2,192,024	-	780,352	2,972,376
Total International Equity	**5,607,225**	**-**	**902,321**	**6,509,546**
Templeton	2,052,373	-	263,125	2,315,498
MFS Int'l	2,360,211	-	408,520	2,768,732
International Emerging Market				
Schroder	1,194,640	-	230,676	1,425,317
Total Domestic Fixed Income	**4,565,341**	**-**	**128,639**	**4,693,980**
Northern Interm Fixed	2,258,525	-	63,982	2,322,507
Northern Core Fixed	2,306,816	-	64,657	2,371,473
Securian	-	-	-	-
Total Real Estate	**2,824,248**	**-8,380**	**-47,651**	**2,768,217**
Clarion Lion Properties	1,668,215	-4,334	-30,371	1,633,510
Principal Enhanced Property Fund, LP	1,156,033	-4,046	-17,280	1,134,707
Infrastructure				
Lazard	1,571,220	-	175,351	1,746,571
Total Cash	**1,997,038**	**20,199**	**-662**	**2,016,575**
Securian (Cash)	1,364,074	22,959	-673	1,386,360
City Reserve - Police account	540,642	-23	10	540,629
Cash	92,322	-2,737	2	89,587

Fiscal Year To Date

	Market Value 07/01/2019	Net Flows	Return On Investment	Market Value 06/30/2020
Police Total Fund	**36,332,052**	**-1,263,252**	**1,289,857**	**36,358,657**
Total Domestic Equity	**19,901,893**	**-2,266,621**	**988,495**	**18,623,768**
SKBA	6,997,869	-6,822,761	-175,108	-
JPM Equity Inc (OIEJX)	-	3,406,346	-267,309	3,139,037
Vanguard Equity Inc (VEIRX)	-	3,406,346	-244,652	3,161,694
MFS Growth	7,543,866	-1,166,541	1,386,826	7,764,151
Principal Mid Cap	2,364,185	-770,010	-7,664	1,586,511
Summit Creek	2,995,974	-320,000	296,402	2,972,376
Total International Equity	**6,713,444**	**-**	**-203,898**	**6,509,546**
Templeton	2,596,152	-	-280,655	2,315,498
MFS Int'l	2,679,973	-	88,759	2,768,732
International Emerging Market				
Schroder	1,437,319	-	-12,002	1,425,317
Total Domestic Fixed Income	**5,510,834**	**-1,185,100**	**368,246**	**4,693,980**
Northern Interm Fixed	2,165,842	-	156,666	2,322,507
Northern Core Fixed	2,179,796	-	191,677	2,371,473
Securian	1,165,197	-1,185,100	19,903	-
Total Real Estate	**1,599,379**	**1,067,184**	**101,654**	**2,768,217**
Clarion Lion Properties	1,599,379	-17,168	51,299	1,633,510
Principal Enhanced Property Fund, LP	-	1,084,352	50,355	1,134,707
Infrastructure				
Lazard	1,835,206	-76,440	-12,195	1,746,571
Total Cash	**771,296**	**1,197,725**	**47,554**	**2,016,575**
Securian (Cash)	-	1,344,038	42,322	1,386,360
City Reserve - Police account	-	537,518	3,111	540,629
Cash	771,296	-683,830	2,121	89,587

1 Year	Market Value 07/01/2019	Net Flows	Return On Investment	Market Value 06/30/2020
Police Total Fund	**36,332,052**	**-1,263,252**	**1,289,857**	**36,358,657**
Total Domestic Equity	**19,901,893**	**-2,266,621**	**988,495**	**18,623,768**
SKBA	6,997,869	-6,822,761	-175,108	-
JPM Equity Inc (OIEJX)	-	3,406,346	-267,309	3,139,037
Vanguard Equity Inc (VEIRX)	-	3,406,346	-244,652	3,161,694
MFS Growth	7,543,866	-1,166,541	1,386,826	7,764,151
Principal Mid Cap	2,364,185	-770,010	-7,664	1,586,511
Summit Creek	2,995,974	-320,000	296,402	2,972,376
Total International Equity	**6,713,444**	**-**	**-203,898**	**6,509,546**
Templeton	2,596,152	-	-280,655	2,315,498
MFS Int'l	2,679,973	-	88,759	2,768,732
International Emerging Market				
Schroder	1,437,319	-	-12,002	1,425,317
Total Domestic Fixed Income	**5,510,834**	**-1,185,100**	**368,246**	**4,693,980**
Northern Interm Fixed	2,165,842	-	156,666	2,322,507
Northern Core Fixed	2,179,796	-	191,677	2,371,473
Securian	1,165,197	-1,185,100	19,903	-
Total Real Estate	**1,599,379**	**1,067,184**	**101,654**	**2,768,217**
Clarion Lion Properties	1,599,379	-17,168	51,299	1,633,510
Principal Enhanced Property Fund, LP	-	1,084,352	50,355	1,134,707
Infrastructure				
Lazard	1,835,206	-76,440	-12,195	1,746,571
Total Cash	**771,296**	**1,197,725**	**47,554**	**2,016,575**
Securian (Cash)	-	1,344,038	42,322	1,386,360
City Reserve - Police account	-	537,518	3,111	540,629
Cash	771,296	-683,830	2,121	89,587

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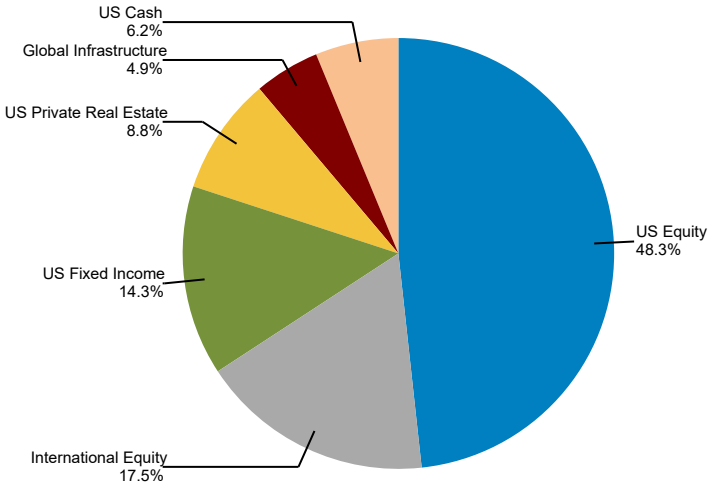
Asset Allocation Attributes

	Domestic Equity		International Equity		Emerging Equity		Domestic Fixed Income		Real Estate		Infrastructure		Cash Equivalent		Total Fund	
	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%
Police Total Fund	**18,490,853**	**50.9**	**5,084,229**	**14.0**	**1,425,317**	**3.9**	**4,693,980**	**12.9**	**2,746,802**	**7.6**	**1,746,571**	**4.8**	**2,170,905**	**6.0**	**36,358,657**	**100.0**
Total Domestic Equity	**18,490,853**	**99.3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**132,915**	**0.7**	**18,623,768**	**51.2**
JPM Equity Inc (OIEJX)	3,139,037	100.0	-	-	-	-	-	-	-	-	-	-	-	-	3,139,037	8.6
Vanguard Equity Inc (VEIRX)	3,161,694	100.0	-	-	-	-	-	-	-	-	-	-	-	-	3,161,694	8.7
MFS Growth	7,746,861	99.8	-	-	-	-	-	-	-	-	-	-	17,290	0.2	7,764,151	21.4
Principal Mid Cap	1,586,511	100.0	-	-	-	-	-	-	-	-	-	-	-	-	1,586,511	4.4
Summit Creek	2,856,751	96.1	-	-	-	-	-	-	-	-	-	-	115,625	3.9	2,972,376	8.2
Total International Equity	**-**	**-**	**5,084,229**	**78.1**	**1,425,317**	**21.9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6,509,546**	**17.9**
Templeton	-	-	2,315,498	100.0	-	-	-	-	-	-	-	-	-	-	2,315,498	6.4
MFS Int'l	-	-	2,768,732	100.0	-	-	-	-	-	-	-	-	-	-	2,768,732	7.6
International Emerging Market																
Schroder	-	-	-	-	1,425,317	100.0	-	-	-	-	-	-	-	-	1,425,317	3.9
Total Domestic Fixed Income	**-**	**-**	**-**	**-**	**-**	**-**	**4,693,980**	**100.0**	**-**	**-**	**-**	**-**	**-**	**-**	**4,693,980**	**12.9**
Northern Interm Fixed	-	-	-	-	-	-	2,322,507	100.0	-	-	-	-	-	-	2,322,507	6.4
Northern Core Fixed	-	-	-	-	-	-	2,371,473	100.0	-	-	-	-	-	-	2,371,473	6.5
Total Real Estate	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2,746,802**	**99.2**	**-**	**-**	**21,415**	**0.8**	**2,768,217**	**7.6**
Clarion Lion Properties	-	-	-	-	-	-	-	-	1,622,800	99.3	-	-	10,710	0.7	1,633,510	4.5
Principal Enhanced Property Fund, LP	-	-	-	-	-	-	-	-	1,124,002	99.1	-	-	10,705	0.9	1,134,707	3.1
Infrastructure																
Lazard	-	-	-	-	-	-	-	-	-	-	1,746,571	100.0	-	-	1,746,571	4.8
Total Cash	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2,016,575**	**100.0**	**2,016,575**	**5.5**
Securian (Cash)	-	-	-	-	-	-	-	-	-	-	-	-	1,386,360	100.0	1,386,360	3.8
City Reserve - Police account	-	-	-	-	-	-	-	-	-	-	-	-	540,629	100.0	540,629	1.5
Cash	-	-	-	-	-	-	-	-	-	-	-	-	89,587	100.0	89,587	0.2

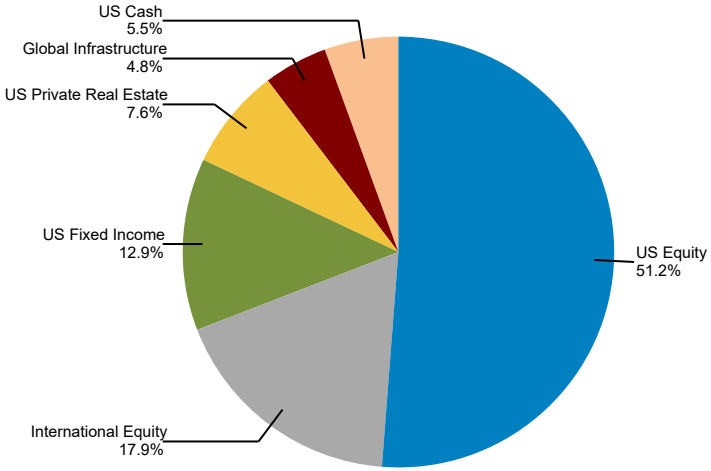
March 31, 2020 : $32,029,471



Allocation

	Market Value	Allocation
US Equity	15,464,399	48.3
International Equity	5,607,225	17.5
US Fixed Income	4,565,341	14.3
US Private Real Estate	2,824,248	8.8
Global Infrastructure	1,571,220	4.9
US Cash	1,997,038	6.2

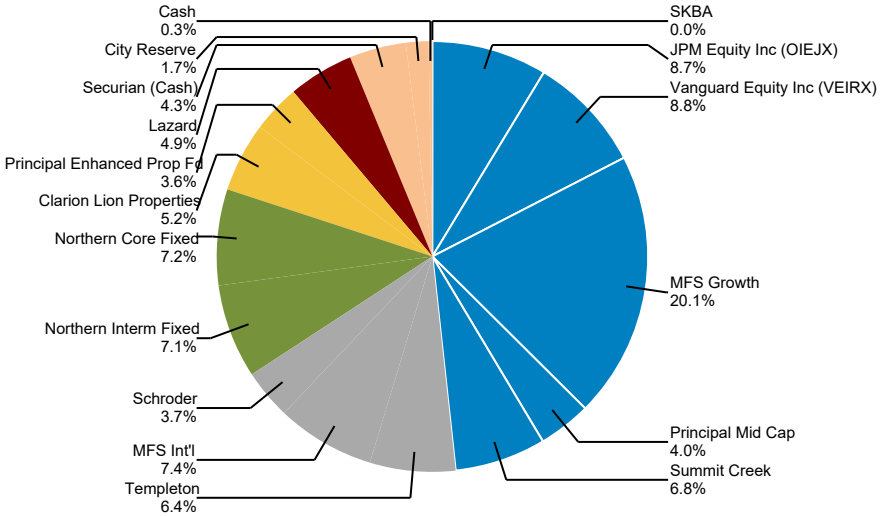
June 30, 2020 : $36,358,657



Allocation

	Market Value	Allocation
US Equity	18,623,768	51.2
International Equity	6,509,546	17.9
US Fixed Income	4,693,980	12.9
US Private Real Estate	2,768,217	7.6
Global Infrastructure	1,746,571	4.8
US Cash	2,016,575	5.5

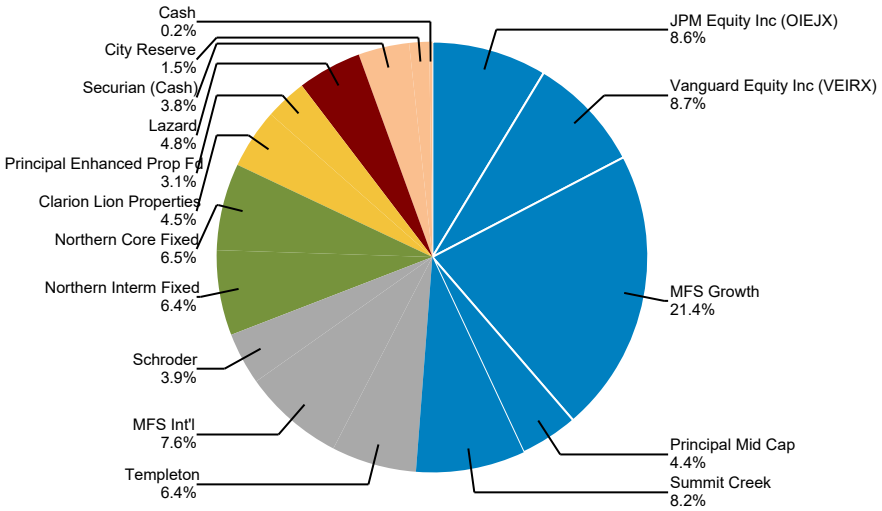
March 31, 2020 : $32,029,471



Allocation

	Market Value	Allocation
SKBA	317	0.0
JPM Equity Inc (OIEJX)	2,771,246	8.7
Vanguard Equity Inc (VEIRX)	2,806,191	8.8
MFS Growth	6,424,009	20.1
Principal Mid Cap	1,270,612	4.0
Summit Creek	2,192,024	6.8
Templeton	2,052,373	6.4
MFS Int'l	2,360,211	7.4
Schroder	1,194,640	3.7
Northern Interm Fixed	2,258,525	7.1
Northern Core Fixed	2,306,816	7.2
Clarion Lion Properties	1,668,215	5.2
Principal Enhanced Prop Fd	1,156,033	3.6
Lazard	1,571,220	4.9
Securian (Cash)	1,364,074	4.3
City Reserve	540,642	1.7
Cash	92,322	0.3

June 30, 2020 : $36,358,657



Allocation

	Market Value	Allocation
SKBA	-	0.0
JPM Equity Inc (OIEJX)	3,139,037	8.6
Vanguard Equity Inc (VEIRX)	3,161,694	8.7
MFS Growth	7,764,151	21.4
Principal Mid Cap	1,586,511	4.4
Summit Creek	2,972,376	8.2
Templeton	2,315,498	6.4
MFS Int'l	2,768,732	7.6
Schroder	1,425,317	3.9
Northern Interm Fixed	2,322,507	6.4
Northern Core Fixed	2,371,473	6.5
Clarion Lion Properties	1,633,510	4.5
Principal Enhanced Prop Fd	1,134,707	3.1
Lazard	1,746,571	4.8
Securian (Cash)	1,386,360	3.8
City Reserve	540,629	1.5
Cash	89,587	0.2

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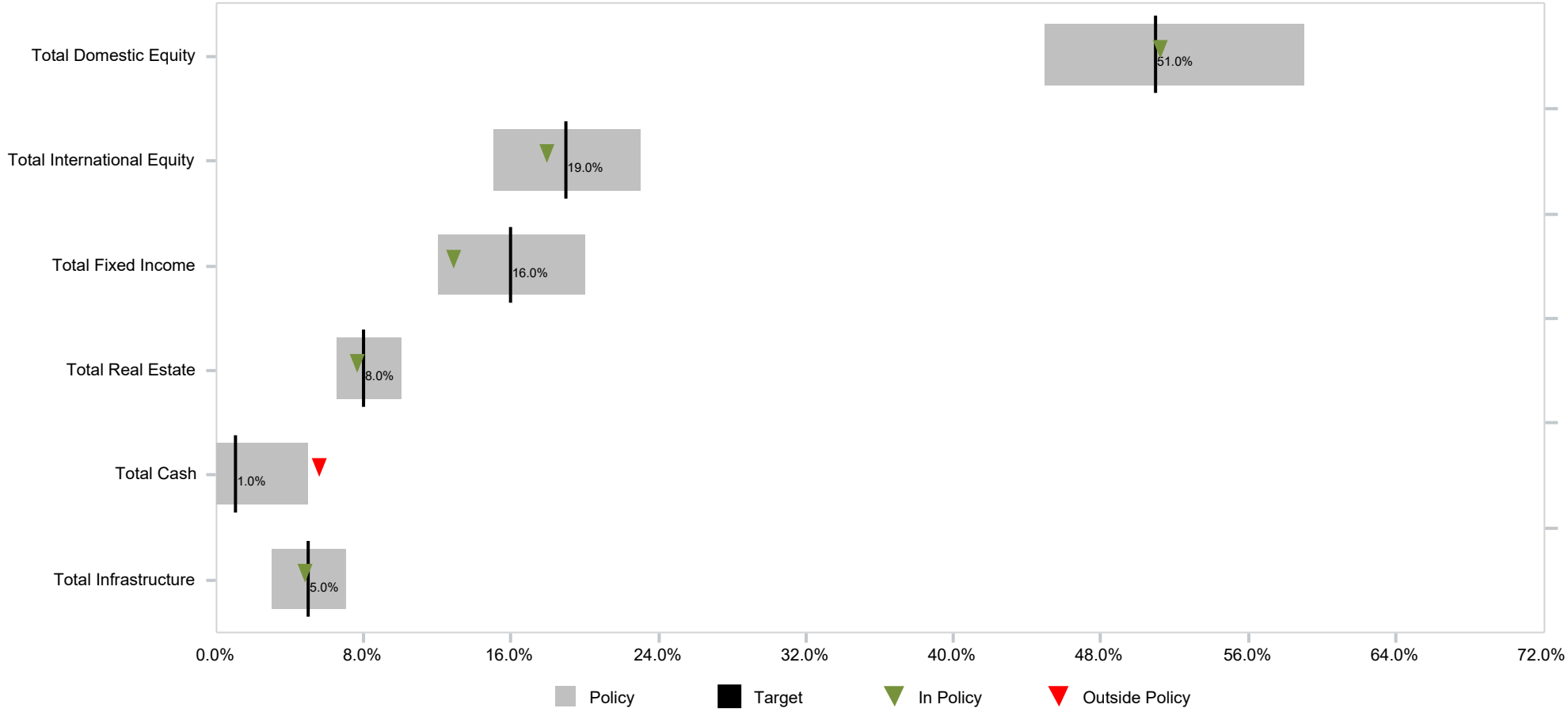
Asset Allocation Compliance

	Asset Allocation $	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Target Rebal. ($)	Differences (%)
Police Total Fund	36,358,657	100.0		100.0		-	0.0
Total Domestic Equity	18,623,768	51.2	45.0	51.0	59.0	-80,853	0.2
Total International Equity	6,509,546	17.9	15.0	19.0	23.0	398,599	-1.1
Total Fixed Income	4,693,980	12.9	12.0	16.0	20.0	1,123,405	-3.1
Total Real Estate	2,768,217	7.6	6.5	8.0	10.0	140,476	-0.4
Total Cash	2,016,575	5.5	0.0	1.0	5.0	-1,652,989	4.5
Total Infrastructure	1,746,571	4.8	3.0	5.0	7.0	71,362	-0.2

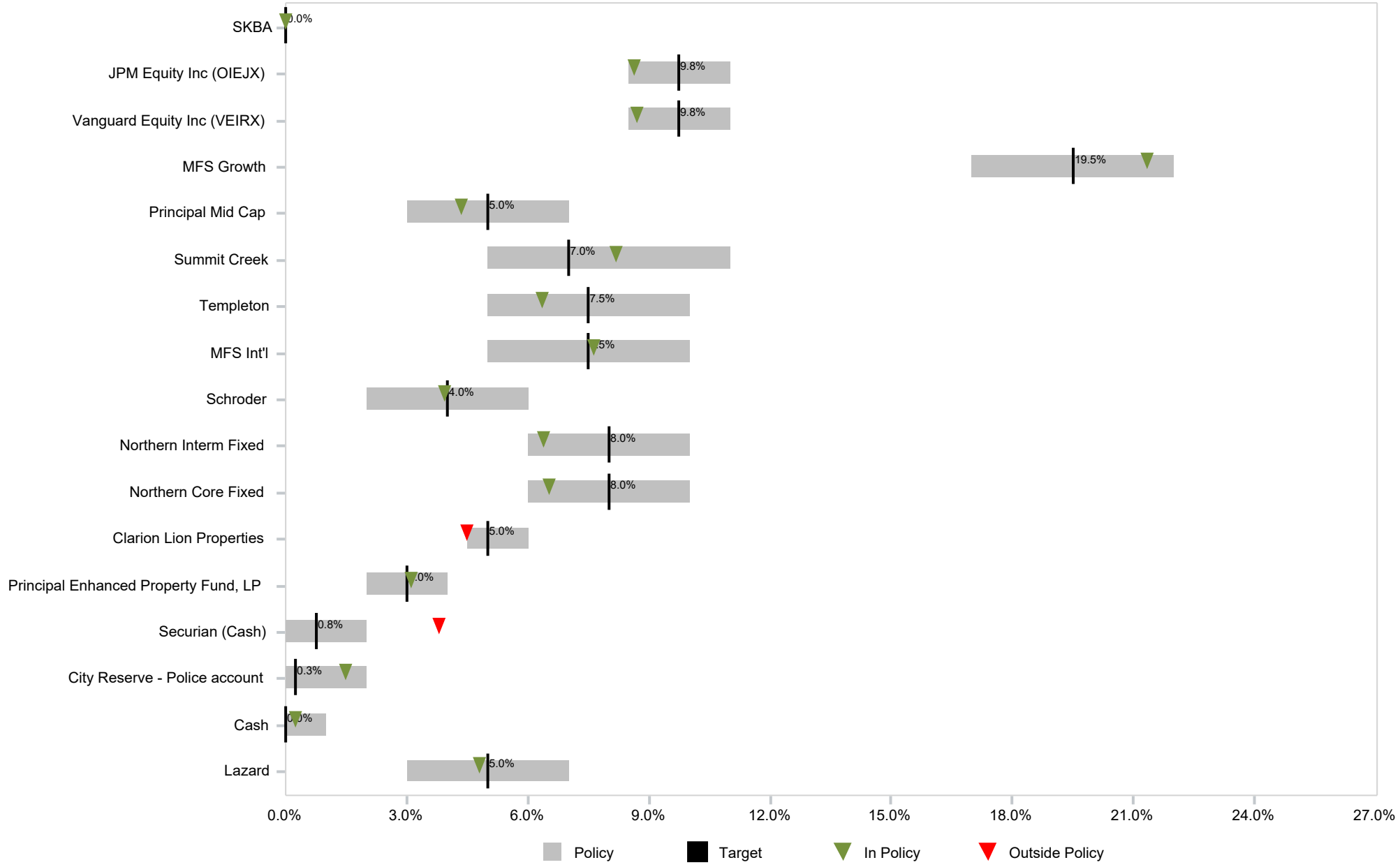
Allocation Summary



Asset Allocation Compliance

	Asset Allocation $	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Target Rebal. ($)	Differences (%)
Police Total Fund	36,358,657	100.0		100.0		-	0.0
Total Equity	25,133,314	69.1		70.0		317,746	-0.9
Total Domestic Equity	18,623,768	51.2		51.0		-80,853	0.2
SKBA	-	0.0	0.0	0.0	0.0	-	0.0
JPM Equity Inc (OIEJX)	3,139,037	8.6	8.5	9.8	11.0	405,932	-1.1
Vanguard Equity Inc (VEIRX)	3,161,694	8.7	8.5	9.8	11.0	383,276	-1.1
MFS Growth	7,764,151	21.4	17.0	19.5	22.0	-674,213	1.9
Principal Mid Cap	1,586,511	4.4	3.0	5.0	7.0	231,422	-0.6
Summit Creek	2,972,376	8.2	5.0	7.0	11.0	-427,270	1.2
Total International Equity	6,509,546	17.9		19.0		398,599	-1.1
Templeton	2,315,498	6.4	5.0	7.5	10.0	411,401	-1.1
MFS Int'l	2,768,732	7.6	5.0	7.5	10.0	-41,832	0.1
Schroder	1,425,317	3.9	2.0	4.0	6.0	29,030	-0.1
Total Fixed Income	4,693,980	12.9		16.0		1,123,405	-3.1
Total Domestic Fixed Income	4,693,980	12.9		16.0		1,123,405	-3.1
Northern Interm Fixed	2,322,507	6.4	6.0	8.0	10.0	586,186	-1.6
Northern Core Fixed	2,371,473	6.5	6.0	8.0	10.0	537,220	-1.5
Total Real Estate	2,768,217	7.6		8.0		140,476	-0.4
Clarion Lion Properties	1,633,510	4.5	4.5	5.0	6.0	184,423	-0.5
Principal Enhanced Property Fund, LP	1,134,707	3.1	2.0	3.0	4.0	-43,947	0.1
Total Cash	2,016,575	5.5		1.0		-1,652,989	4.5
Securian (Cash)	1,386,360	3.8	0.0	0.8	2.0	-1,113,670	3.1
City Reserve - Police account	540,629	1.5	0.0	0.3	2.0	-449,732	1.2
Cash	89,587	0.2	0.0	0.0	1.0	-89,587	0.2
Total Infrastructure	1,746,571	4.8		5.0		71,362	-0.2
Lazard	1,746,571	4.8	3.0	5.0	7.0	71,362	-0.2

Allocation Summary



Comparative Performance

	QTR		FYTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Police Total Fund	**14.25**	**(23)**	**3.63**	**(47)**	**3.63**	**(47)**	**8.21**	**(7)**	**8.17**	**(4)**	**8.79**	**(4)**	**10.40**	**(2)**
Policy	15.19	(13)	3.69	(46)	3.69	(46)	6.96	(18)	7.21	(10)	8.57	(5)	10.21	(2)
All Master Trust - Total Fund Median	12.10		3.39		3.39		5.28		5.32		6.30		7.52	
Police Total Fund	**14.25**	**(92)**	**3.63**	**(31)**	**3.63**	**(31)**	**8.21**	**(15)**	**8.17**	**(8)**	**8.79**	**(9)**	**10.40**	**(3)**
Policy	15.19	(80)	3.69	(31)	3.69	(31)	6.96	(29)	7.21	(22)	8.57	(19)	10.21	(4)
Master Trust >=70% Equity Median	16.15		2.99		2.99		5.96		6.17		7.39		8.82	
Total Domestic Equity	**22.02**	**(35)**	**5.65**	**(33)**	**5.65**	**(33)**	**11.94**	**(6)**	**11.01**	**(9)**	**11.59**	**(24)**	**14.17**	**(9)**
Russell 3000 Index	22.03	(35)	6.53	(25)	6.53	(25)	10.04	(25)	10.03	(25)	11.68	(22)	13.72	(23)
All Master Trust-US Equity Segment Median	20.98		4.12		4.12		8.38		8.85		10.51		12.79	
JPM Equity Inc (OIEJX)	13.27	(74)	N/A		N/A		N/A		N/A		N/A		N/A	
Russell 1000 Value Index	14.29	(63)	-8.84	(76)	-8.84	(76)	1.82	(64)	4.64	(61)	7.11	(49)	10.41	(40)
IM Equity Income (MF) Median	15.17		-5.51		-5.51		3.46		5.41		7.07		9.98	
Vanguard Equity Inc (VEIRX)	12.67	(92)	N/A		N/A		N/A		N/A		N/A		N/A	
Russell 1000 Value Index	14.29	(68)	-8.84	(65)	-8.84	(65)	1.82	(55)	4.64	(42)	7.11	(40)	10.41	(27)
IM U.S. Large Cap Value Equity (MF) Median	15.42		-7.67		-7.67		2.13		4.28		6.68		9.72	
MFS Growth	24.68	(85)	20.88	(52)	20.88	(52)	20.32	(22)	16.73	(12)	N/A		N/A	
Russell 1000 Growth Index	27.84	(46)	23.28	(26)	23.28	(26)	18.99	(37)	15.89	(24)	16.62	(27)	17.23	(21)
IM U.S. Large Cap Growth Equity (MF) Median	27.69		21.05		21.05		18.03		14.47		15.69		15.98	
Principal Mid Cap	24.86	(24)	4.20	(10)	4.20	(10)	12.14	(4)	11.15	(5)	13.00	(4)	15.64	(2)
Russell Midcap Index	24.61	(26)	-2.24	(30)	-2.24	(30)	5.79	(22)	6.76	(25)	9.40	(24)	12.35	(19)
IM U.S. Mid Cap Core Equity (SA+CF+MF) Median	21.66		-4.82		-4.82		3.43		4.95		7.94		11.16	
Summit Creek	35.60	(37)	10.68	(37)	10.68	(37)	16.05	(34)	11.68	(35)	N/A		N/A	
Russell 2000 Growth Index	30.58	(60)	3.48	(57)	3.48	(57)	7.86	(73)	6.86	(76)	10.03	(75)	12.92	(79)
IM U.S. Small Cap Growth Equity (SA+CF) Median	32.78		5.99		5.99		12.27		10.20		12.31		15.04	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Principal Enhanced Property Fund returns are preliminary.

	QTR		FYTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Total International Equity	**16.09**	**(72)**	**-3.04**	**(43)**	**-3.04**	**(43)**	**2.03**	**(46)**	**3.60**	**(33)**	**4.57**	**(60)**	**5.63**	**(77)**
MSCI AC World ex USA Index (Net)	16.12	(71)	-4.80	(65)	-4.80	(65)	1.13	(67)	2.26	(77)	3.71	(87)	4.97	(90)
All Master Trust-Intl. Equity Segment Median	17.42		-3.74		-3.74		1.80		3.10		4.79		6.42	
Templeton	12.82	(82)	-10.81	(49)	-10.81	(49)	-4.36	(62)	-1.58	(54)	1.08	(30)	3.66	(29)
MSCI EAFE Value Index (Net)	12.43	(88)	-14.48	(70)	-14.48	(70)	-4.43	(63)	-1.59	(54)	1.21	(28)	3.53	(32)
IM International Large Cap Value Equity (MF) Median	15.40		-10.88		-10.88		-3.94		-1.51		0.68		3.39	
MFS Int'l	17.31	(66)	3.31	(33)	3.31	(33)	7.96	(11)	8.33	(4)	8.10	(9)	N/A	
MSCI AC World ex USA Growth Index (Net)	19.11	(35)	5.80	(21)	5.80	(21)	6.07	(29)	5.61	(25)	6.32	(22)	7.04	(37)
IM International Large Cap Growth Equity (MF) Median	18.13		2.00		2.00		3.99		3.30		4.99		6.44	
Schroder	19.31	(61)	-0.83	(36)	-0.83	(36)	3.34	(29)	4.48	(26)	N/A		N/A	
MSCI Emerging Markets Index (Net)	18.08	(75)	-3.39	(53)	-3.39	(53)	1.90	(44)	2.86	(46)	3.22	(44)	3.27	(49)
IM Emerging Markets Equity (MF) Median	20.27		-3.04		-3.04		1.15		2.57		3.03		3.16	
Total Domestic Fixed Income	**2.82**	**(82)**	**7.99**	**(50)**	**7.99**	**(50)**	**5.13**	**(54)**	**4.10**	**(71)**	**3.80**	**(75)**	**3.66**	**(83)**
Blmbg. Barc. U.S. Aggregate Index	2.90	(82)	8.74	(39)	8.74	(39)	5.32	(48)	4.30	(62)	3.96	(69)	3.82	(75)
All Master Trust-US Fixed Income Segment Median	4.94		7.98		7.98		5.25		4.55		4.37		4.74	
Northern Interm Fixed	2.83	(81)	7.23	(40)	7.23	(40)	4.53	(55)	3.51	(73)	3.19	(78)	N/A	
Bloomberg Barclays Intermed Aggregate Index	2.13	(96)	6.60	(71)	6.60	(71)	4.28	(77)	3.40	(82)	3.19	(78)	3.14	(83)
IM U.S. Intermediate Duration (SA+CF) Median	3.72		7.09		7.09		4.57		3.71		3.41		3.48	
Northern Core Fixed	2.80	(92)	8.79	(65)	8.79	(65)	5.35	(81)	4.32	(89)	4.00	(85)	3.86	(88)
Blmbg. Barc. U.S. Aggregate Index	2.90	(90)	8.74	(68)	8.74	(68)	5.32	(84)	4.30	(90)	3.96	(92)	3.82	(96)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	4.42		8.93		8.93		5.57		4.70		4.41		4.34	
Total Real Estate	**-1.69**	**(70)**	**3.76**	**(37)**	**3.76**	**(37)**	**N/A**		**N/A**		**N/A**		**N/A**	
NCREIF Fund Index-ODCE (EW)	-1.27	(67)	2.56	(63)	2.56	(63)	5.99	(66)	7.63	(63)	9.25	(57)	10.90	(64)
IM U.S. Open End Private Real Estate (SA+CF) Median	-1.14		2.78		2.78		6.54		8.15		9.77		11.32	
Clarion Lion Properties	-1.82	(71)	3.21	(45)	3.21	(45)	N/A		N/A		N/A		N/A	
NCREIF Fund Index-ODCE (EW)	-1.27	(67)	2.56	(63)	2.56	(63)	5.99	(66)	7.63	(63)	9.25	(57)	10.90	(64)
IM U.S. Open End Private Real Estate (SA+CF) Median	-1.14		2.78		2.78		6.54		8.15		9.77		11.32	
Principal Enhanced Property Fund, LP	-1.49	(69)	N/A		N/A		N/A		N/A		N/A		N/A	
NCREIF Fund Index-ODCE (EW)	-1.27	(67)	2.56	(63)	2.56	(63)	5.99	(66)	7.63	(63)	9.25	(57)	10.90	(64)
IM U.S. Open End Private Real Estate (SA+CF) Median	-1.14		2.78		2.78		6.54		8.15		9.77		11.32	
Infrastructure														
Lazard	11.16		-1.00		-1.00		5.44		10.14		12.49		N/A	
S&P Global Infrastructure Index	13.87		-14.76		-14.76		-0.89		2.62		5.01		6.92	
FTSE Developed Core Infrast 50/50 Index (Net)	10.31		-8.96		-8.96		2.47		5.54		6.65		9.09	

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Principal Enhanced Property Fund returns are preliminary.

	QTR	FYTD	1 YR	3 YR	5 YR	7 YR	10 YR
Cash							
Securian (Cash)	-0.05	4.85	4.85	4.86	4.07	4.17	4.08
90 Day U.S. Treasury Bill	0.02	1.63	1.63	1.77	1.17	0.85	0.62
City Reserve - Police account	0.00	N/A	N/A	N/A	N/A	N/A	N/A
90 Day U.S. Treasury Bill	0.02	1.63	1.63	1.77	1.17	0.85	0.62
Cash	0.00	0.93	0.93	1.44	N/A	N/A	N/A

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Principal Enhanced Property Fund returns are preliminary.

Comparative Performance

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Police Total Fund	**22.55 (6)**	**-3.96 (40)**	**21.54 (1)**	**6.90 (45)**	**1.61(6)**	**5.20 (54)**	**21.01 (6)**	**14.10 (13)**	**1.23 (30)**	**13.85 (19)**	**21.89 (36)**	**-23.88 (49)**
Policy	23.13 (4)	-5.13 (61)	18.08 (7)	9.77 (6)	-0.51(43)	7.90 (17)	22.60 (3)	14.36 (10)	-0.25 (52)	15.07 (8)	26.05 (14)	-32.60 (96)
All Master Trust - Total Fund Median	18.17	-4.58	14.55	6.66	-0.94	5.45	14.90	11.84	-0.17	12.12	19.78	-24.17
Police Total Fund	**22.55 (36)**	**-3.96 (7)**	**21.54 (5)**	**6.90 (71)**	**1.61(5)**	**5.20 (68)**	**21.01 (25)**	**14.10 (40)**	**1.23 (15)**	**13.85 (38)**	**21.89 (67)**	**-23.88 (22)**
Policy	23.13 (27)	-5.13 (27)	18.08 (37)	9.77 (12)	-0.51(51)	7.90 (26)	22.60 (10)	14.36 (34)	-0.25 (34)	15.07 (17)	26.05 (39)	-32.60 (75)
Master Trust >=70% Equity Median	22.24	-5.99	17.33	7.86	-0.42	6.32	19.18	13.46	-1.46	13.31	24.08	-29.31
Total Domestic Equity	**29.75 (41)**	**-3.09 (12)**	**25.40 (7)**	**8.90 (86)**	**2.07(11)**	**7.46 (89)**	**30.21 (73)**	**15.16 (81)**	**4.08 (6)**	**18.45 (38)**	**33.75 (19)**	**-32.94 (12)**
Russell 3000 Index	31.02 (22)	-5.24 (42)	21.13 (43)	12.74 (44)	0.48(41)	12.56 (19)	33.55 (47)	16.42 (59)	1.03 (35)	16.93 (61)	28.34 (59)	-37.31 (39)
All Master Trust-US Equity Segment Median	28.73	-5.79	20.72	12.45	0.27	11.08	33.34	16.64	0.10	17.68	29.37	-38.27
JPM Equity Inc (OIEJX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	26.54 (33)	-8.27 (65)	13.66 (73)	17.34 (22)	-3.83(59)	13.45 (10)	32.53 (11)	17.51 (7)	0.39 (67)	15.51 (39)	19.69 (64)	-36.85 (80)
IM Equity Income (MF) Median	25.27	-7.25	16.16	14.10	-3.05	10.15	28.83	12.64	2.40	14.88	22.55	-34.32
Vanguard Equity Inc (VEIRX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	26.54 (45)	-8.27 (36)	13.66 (77)	17.34 (19)	-3.83(58)	13.45 (9)	32.53 (48)	17.51 (28)	0.39 (28)	15.51 (21)	19.69 (73)	-36.85 (48)
IM U.S. Large Cap Value Equity (MF) Median	26.07	-9.08	16.29	13.82	-3.54	10.81	32.30	15.84	-2.20	13.00	24.10	-37.02
MFS Growth	37.88 (10)	2.66 (14)	30.92 (35)	2.58 (46)	7.54(29)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	36.39 (21)	-1.51 (58)	30.21 (41)	7.08 (8)	5.67(54)	13.05 (22)	33.48 (55)	15.26 (46)	2.64 (11)	16.71 (33)	37.21 (42)	-38.44 (39)
IM U.S. Large Cap Growth Equity (MF) Median	33.38	-0.87	29.46	2.18	6.01	10.47	33.94	14.81	-1.76	15.15	35.24	-39.76
Principal Mid Cap	42.89 (1)	-6.51 (16)	25.32 (8)	10.25 (82)	1.47(19)	12.69 (28)	34.44 (68)	19.93 (18)	8.60 (3)	24.41 (55)	N/A	N/A
Russell Midcap Index	30.54 (39)	-9.06 (29)	18.52 (34)	13.80 (62)	-2.44(58)	13.22 (24)	34.76 (63)	17.28 (48)	-1.55 (43)	25.47 (40)	40.48 (22)	-41.46 (73)
IM U.S. Mid Cap Core Equity (SA+CF+MF) Median	29.25	-10.51	16.61	15.43	-2.14	9.96	36.36	17.19	-1.77	24.60	35.42	-38.03
Summit Creek	27.34 (62)	4.19 (12)	28.93 (24)	0.76 (94)	0.63(39)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Growth Index	28.48 (51)	-9.31 (77)	22.17 (57)	11.32 (52)	-1.38(56)	5.60 (35)	43.30 (67)	14.59 (53)	-2.91 (62)	29.09 (47)	34.47 (61)	-38.54 (28)
IM U.S. Small Cap Growth Equity (SA+CF) Median	28.49	-4.24	23.81	11.40	-0.74	4.32	45.49	14.76	-1.22	28.82	37.40	-41.17

Returns are expressed as percentages.

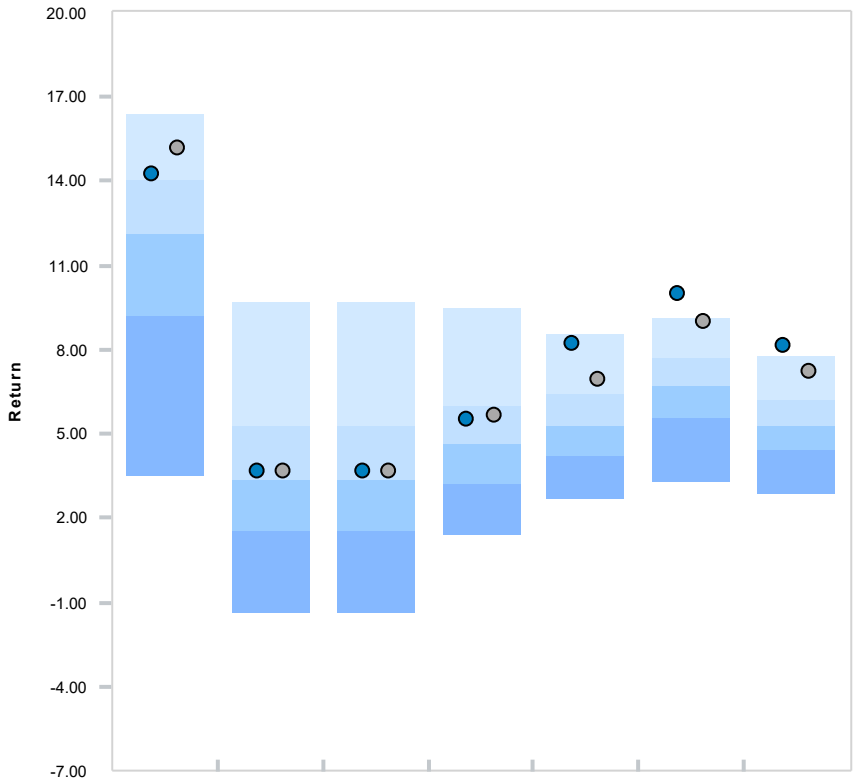
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total International Equity	**20.48 (82)**	**-12.65 (27)**	**30.90 (22)**	**3.96 (56)**	**-3.11(53)**	**-5.33 (96)**	**14.34 (84)**	**17.95 (60)**	**-12.03 (44)**	**8.20 (94)**	**34.70 (57)**	**-41.70 (33)**
MSCI AC World ex USA Index (Net)	21.51 (76)	-14.20 (61)	27.19 (63)	4.50 (47)	-5.66(82)	-3.87 (79)	15.29 (80)	16.83 (78)	-13.71 (72)	11.15 (74)	41.45 (23)	-45.53 (74)
All Master Trust-Intl. Equity Segment Median	22.67	-13.69	28.24	4.37	-2.94	-2.23	18.68	18.40	-12.55	12.90	35.64	-44.29
Templeton	11.57 (100)	-14.95 (19)	22.90 (38)	1.30 (48)	-2.67(63)	-6.78 (22)	20.47 (78)	19.47 (26)	-10.20 (13)	7.58 (20)	34.70 (21)	-41.70 (19)
MSCI EAFE Value Index (Net)	16.09 (74)	-14.78 (19)	21.44 (63)	5.02 (1)	-5.68(100)	-5.39 (16)	22.95 (3)	17.69 (49)	-12.17 (21)	3.25 (74)	34.23 (24)	-44.09 (42)
IM International Large Cap Value Equity (MF) Median	18.45	-17.83	22.09	1.18	-2.21	-9.55	21.34	17.57	-13.74	5.02	27.92	-46.14
MFS Int'l	28.59 (21)	-8.14 (9)	33.99 (6)	3.58 (11)	1.31(34)	-4.20 (36)	15.06 (70)	20.89 (21)	-9.83 (21)	N/A	N/A	N/A
MSCI AC World ex USA Growth Index (Net)	27.34 (43)	-14.43 (44)	32.01 (13)	0.12 (41)	-1.25(70)	-2.65 (24)	15.49 (66)	16.67 (70)	-14.21 (67)	14.45 (15)	38.67 (17)	-45.61 (74)
IM International Large Cap Growth Equity (MF) Median	27.03	-14.98	29.50	-0.87	-0.02	-4.98	18.48	18.97	-13.24	10.99	32.36	-42.35
Schroder	22.11 (39)	-15.63 (43)	40.88 (22)	10.40 (36)	-12.70(42)	-4.61 (71)	N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index (Net)	18.44 (62)	-14.58 (31)	37.28 (42)	11.19 (30)	-14.92(63)	-2.19 (43)	-2.60 (58)	18.23 (56)	-18.42 (36)	18.88 (44)	78.51 (26)	-53.33 (42)
IM Emerging Markets Equity (MF) Median	20.08	-16.40	35.37	8.35	-13.66	-2.92	-1.42	18.78	-19.51	18.32	72.67	-54.63
Total Domestic Fixed Income	**7.60 (77)**	**1.02 (13)**	**3.19 (79)**	**2.49 (81)**	**1.04(21)**	**5.06 (72)**	**-1.38 (40)**	**4.09 (94)**	**6.99 (64)**	**6.24 (92)**	**5.97 (82)**	**3.77 (21)**
Blmbg. Barc. U.S. Aggregate Index	8.72 (58)	0.01 (36)	3.54 (69)	2.65 (78)	0.55(33)	5.97 (52)	-2.02 (54)	4.21 (92)	7.84 (51)	6.54 (89)	5.93 (82)	5.24 (17)
All Master Trust-US Fixed Income Segment Median	9.09	-0.39	4.78	4.21	-0.02	6.01	-1.83	7.78	7.85	8.82	11.63	-2.21
Northern Interm Fixed	6.85 (55)	0.94 (50)	2.17 (83)	2.04 (75)	1.14(69)	3.21 (68)	-0.71 (62)	3.87 (80)	N/A	N/A	N/A	N/A
Bloomberg Barclays Intermed Aggregate Index	6.67 (65)	0.92 (51)	2.27 (76)	1.97 (78)	1.21(63)	4.12 (30)	-1.02 (80)	3.56 (87)	5.97 (46)	6.15 (64)	6.46 (65)	4.86 (49)
IM U.S. Intermediate Duration (SA+CF) Median	6.93	0.94	2.54	2.37	1.30	3.56	-0.53	4.98	5.88	6.41	7.85	4.68
Northern Core Fixed	8.77 (72)	0.05 (53)	3.56 (81)	2.60 (81)	0.58(71)	6.12 (53)	-2.12 (81)	4.34 (85)	7.92 (42)	6.24 (92)	5.97 (88)	3.77 (45)
Blmbg. Barc. U.S. Aggregate Index	8.72 (78)	0.01 (61)	3.54 (83)	2.65 (75)	0.55(76)	5.97 (67)	-2.02 (72)	4.21 (90)	7.84 (51)	6.54 (82)	5.93 (88)	5.24 (32)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	9.19	0.06	4.04	3.10	0.82	6.16	-1.59	5.83	7.84	7.22	9.84	3.10
Total Real Estate	**7.85 (37)**	**N/A**	**N/A**	**7.23 (88)**	**12.92(83)**	**11.65 (84)**	**10.41 (92)**	**10.14 (84)**	**13.19 (82)**	**16.83 (41)**	**-22.28 (17)**	**-7.46 (34)**
NCREIF Fund Index-ODCE (EW)	6.08 (77)	8.25 (55)	7.80 (57)	9.27 (52)	15.17(51)	12.28 (77)	13.34 (59)	11.03 (78)	15.96 (43)	16.14 (47)	-30.65 (53)	-10.37 (48)
IM U.S. Open End Private Real Estate (SA+CF) Median	7.02	8.42	8.08	9.35	15.23	13.59	14.47	12.48	15.71	15.76	-29.99	-11.61
Clarion Lion Properties	7.26 (45)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	6.08 (77)	8.25 (55)	7.80 (57)	9.27 (52)	15.17(51)	12.28 (77)	13.34 (59)	11.03 (78)	15.96 (43)	16.14 (47)	-30.65 (53)	-10.37 (48)
IM U.S. Open End Private Real Estate (SA+CF) Median	7.02	8.42	8.08	9.35	15.23	13.59	14.47	12.48	15.71	15.76	-29.99	-11.61
Principal Enhanced Property Fund, LP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-ODCE (EW)	6.08 (77)	8.25 (55)	7.80 (57)	9.27 (52)	15.17(51)	12.28 (77)	13.34 (59)	11.03 (78)	15.96 (43)	16.14 (47)	-30.65 (53)	-10.37 (48)
IM U.S. Open End Private Real Estate (SA+CF) Median	7.02	8.42	8.08	9.35	15.23	13.59	14.47	12.48	15.71	15.76	-29.99	-11.61
Infrastructure												
Lazard	24.40	-2.85	24.10	10.36	10.85	18.28	29.34	18.61	N/A	N/A	N/A	N/A
S&P Global Infrastructure Index	26.99	-9.50	20.13	12.43	-11.46	12.98	14.99	11.89	-0.39	5.77	25.28	-38.98
FTSE Developed Core Infrast 50/50 Index (Net)	25.04	-4.63	18.18	10.63	-7.56	16.02	15.48	11.49	8.00	10.34	N/A	N/A

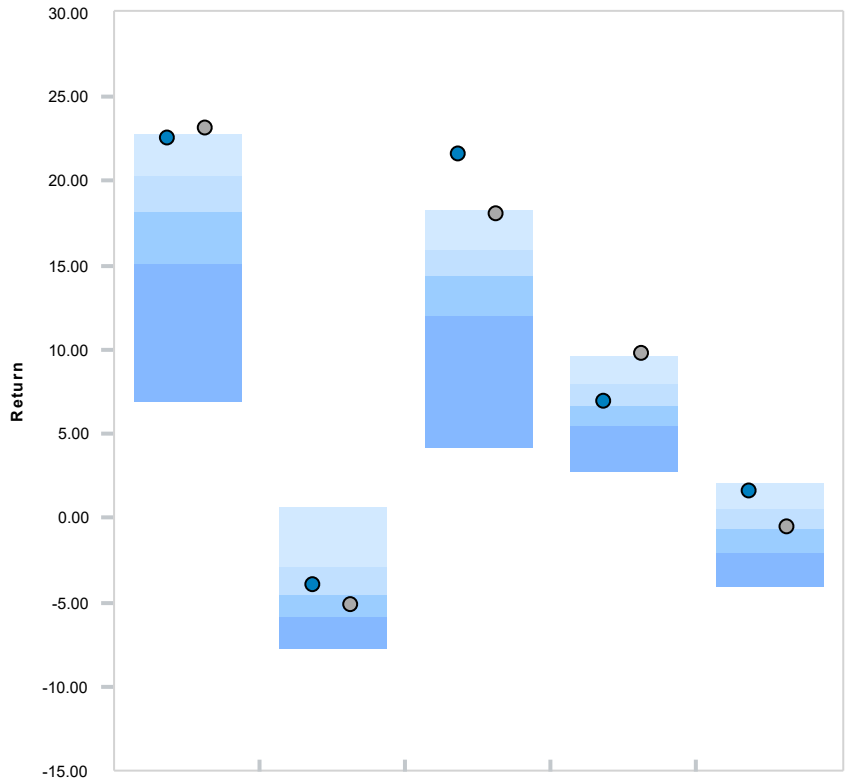
Returns are expressed as percentages.

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Cash												
Securian (Cash)	6.49	3.09	4.16	2.90	1.16	6.69	-3.88	11.25	4.17	4.32	7.18	4.93
90 Day U.S. Treasury Bill	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17	2.10
City Reserve - Police account	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90 Day U.S. Treasury Bill	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17	2.10
Cash	1.70	2.03	0.47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90 Day U.S. Treasury Bill	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17	2.10

Returns are expressed as percentages.

Peer Group Analysis - All Master Trust - Total Fund





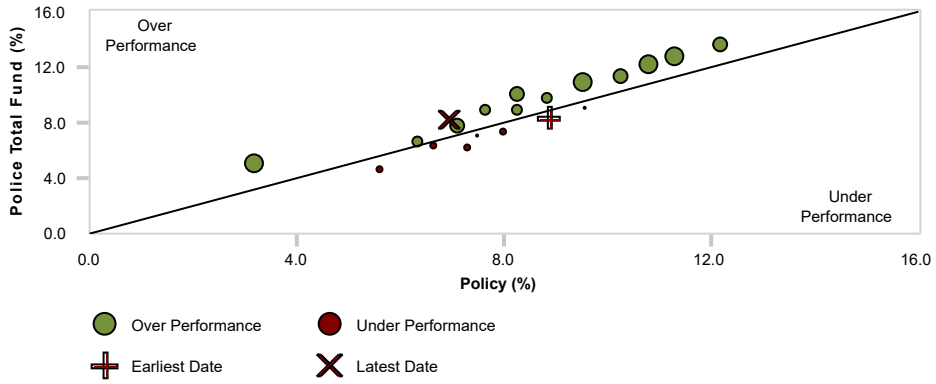
	QTR		FYTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Police Total Fund	14.25	(23)	3.63	(47)	3.63	(47)	5.54	(33)	8.21	(7)	9.99	(2)	8.17	(4)
Policy	15.19	(13)	3.69	(46)	3.69	(46)	5.63	(31)	6.96	(18)	8.99	(7)	7.21	(10)
Median	12.10		3.39		3.39		4.63		5.28		6.74		5.32	

	2019		2018		2017		2016		2015	
Police Total Fund	22.55	(6)	-3.96	(40)	21.54	(1)	6.90	(47)	1.61	(8)
Policy	23.13	(4)	-5.13	(62)	18.08	(6)	9.77	(5)	-0.51	(47)
Median	18.17		-4.55		14.39		6.73		-0.69	

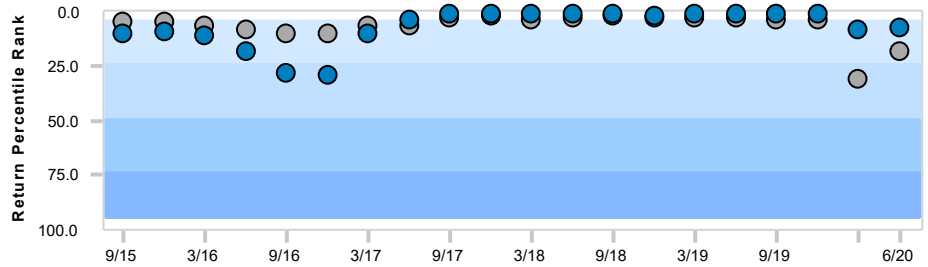
Comparative Performance

	1 Qtr Ending Mar-2020		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	
Police Total Fund	**-14.23**	**(63)**	**5.35**	**(42)**	**0.39**	**(72)**	**4.13**	**(10)**	**11.29**	**(2)**	**-11.14**	**(99)**
Policy	-16.30	(85)	6.72	(5)	0.78	(48)	3.62	(21)	10.48	(4)	-9.55	(90)
All Master Trust - Total Fund Median	-13.11		5.08		0.74		3.12		8.15		-7.46	

3 Yr Rolling Under/Over Performance - 5 Years

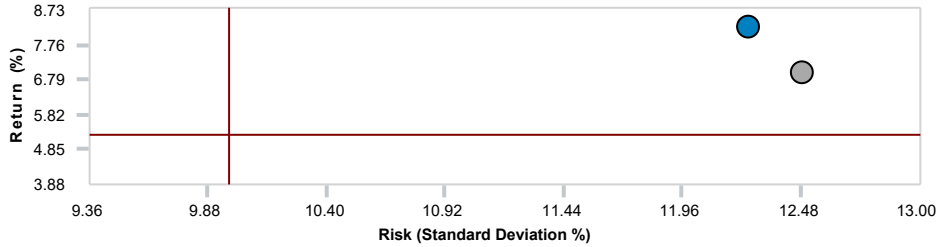


3 Yr Rolling Percentile Ranking - 5 Years



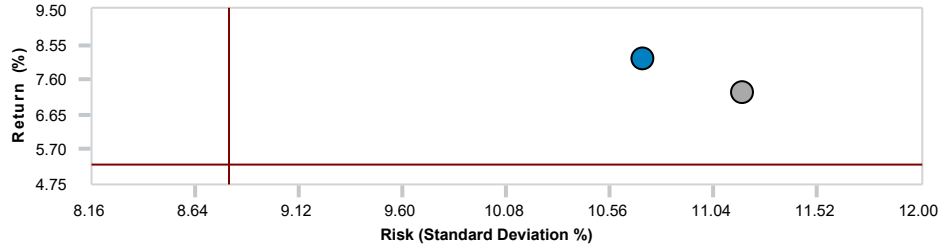
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Police Total Fund	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)
Policy	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Police Total Fund	8.21	12.26
Policy	6.96	12.50
Median	5.27	9.97

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Police Total Fund	8.17	10.72
Policy	7.21	11.18
Median	5.31	8.79

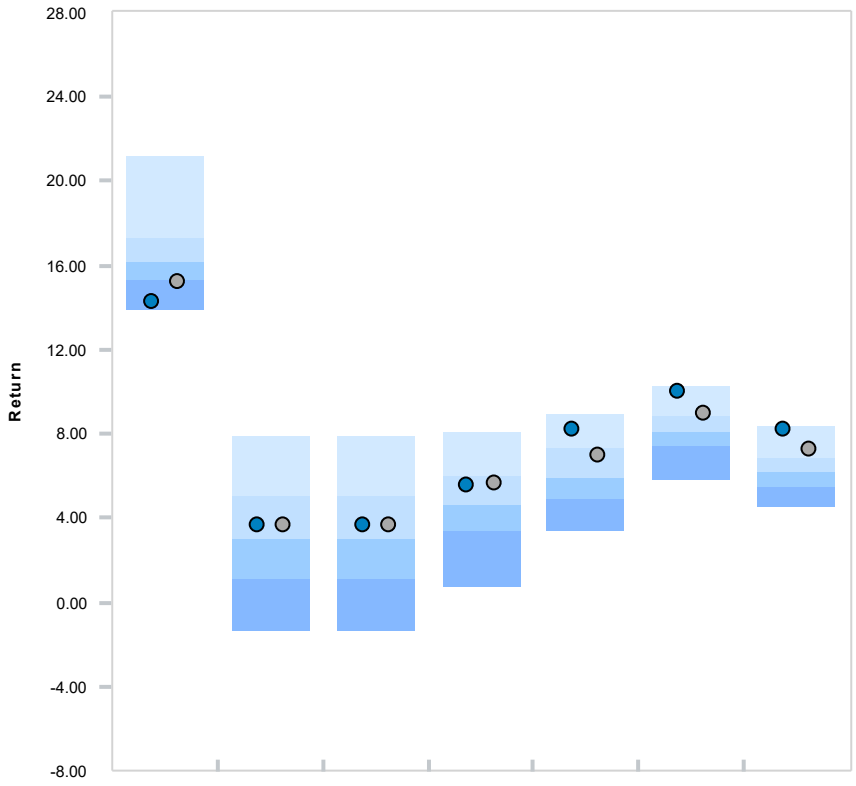
Historical Statistics - 3 Years

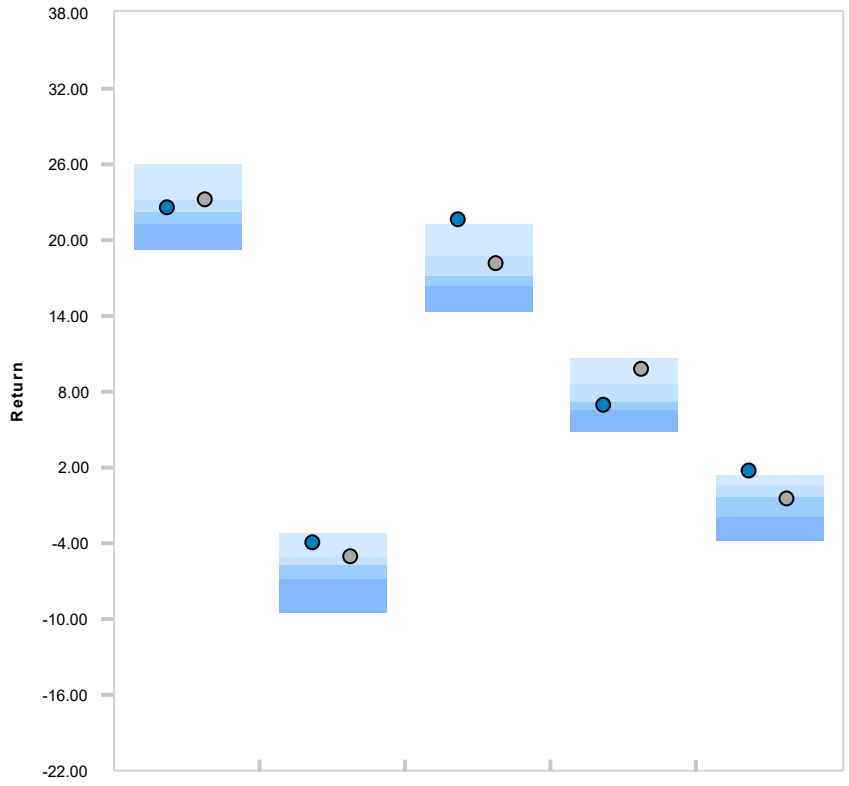
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Police Total Fund	1.66	103.03	95.80	1.36	0.68	0.56	0.97	8.82
Policy	0.00	100.00	100.00	0.00	N/A	0.46	1.00	9.06

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Police Total Fund	1.72	99.93	92.06	1.25	0.49	0.68	0.95	7.47
Policy	0.00	100.00	100.00	0.00	N/A	0.57	1.00	7.80

Peer Group Analysis - Master Trust >=70% Equity





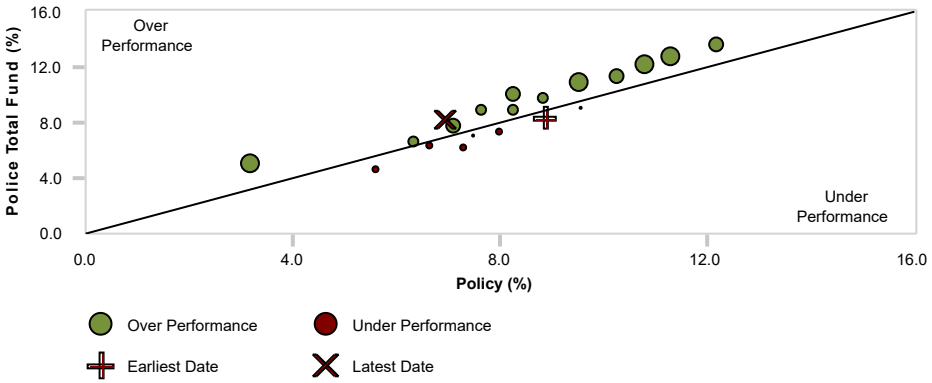
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Police Total Fund	14.25 (92)	3.63 (31)	3.63 (31)	5.54 (32)	8.21 (15)	9.99 (11)	8.17 (8)
Policy	15.19 (80)	3.69 (31)	3.69 (31)	5.63 (31)	6.96 (29)	8.99 (25)	7.21 (22)
Median	16.15	2.99	2.99	4.63	5.96	8.11	6.17

	2019	2018	2017	2016	2015
Police Total Fund	22.55 (36)	-3.96 (9)	21.54 (5)	6.90 (61)	1.61 (4)
Policy	23.13 (27)	-5.13 (26)	18.08 (32)	9.77 (14)	-0.51 (53)
Median	22.24	-5.81	17.10	7.22	-0.39

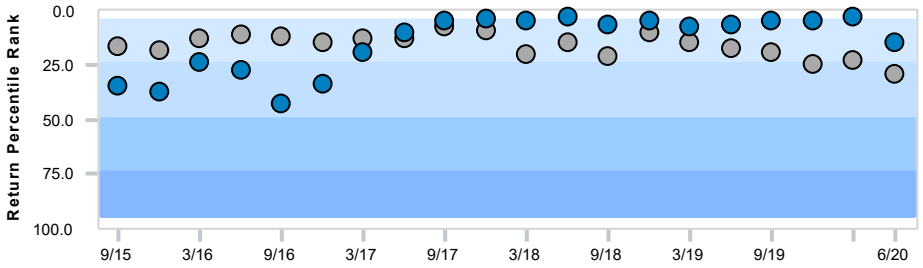
Comparative Performance

	1 Qtr Ending Mar-2020	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
Police Total Fund	**-14.23 (7)**	**5.35 (95)**	**0.39 (71)**	**4.13 (15)**	**11.29 (15)**	**-11.14 (75)**
Policy	-16.30 (25)	6.72 (31)	0.78 (37)	3.62 (42)	10.48 (40)	-9.55 (11)
Master Trust >=70% Equity Median	-18.44	6.44	0.61	3.54	10.37	-10.53

3 Yr Rolling Under/Over Performance - 5 Years

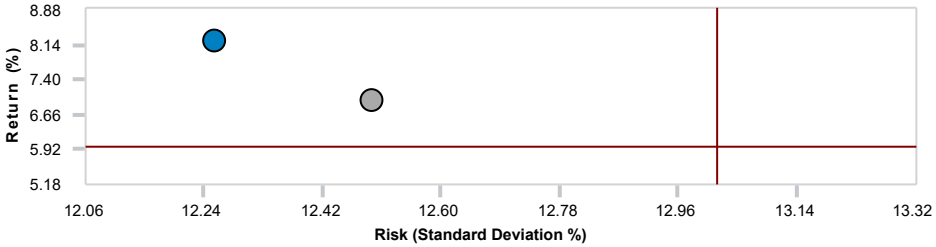


3 Yr Rolling Percentile Ranking - 5 Years



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Police Total Fund	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)
Policy	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Police Total Fund	8.21	12.26
Policy	6.96	12.50
Median	5.96	13.02

Peer Group Scattergram - 5 Years

	Return	Standard Deviation
Police Total Fund	8.17	10.72
Policy	7.21	11.18
Median	6.15	11.40

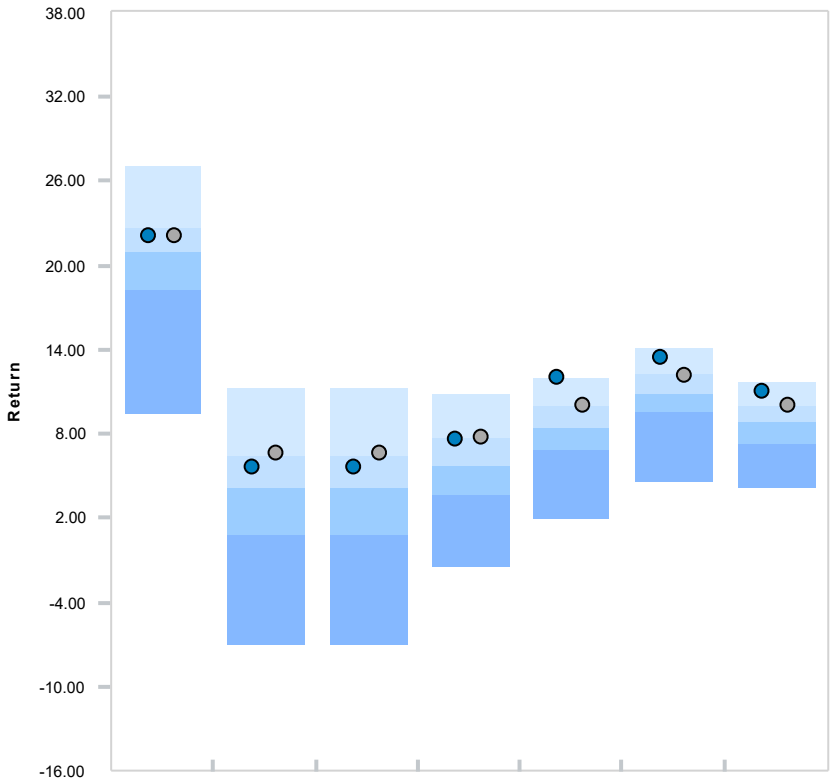
Historical Statistics - 3 Years

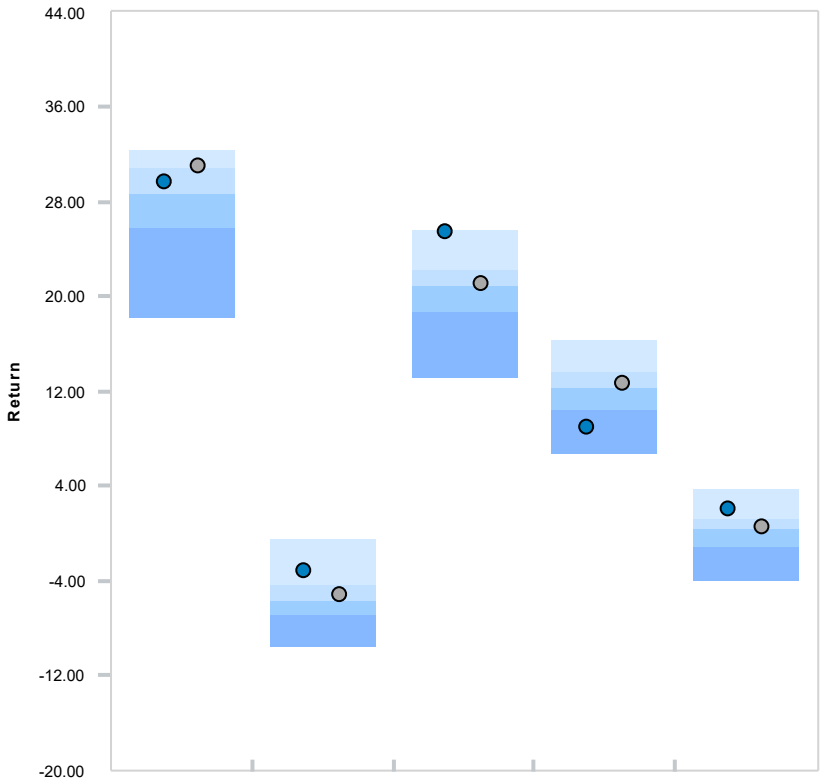
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Police Total Fund	1.66	103.03	95.80	1.36	0.68	0.56	0.97	8.82
Policy	0.00	100.00	100.00	0.00	N/A	0.46	1.00	9.06

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Police Total Fund	1.72	99.93	92.06	1.25	0.49	0.68	0.95	7.47
Policy	0.00	100.00	100.00	0.00	N/A	0.57	1.00	7.80

Peer Group Analysis - All Master Trust-US Equity Segment





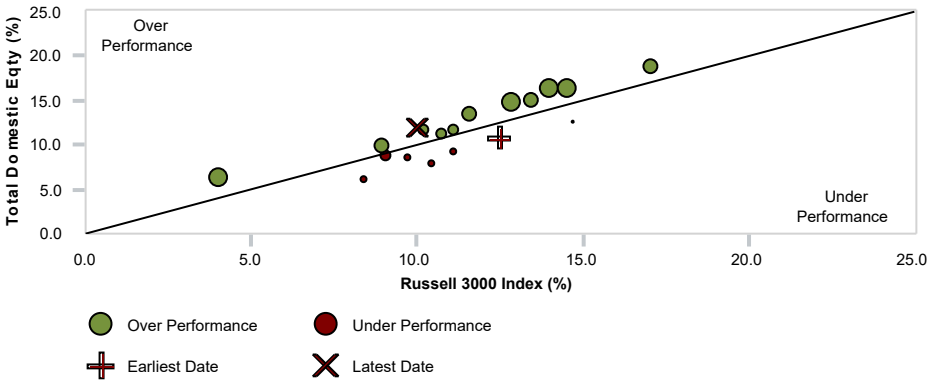
	QTR		FYTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Total Domestic Eqty	22.02	(35)	5.65	(33)	5.65	(33)	7.64	(26)	11.94	(6)	13.47	(6)	11.01	(9)
R 3000 Index	22.03	(35)	6.53	(25)	6.53	(25)	7.75	(25)	10.04	(25)	12.10	(31)	10.03	(25)
Median	20.98		4.12		4.12		5.74		8.38		10.84		8.85	

	2019		2018		2017		2016		2015	
Total Domestic Eqty	29.75	(41)	-3.09	(13)	25.40	(7)	8.90	(86)	2.07	(13)
R 3000 Index	31.02	(22)	-5.24	(43)	21.13	(45)	12.74	(42)	0.48	(45)
Median	28.73		-5.72		20.91		12.34		0.38	

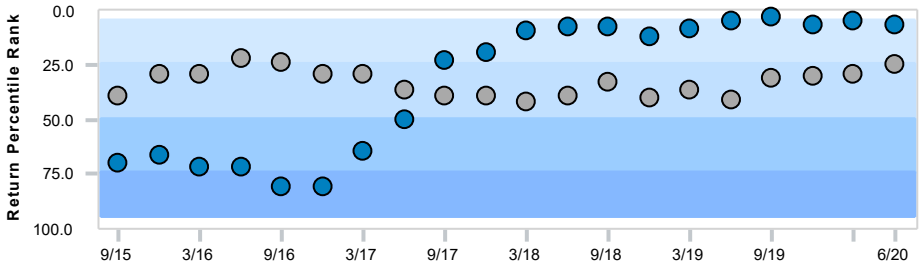
Comparative Performance

	1 Qtr Ending Mar-2020		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	
Total Domestic Eqty	-18.89	(21)	6.18	(89)	0.54	(60)	5.36	(4)	15.37	(6)	-15.70	(89)
Russell 3000 Index	-20.90	(46)	9.10	(31)	1.16	(28)	4.10	(31)	14.04	(31)	-14.30	(64)
All Master Trust-US Equity Segment Median	-21.19		8.70		0.75		3.80		13.56		-13.94	

3 Yr Rolling Under/Over Performance - 5 Years

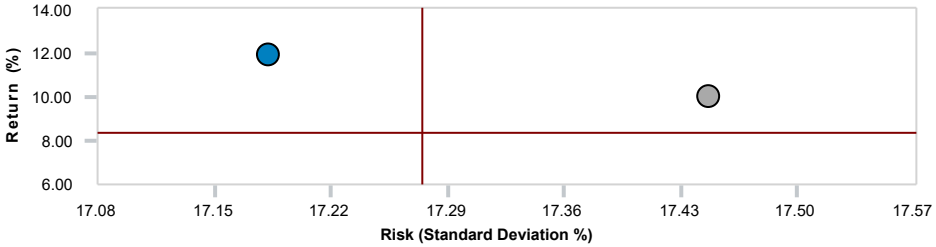


3 Yr Rolling Percentile Ranking - 5 Years



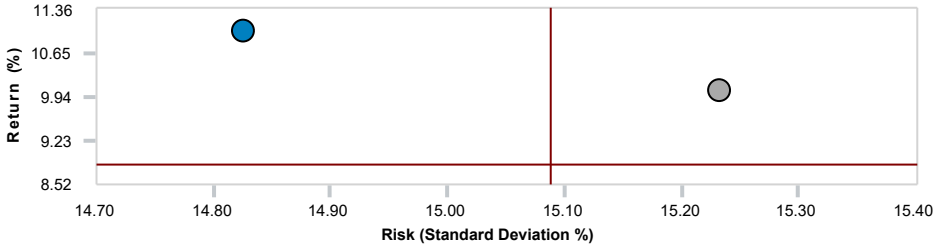
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Domestic Eqty	20	12 (60%)	1 (5%)	5 (25%)	2 (10%)
R 3000 Index	20	3 (15%)	17 (85%)	0 (0%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Total Domestic Eqty	11.94	17.18
R 3000 Index	10.04	17.45
Median	8.38	17.27

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Total Domestic Eqty	11.01	14.83
R 3000 Index	10.03	15.23
Median	8.85	15.09

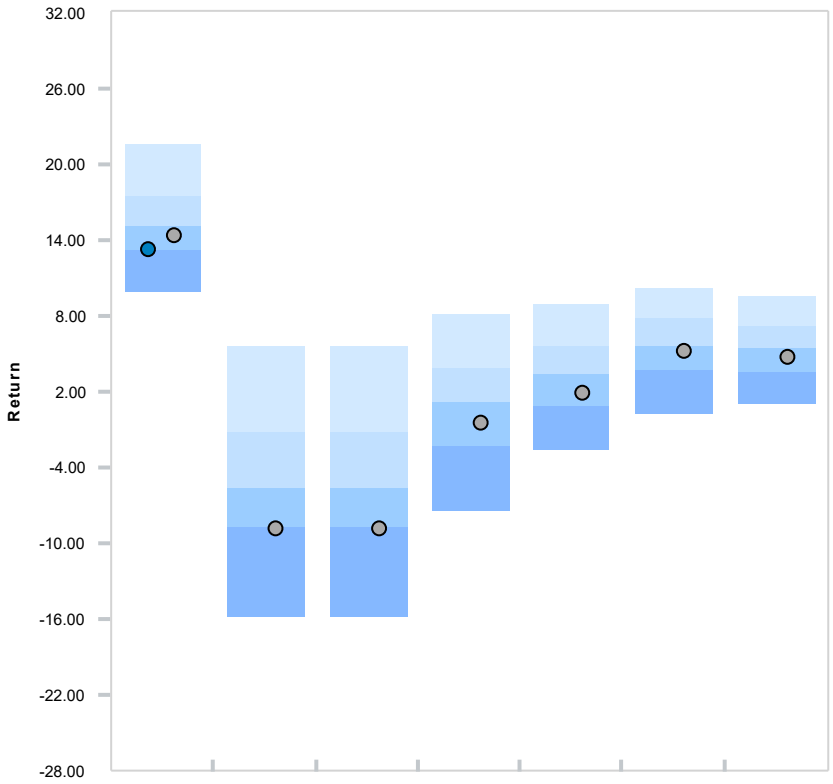
Historical Statistics - 3 Years

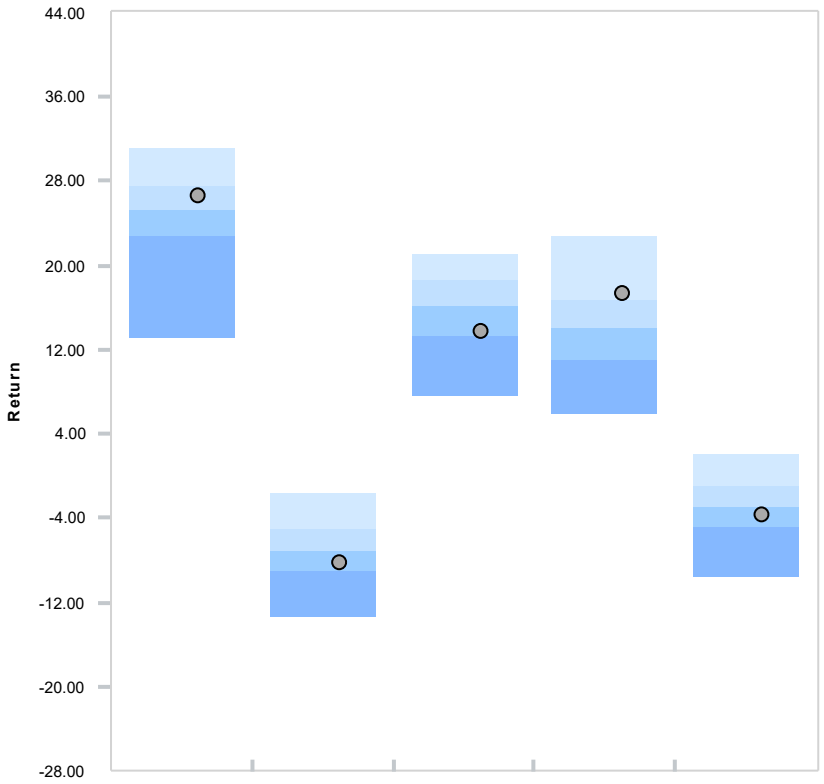
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Eqty	2.62	100.17	90.78	1.99	0.64	0.64	0.97	12.07
Russell 3000 Index	0.00	100.00	100.00	0.00	N/A	0.54	1.00	12.39

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Eqty	2.51	98.95	92.40	1.26	0.33	0.70	0.96	10.17
Russell 3000 Index	0.00	100.00	100.00	0.00	N/A	0.63	1.00	10.45

Peer Group Analysis - IM Equity Income (MF)





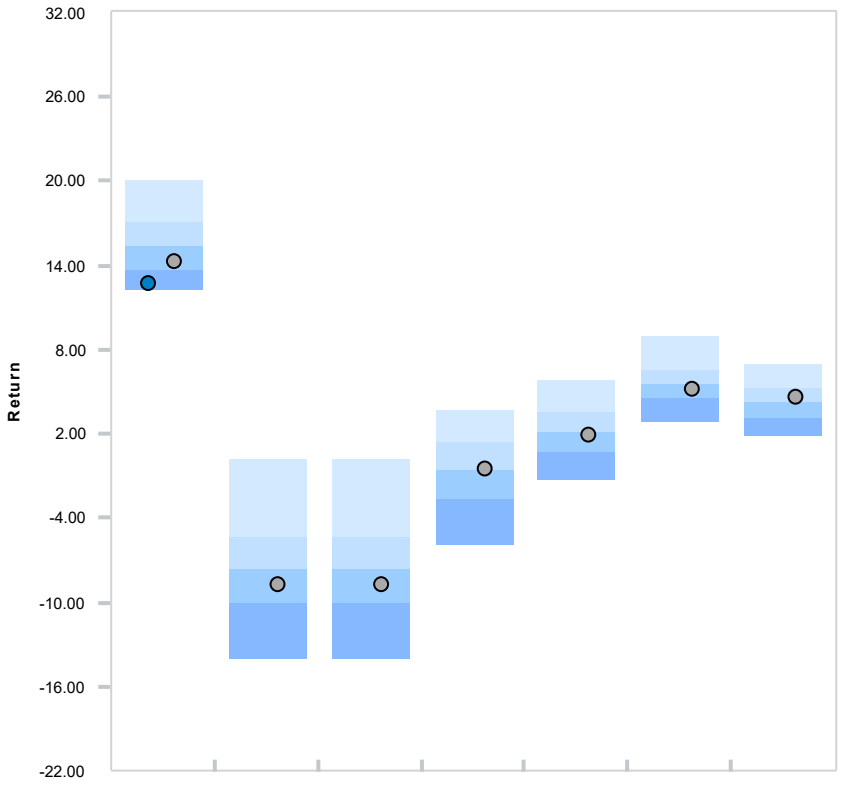
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
JPM Eq Inc (OIEJX)	13.27 (74)	N/A	N/A	N/A	N/A	N/A	N/A
R1000 V	14.29 (63)	-8.84 (76)	-8.84 (76)	-0.56 (64)	1.82 (64)	5.09 (57)	4.64 (61)
Median	15.17	-5.51	-5.51	1.24	3.46	5.61	5.41

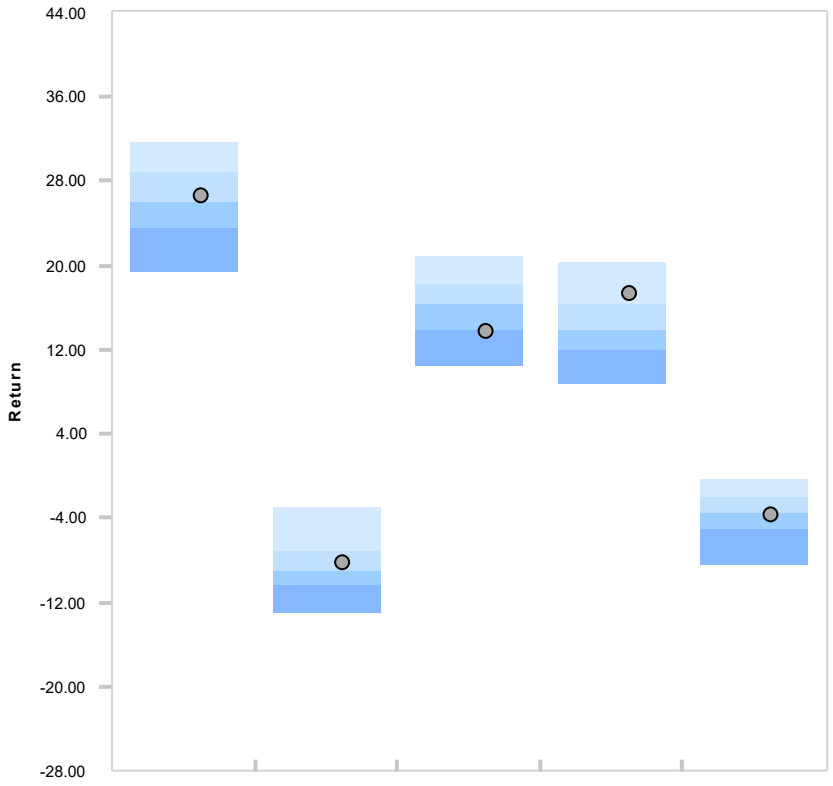
	2019	2018	2017	2016	2015
JPM Eq Inc (OIEJX)	N/A	N/A	N/A	N/A	N/A
R1000 V	26.54 (33)	-8.27 (65)	13.66 (73)	17.34 (22)	-3.83 (59)
Median	25.27	-7.25	16.16	14.10	-3.05

Comparative Performance

	1 Qtr Ending Mar-2020	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
JPM Eq Inc (OIEJX)	-24.03 (52)	N/A	N/A	N/A	N/A	N/A
R 1000 V	-26.73 (73)	7.41 (27)	1.36 (79)	3.84 (42)	11.93 (30)	-11.72 (56)
IM Equity Income (MF) Median	-23.86	6.46	2.23	3.45	11.24	-11.46

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





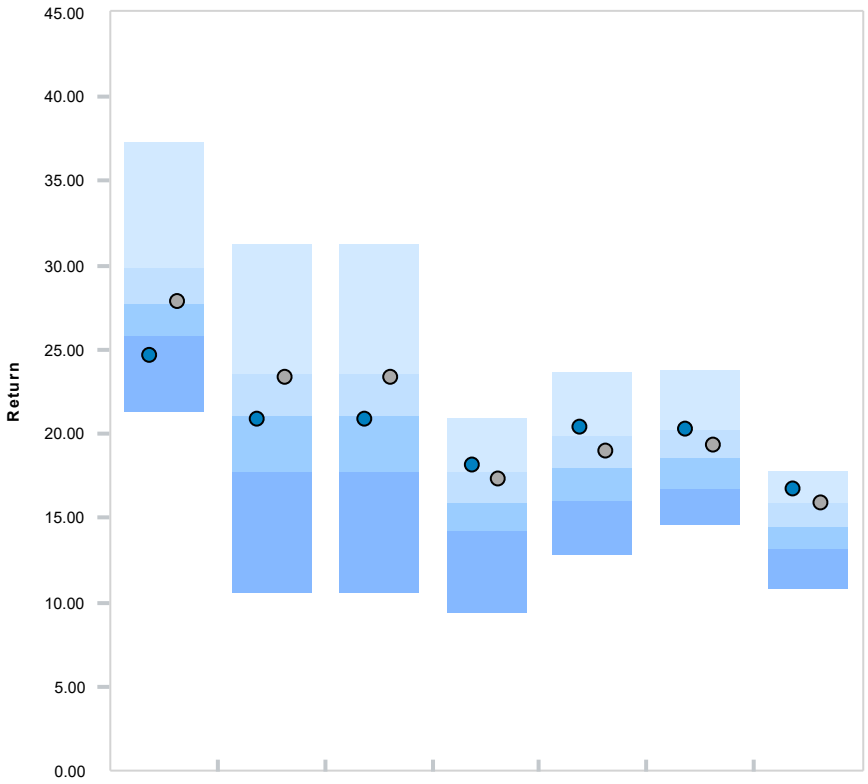
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
VG Eq Inc (VEIRX)	12.67 (92)	N/A	N/A	N/A	N/A	N/A	N/A
R1000 V	14.29 (68)	-8.84 (65)	-8.84 (65)	-0.56 (51)	1.82 (55)	5.09 (65)	4.64 (42)
Median	15.42	-7.67	-7.67	-0.48	2.13	5.58	4.28

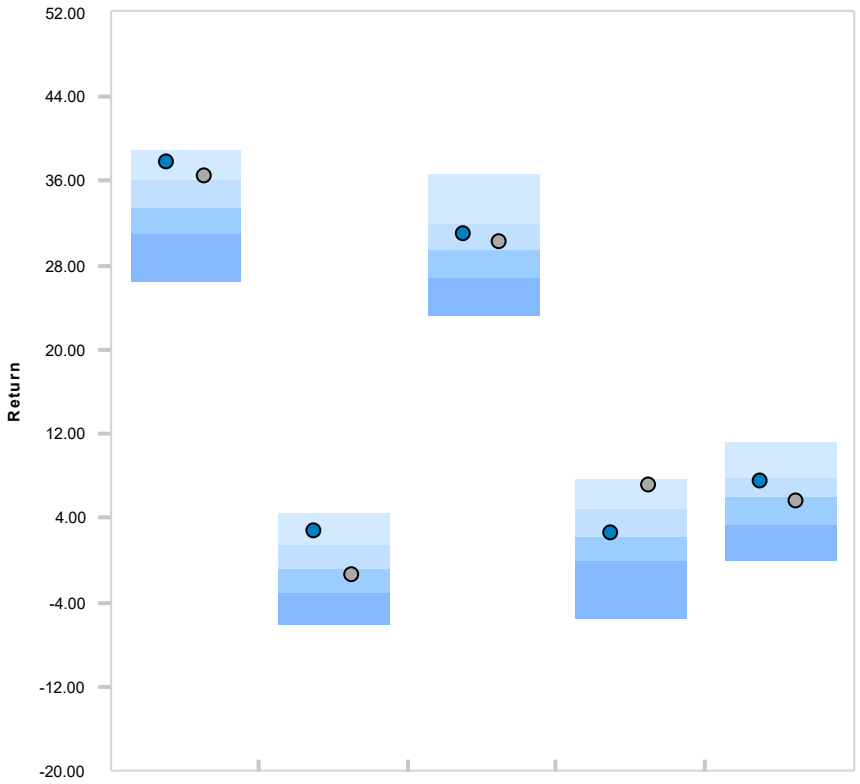
	2019	2018	2017	2016	2015
VG Eq Inc (VEIRX)	N/A	N/A	N/A	N/A	N/A
R1000 V	26.54 (45)	-8.27 (36)	13.66 (77)	17.34 (19)	-3.83 (58)
Median	26.07	-9.08	16.29	13.82	-3.54

Comparative Performance

	1 Qtr Ending Mar-2020	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
VG Eq Inc (VEIRX)	-23.06 (8)	N/A	N/A	N/A	N/A	N/A
R 1000 V	-26.73 (53)	7.41 (55)	1.36 (53)	3.84 (39)	11.93 (40)	-11.72 (29)
IM U.S. Large Cap Value Equity (MF) Median	-26.58	7.57	1.41	3.49	11.58	-12.92

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





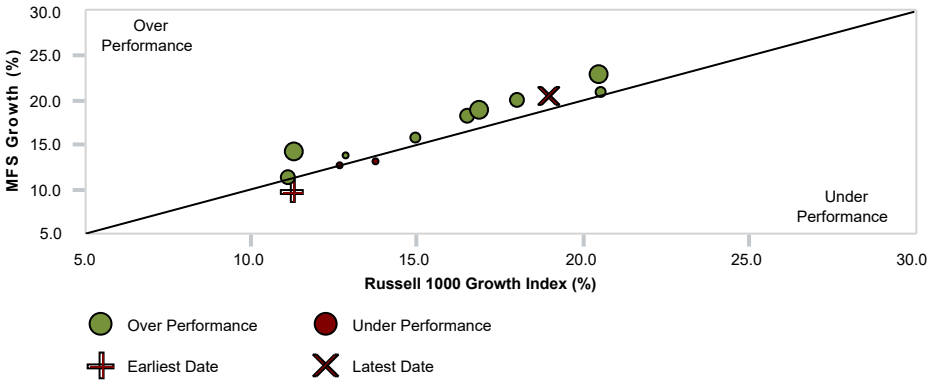
	QTR		FYTD		1 YR		2 YR		3 YR		4 YR		5 YR	
MFS Growth	24.68	(85)	20.88	(52)	20.88	(52)	18.12	(23)	20.32	(22)	20.21	(27)	16.73	(12)
R 1000 G Index	27.84	(46)	23.28	(26)	23.28	(26)	17.27	(31)	18.99	(37)	19.35	(40)	15.89	(24)
Median	27.69		21.05		21.05		15.85		18.03		18.57		14.47	

	2019		2018		2017		2016		2015	
MFS Growth	37.88	(10)	2.66	(14)	30.92	(35)	2.58	(46)	7.54	(29)
R 1000 G Index	36.39	(21)	-1.51	(58)	30.21	(41)	7.08	(8)	5.67	(54)
Median	33.38		-0.87		29.46		2.18		6.01	

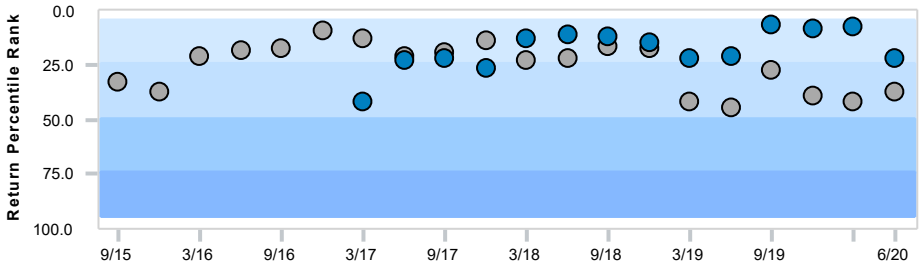
Comparative Performance

	1 Qtr Ending Mar-2020		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	
MFS Growth	-11.75	(18)	8.55	(78)	1.21	(21)	6.56	(11)	17.77	(10)	-15.28	(43)
Russell 1000 Growth Index	-14.10	(64)	10.62	(27)	1.49	(16)	4.64	(56)	16.10	(55)	-15.89	(53)
IM U.S. Large Cap Growth Equity (MF) Median	-13.45		9.69		-0.01		4.76		16.25		-15.76	

3 Yr Rolling Under/Over Performance - 5 Years

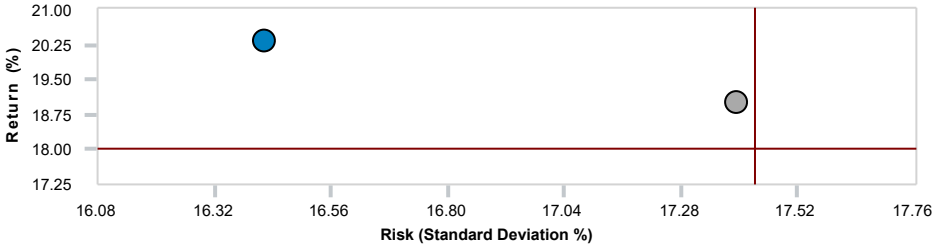


3 Yr Rolling Percentile Ranking - 5 Years



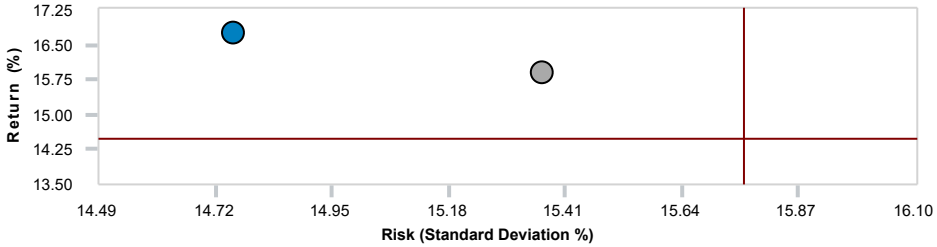
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
MFS Growth	14	12 (86%)	2 (14%)	0 (0%)	0 (0%)
R 1000 G Index	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
MFS Growth	20.32	16.42
R 1000 G Index	18.99	17.40
Median	18.03	17.43

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
MFS Growth	16.73	14.76
R 1000 G Index	15.89	15.36
Median	14.47	15.76

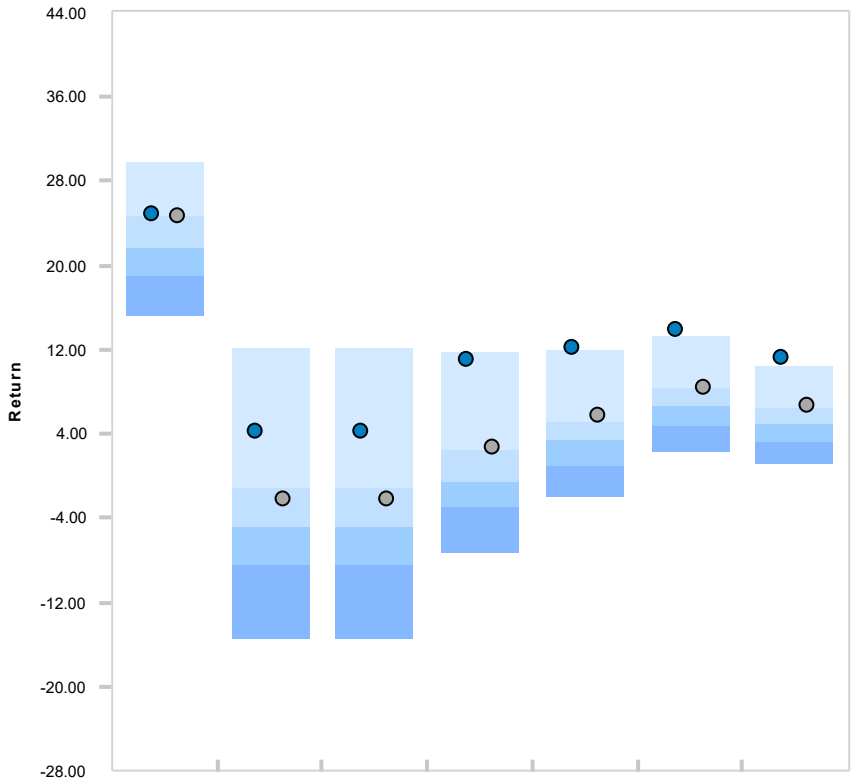
Historical Statistics - 3 Years

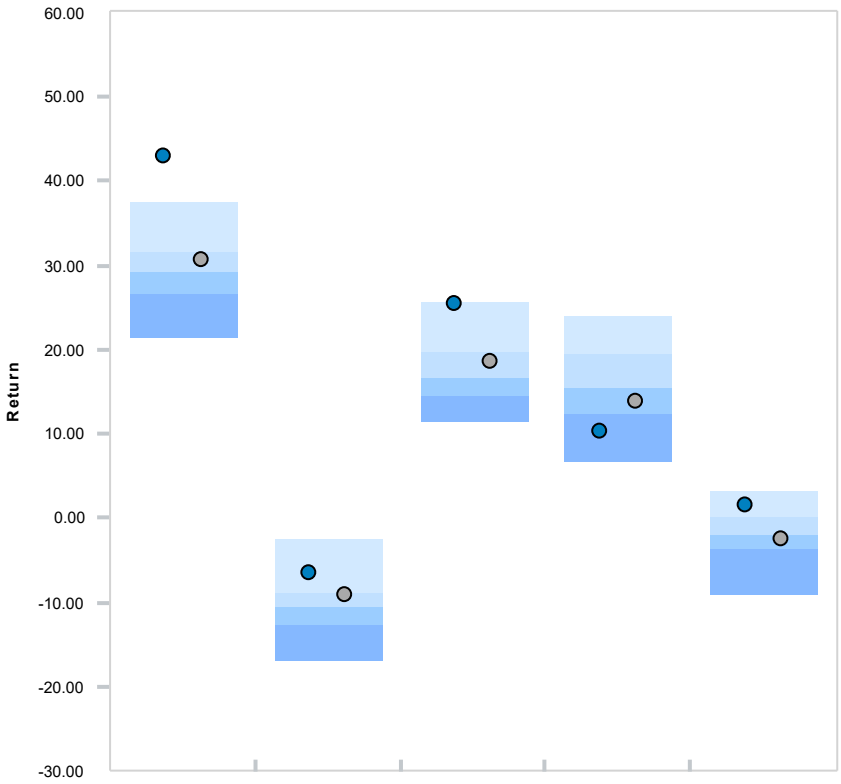
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MFS Growth	3.09	96.49	86.03	2.32	0.31	1.10	0.93	10.00
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.99	1.00	10.83

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MFS Growth	3.15	98.42	91.70	1.61	0.20	1.05	0.94	8.70
Russell 1000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.96	1.00	9.33

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





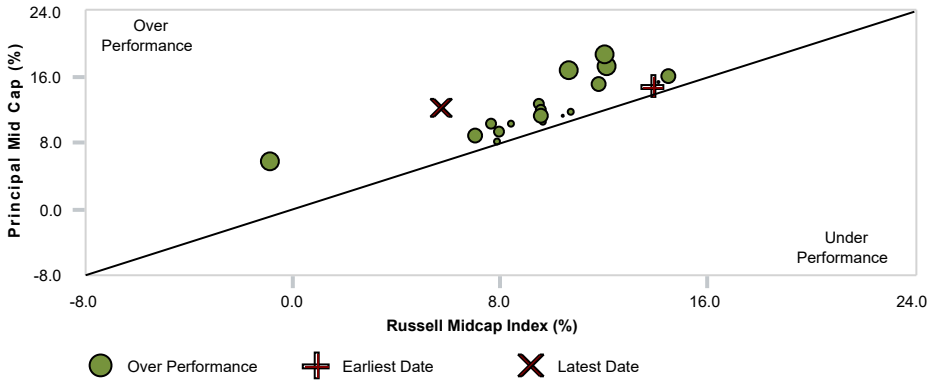
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Principal Mid Cap	24.86 (24)	4.20 (10)	4.20 (10)	10.94 (6)	12.14 (4)	13.91 (5)	11.15 (5)
R Midcap Index	24.61 (26)	-2.24 (30)	-2.24 (30)	2.67 (24)	5.79 (22)	8.37 (28)	6.76 (25)
Median	21.66	-4.82	-4.82	-0.50	3.43	6.65	4.95

	2019	2018	2017	2016	2015
Principal Mid Cap	42.89 (1)	-6.51 (16)	25.32 (8)	10.25 (82)	1.47 (19)
R Midcap Index	30.54 (39)	-9.06 (29)	18.52 (34)	13.80 (62)	-2.44 (58)
Median	29.25	-10.51	16.61	15.43	-2.14

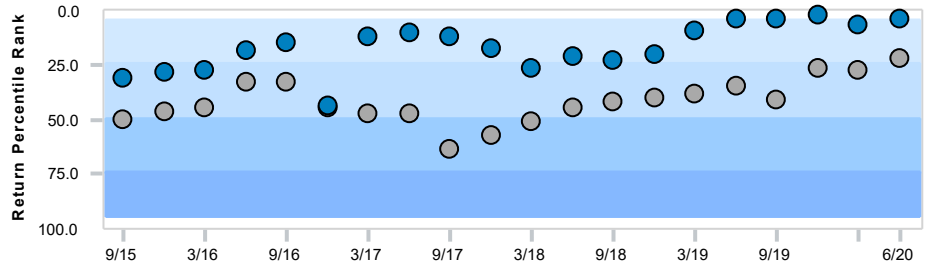
Comparative Performance

	1 Qtr Ending Mar-2020	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
Principal Mid Cap	-23.88 (17)	6.19 (75)	3.23 (10)	9.28 (2)	19.28 (2)	-13.30 (12)
Russell Midcap Index	-27.07 (40)	7.06 (51)	0.48 (66)	4.13 (56)	16.54 (21)	-15.37 (43)
IM U.S. Mid Cap Core Equity (SA+CF+MF) Median	-28.06	7.07	1.15	4.28	14.90	-15.65

3 Yr Rolling Under/Over Performance - 5 Years

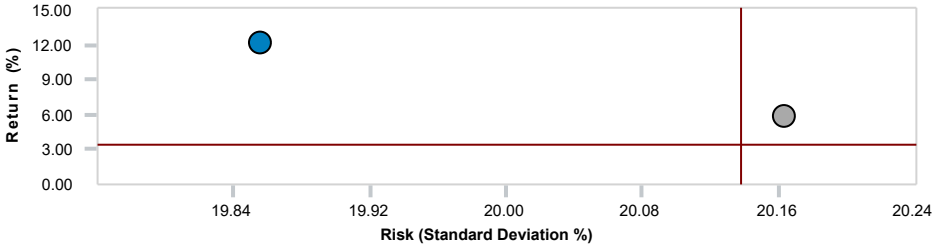


3 Yr Rolling Percentile Ranking - 5 Years



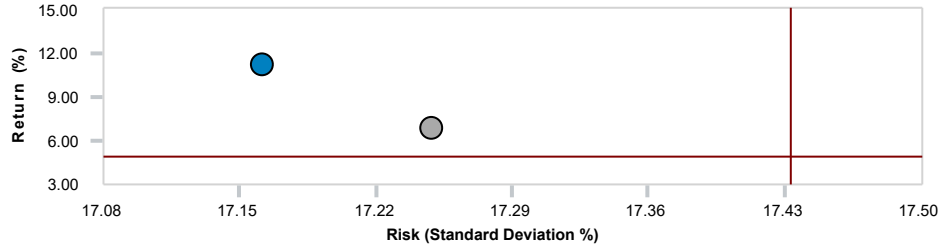
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Principal Mid Cap	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)
R Midcap Index	20	1 (5%)	16 (80%)	3 (15%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Principal Mid Cap	12.14	19.86
R Midcap Index	5.79	20.16
Median	3.43	20.14

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Principal Mid Cap	11.15	17.16
R Midcap Index	6.76	17.25
Median	4.95	17.43

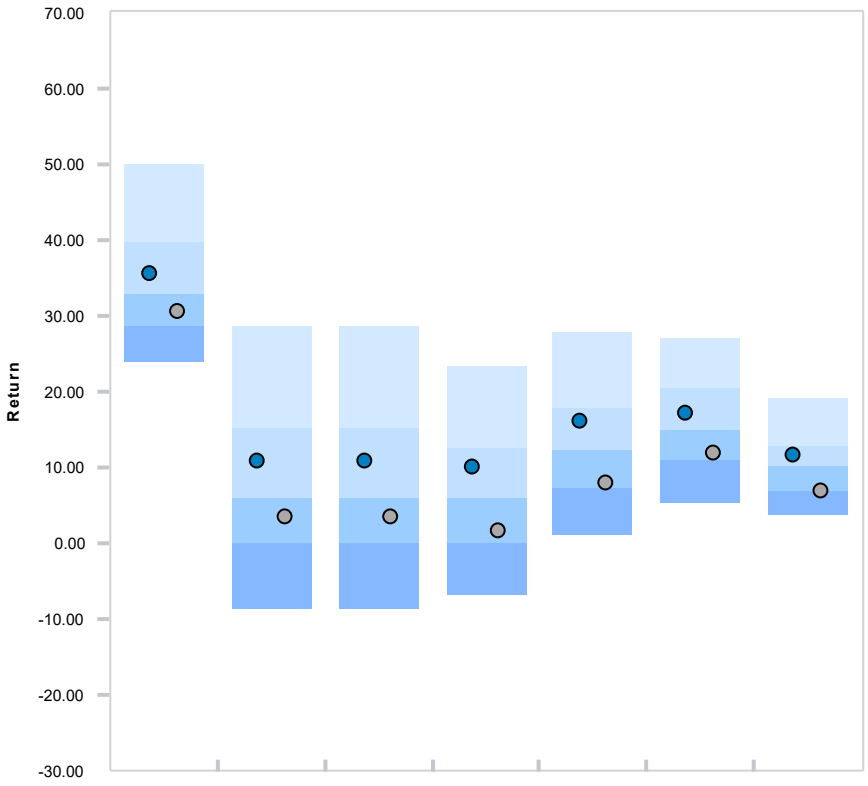
Historical Statistics - 3 Years

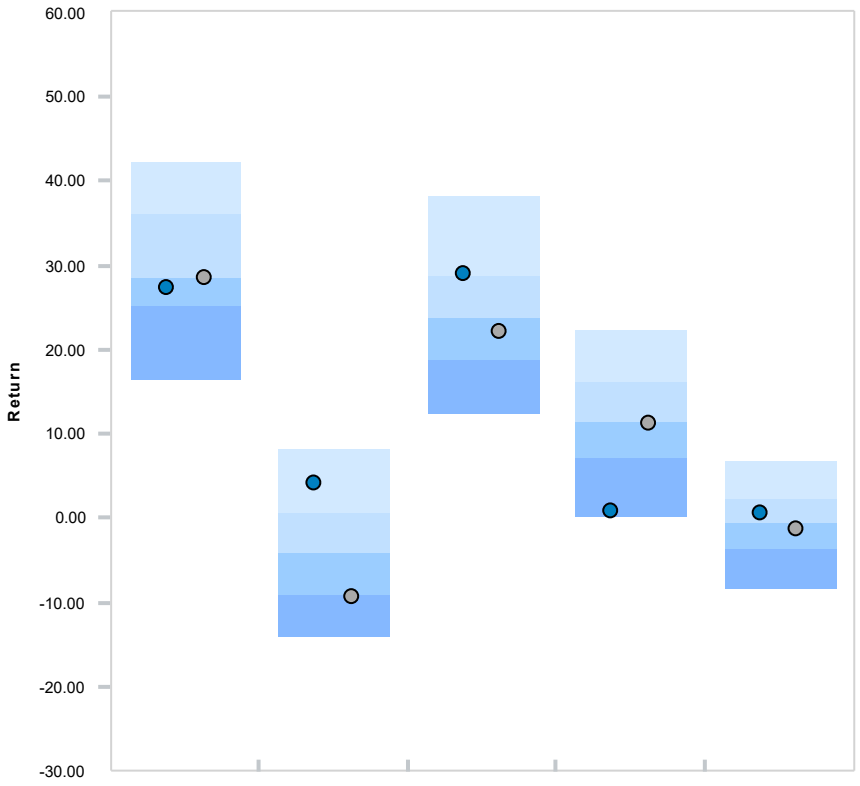
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Principal Mid Cap	7.06	100.05	71.83	6.61	0.82	0.59	0.92	14.58
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.30	1.00	15.13

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Principal Mid Cap	5.88	103.00	80.19	4.66	0.69	0.64	0.94	12.27
Russell Midcap Index	0.00	100.00	100.00	0.00	N/A	0.40	1.00	12.56

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





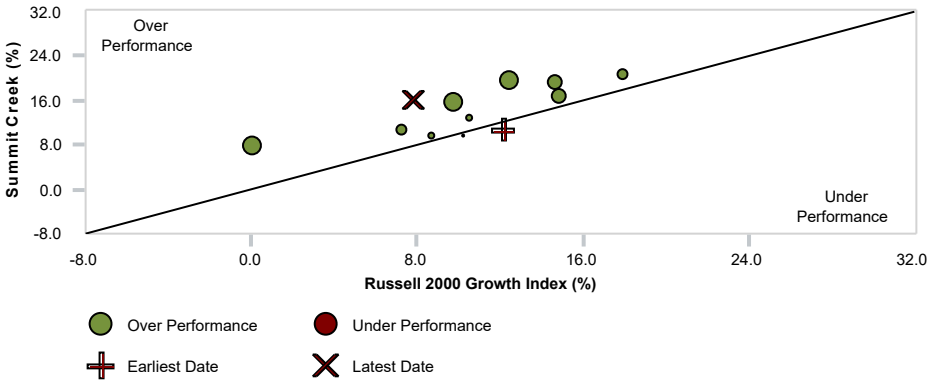
	QTR		FYTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Summit Creek	35.60	(37)	10.68	(37)	10.68	(37)	10.06	(32)	16.05	(34)	16.99	(38)	11.68	(35)
R 2000 G Index	30.58	(60)	3.48	(57)	3.48	(57)	1.47	(70)	7.86	(73)	11.78	(71)	6.86	(76)
Median	32.78		5.99		5.99		6.13		12.27		14.99		10.20	

	2019		2018		2017		2016		2015	
Summit Creek	27.34	(62)	4.19	(12)	28.93	(24)	0.76	(94)	0.63	(39)
R 2000 G Index	28.48	(51)	-9.31	(77)	22.17	(57)	11.32	(52)	-1.38	(56)
Median	28.49		-4.24		23.81		11.40		-0.74	

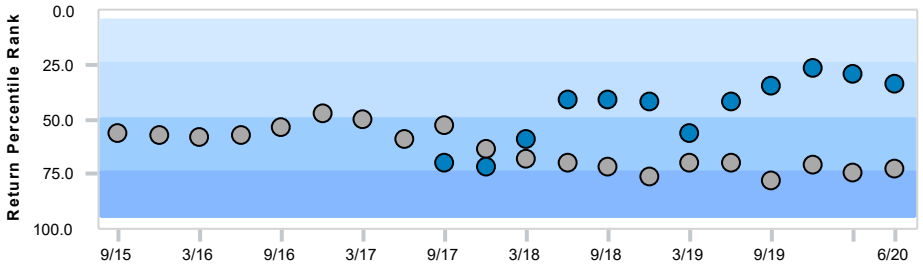
Comparative Performance

	1 Qtr Ending Mar-2020		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	
Summit Creek	-21.13	(33)	8.93	(59)	-5.00	(61)	4.95	(47)	17.24	(53)	-19.84	(34)
Russell 2000 Growth Index	-25.76	(67)	11.39	(27)	-4.17	(52)	2.75	(80)	17.14	(54)	-21.65	(66)
IM U.S. Small Cap Growth Equity (SA+CF) Median	-23.57		9.39		-4.14		4.51		17.48		-20.69	

3 Yr Rolling Under/Over Performance - 5 Years

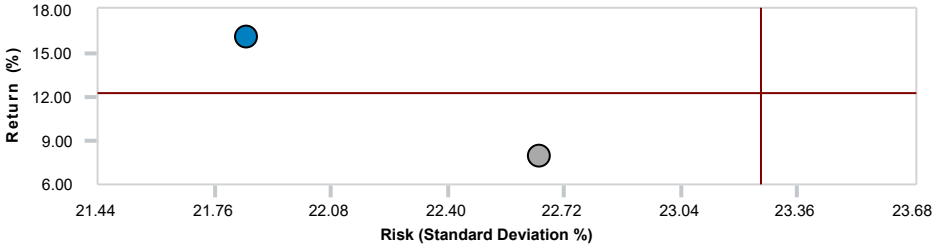


3 Yr Rolling Percentile Ranking - 5 Years



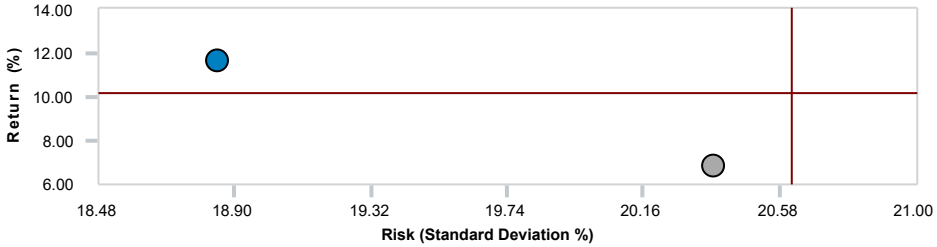
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Summit Creek	12	0 (0%)	8 (67%)	4 (33%)	0 (0%)
R 2000 G Index	20	0 (0%)	2 (10%)	16 (80%)	2 (10%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Summit Creek	16.05	21.85
R 2000 G Index	7.86	22.65
Median	12.27	23.26

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Summit Creek	11.68	18.85
R 2000 G Index	6.86	20.38
Median	10.20	20.62

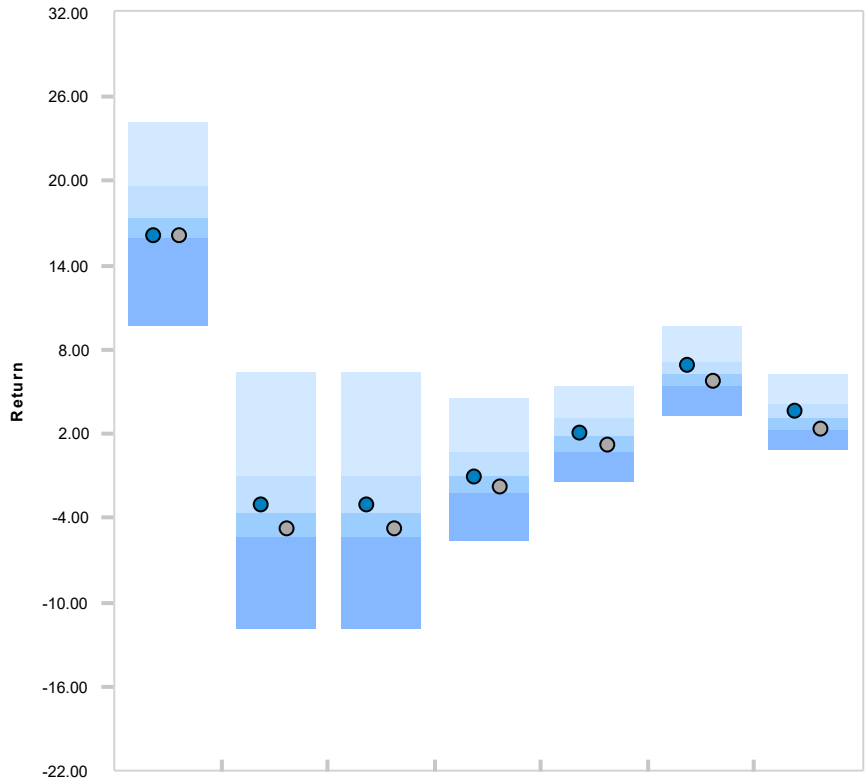
Historical Statistics - 3 Years

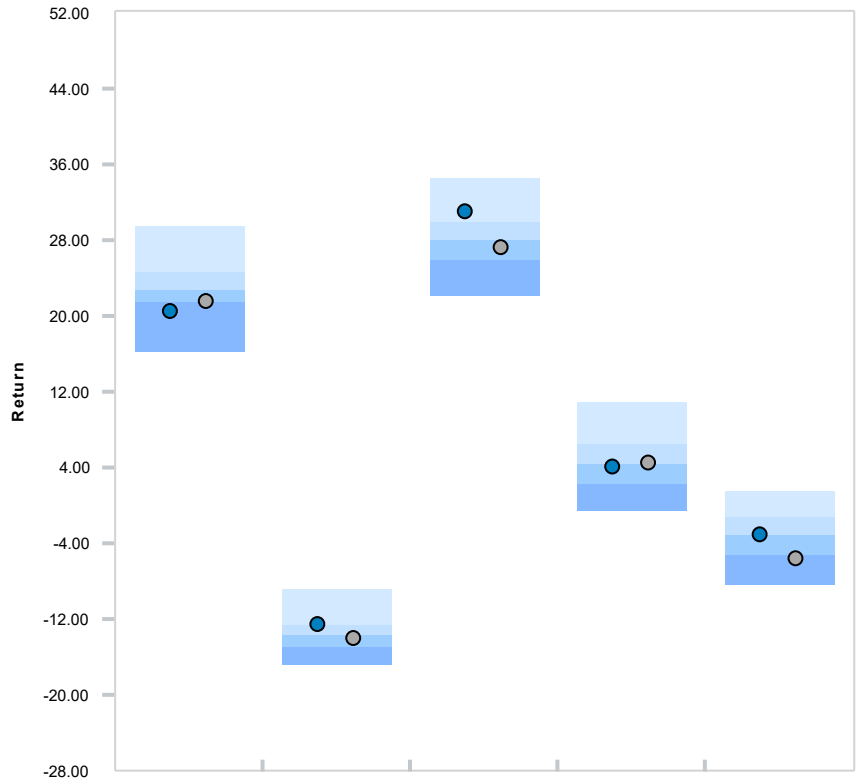
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Summit Creek	4.67	107.05	79.88	8.00	1.53	0.71	0.94	14.29
Russell 2000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.37	1.00	16.38

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Summit Creek	6.03	95.71	75.12	5.24	0.68	0.62	0.88	12.56
Russell 2000 Growth Index	0.00	100.00	100.00	0.00	N/A	0.37	1.00	14.71

Peer Group Analysis - All Master Trust-Intl. Equity Segment





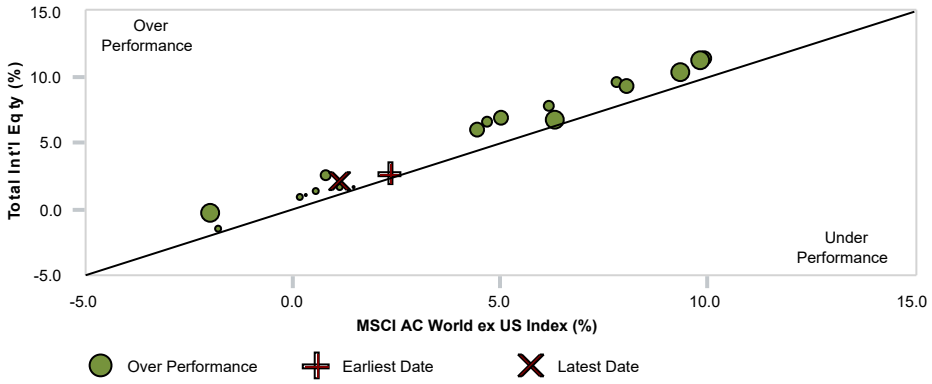
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Total Int'l Eqty	16.09 (72)	-3.04 (43)	-3.04 (43)	-1.17 (54)	2.03 (46)	6.84 (32)	3.60 (33)
ACWIxUS Index	16.12 (71)	-4.80 (65)	-4.80 (65)	-1.80 (67)	1.13 (67)	5.65 (69)	2.26 (77)
Median	17.42	-3.74	-3.74	-0.99	1.80	6.32	3.10

	2019	2018	2017	2016	2015
Total Int'l Eqty	20.48 (82)	-12.65 (26)	30.90 (18)	3.96 (55)	-3.11 (49)
ACWIxUS Index	21.51 (76)	-14.20 (61)	27.19 (62)	4.50 (49)	-5.66 (81)
Median	22.67	-13.68	28.09	4.41	-3.21

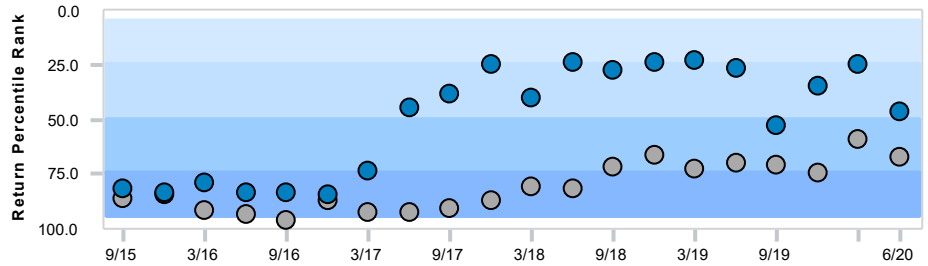
Comparative Performance

	1 Qtr Ending Mar-2020	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
Total Int'l Eqty	-21.93 (23)	9.86 (34)	-2.62 (86)	2.45 (77)	9.92 (80)	-11.46 (43)
MSCI AC World ex US Index	-23.36 (42)	8.92 (65)	-1.80 (70)	2.98 (59)	10.31 (67)	-11.46 (43)
All Master Trust-Intl. Equity Segment Median	-23.70	9.31	-1.41	3.13	10.77	-11.69

3 Yr Rolling Under/Over Performance - 5 Years

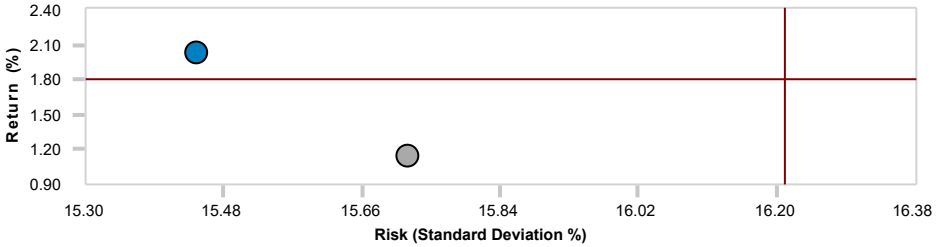


3 Yr Rolling Percentile Ranking - 5 Years



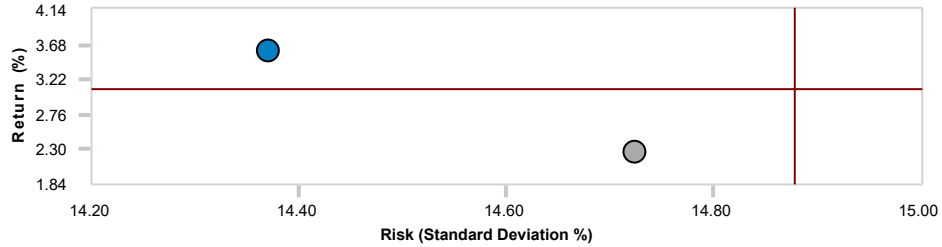
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Int'l Eqty	20	5 (25%)	7 (35%)	2 (10%)	6 (30%)
ACWIxUS Index	20	0 (0%)	0 (0%)	8 (40%)	12 (60%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Total Int'l Eqty	2.03	15.45
ACWIxUS Index	1.13	15.72
Median	1.80	16.21

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Total Int'l Eqty	3.60	14.37
ACWIxUS Index	2.26	14.73
Median	3.10	14.88

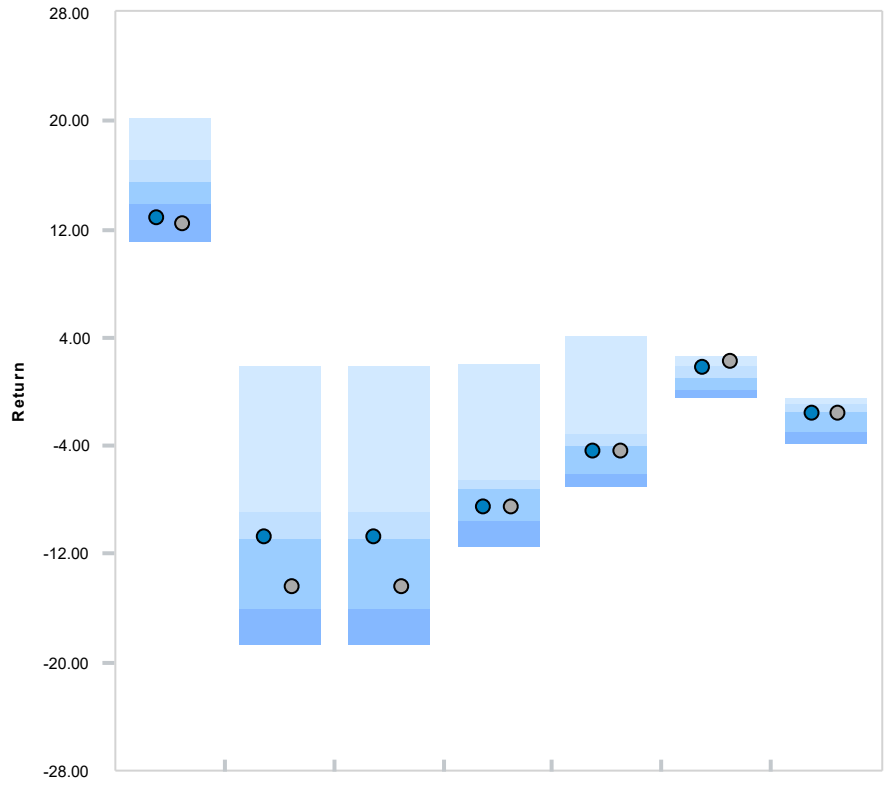
Historical Statistics - 3 Years

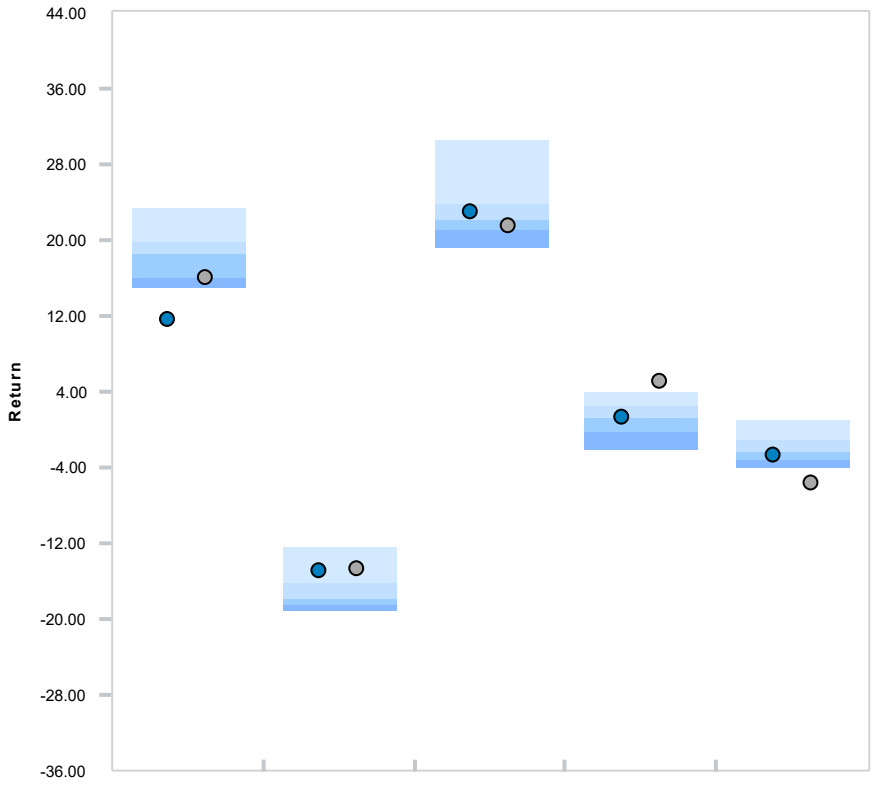
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Eqty	1.75	100.58	96.50	0.89	0.48	0.10	0.98	11.83
MSCI AC World ex US Index	0.00	100.00	100.00	0.00	N/A	0.04	1.00	12.17

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Int'l Eqty	2.23	101.16	94.56	1.37	0.56	0.24	0.96	10.41
MSCI AC World ex US Index	0.00	100.00	100.00	0.00	N/A	0.15	1.00	10.88

Peer Group Analysis - IM International Large Cap Value Equity (MF)





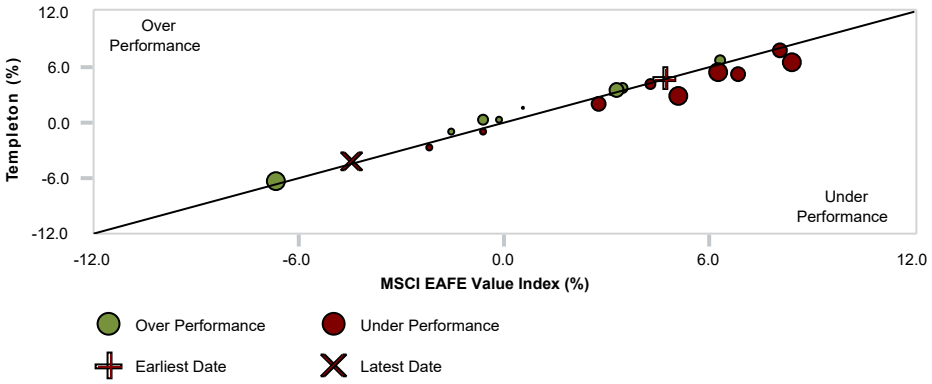
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Templeton	12.82 (82)	-10.81 (49)	-10.81 (49)	-8.57 (69)	-4.36 (62)	1.77 (30)	-1.58 (54)
EAFE V Index	12.43 (88)	-14.48 (70)	-14.48 (70)	-8.50 (67)	-4.43 (63)	2.20 (14)	-1.59 (54)
Median	15.40	-10.88	-10.88	-7.17	-3.94	1.01	-1.51

	2019	2018	2017	2016	2015
Templeton	11.57 (100)	-14.95 (19)	22.90 (38)	1.30 (48)	-2.67 (63)
EAFE V Index	16.09 (74)	-14.78 (19)	21.44 (63)	5.02 (1)	-5.68 (100)
Median	18.45	-17.83	22.09	1.18	-2.21

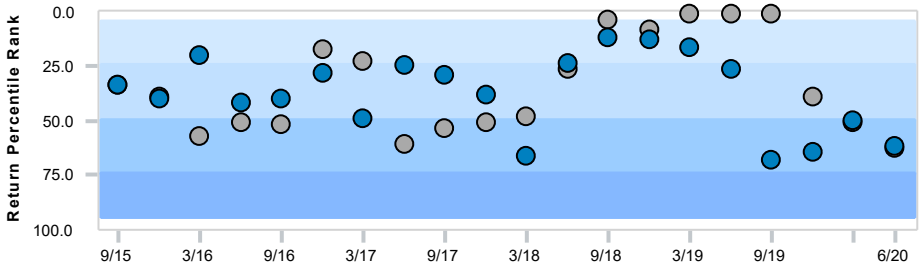
Comparative Performance

	1 Qtr Ending Mar-2020	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
Templeton	-24.71 (10)	8.22 (87)	-2.97 (100)	-0.36 (100)	6.64 (96)	-12.65 (23)
MSCI EAFE Value Index	-28.20 (49)	7.82 (99)	-1.74 (51)	1.54 (64)	7.92 (51)	-11.70 (13)
IM International Large Cap Value Equity (MF) Median	-28.23	8.77	-1.73	2.40	7.92	-13.74

3 Yr Rolling Under/Over Performance - 5 Years

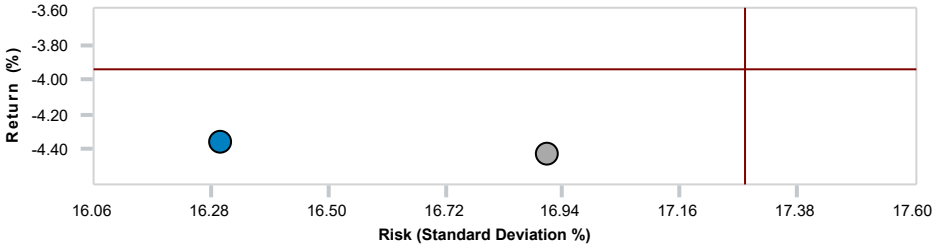


3 Yr Rolling Percentile Ranking - 5 Years



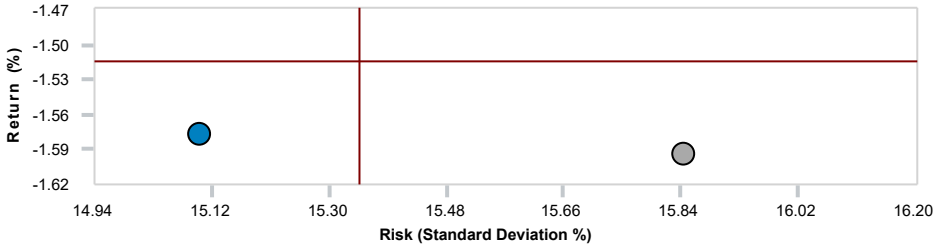
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Templeton	20	6 (30%)	10 (50%)	4 (20%)	0 (0%)
EAFE V Index	20	7 (35%)	5 (25%)	8 (40%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Templeton	-4.36	16.30
EAFE V Index	-4.43	16.91
Median	-3.94	17.28

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Templeton	-1.58	15.10
EAFE V Index	-1.59	15.85
Median	-1.51	15.35

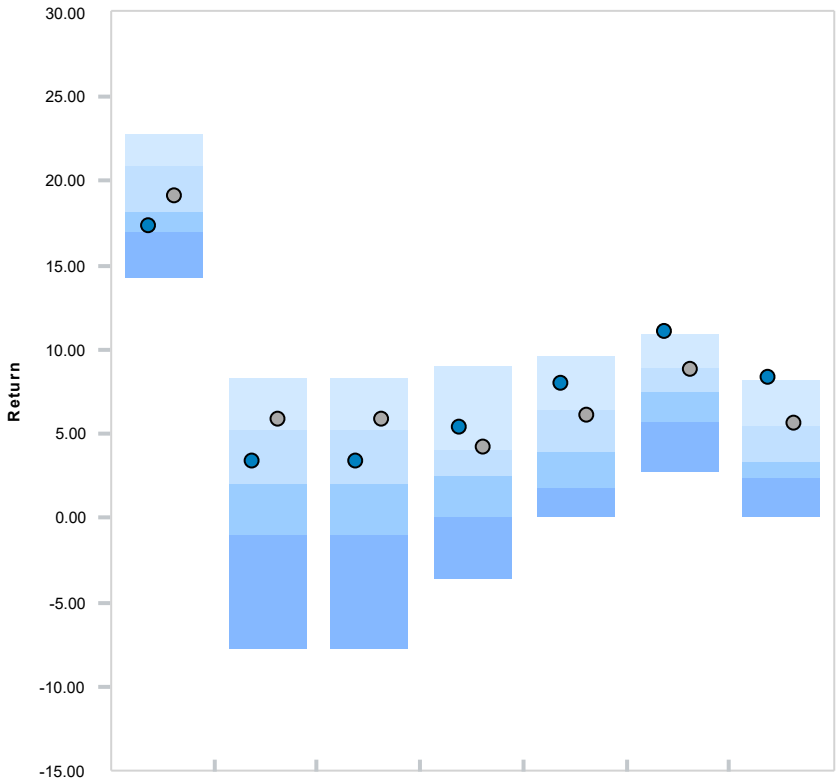
Historical Statistics - 3 Years

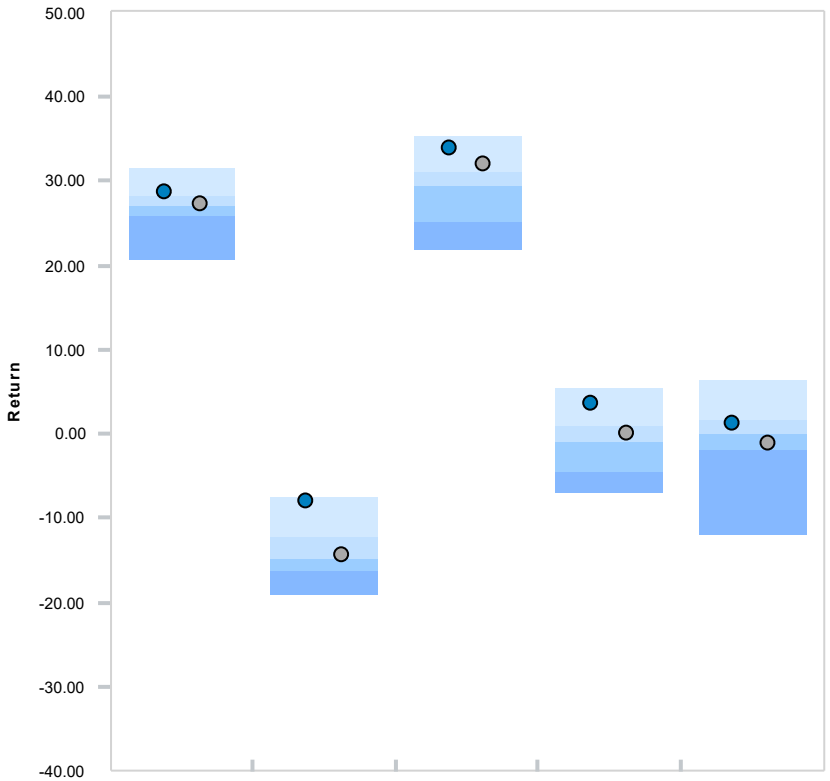
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton	3.27	95.94	96.66	-0.22	-0.02	-0.29	0.95	13.46
MSCI EAFE Value Index	0.00	100.00	100.00	0.00	N/A	-0.28	1.00	14.18

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Templeton	3.40	93.49	94.11	-0.13	-0.03	-0.10	0.93	11.86
MSCI EAFE Value Index	0.00	100.00	100.00	0.00	N/A	-0.09	1.00	12.69

Peer Group Analysis - IM International Large Cap Growth Equity (MF)





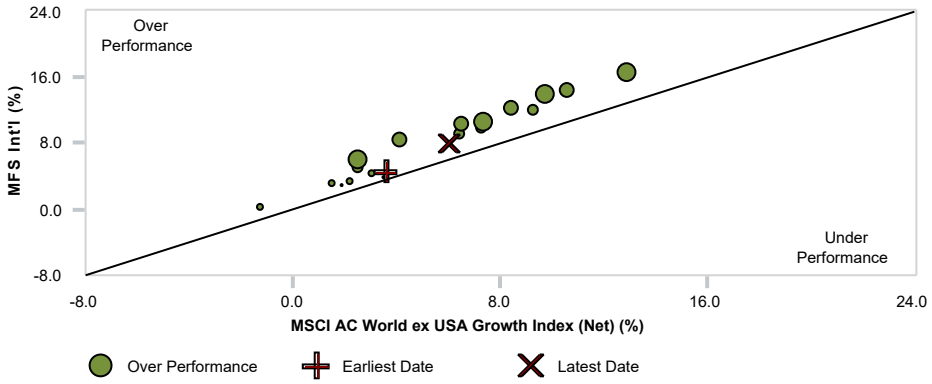
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
MFS Int'l	17.31 (66)	3.31 (33)	3.31 (33)	5.35 (16)	7.96 (11)	11.11 (5)	8.33 (4)
ACWIxUS Gr Index	19.11 (35)	5.80 (21)	5.80 (21)	4.21 (23)	6.07 (29)	8.79 (28)	5.61 (25)
Median	18.13	2.00	2.00	2.48	3.99	7.47	3.30

	2019	2018	2017	2016	2015
MFS Int'l	28.59 (21)	-8.14 (9)	33.99 (6)	3.58 (11)	1.31 (34)
ACWIxUS Gr Index	27.34 (43)	-14.43 (44)	32.01 (13)	0.12 (41)	-1.25 (70)
Median	27.03	-14.98	29.50	-0.87	-0.02

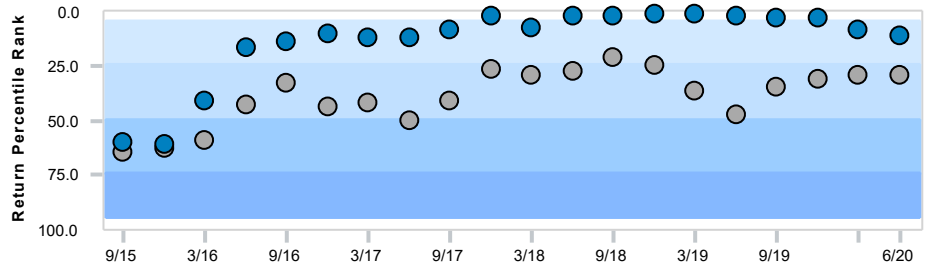
Comparative Performance

	1 Qtr Ending Mar-2020	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
MFS Int'l	-18.64 (26)	10.72 (15)	-2.23 (86)	5.22 (30)	12.90 (40)	-11.57 (26)
MSCI AC World ex USA Growth Index (Net)	-18.25 (23)	9.58 (41)	-0.85 (32)	4.35 (53)	12.31 (55)	-12.20 (37)
IM International Large Cap Growth Equity (MF) Median	-20.57	9.00	-1.46	4.44	12.52	-12.70

3 Yr Rolling Under/Over Performance - 5 Years

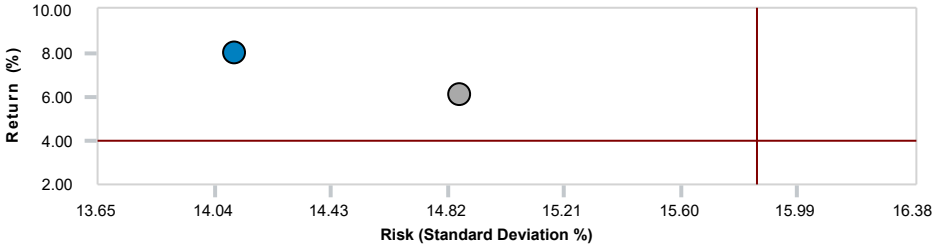


3 Yr Rolling Percentile Ranking - 5 Years



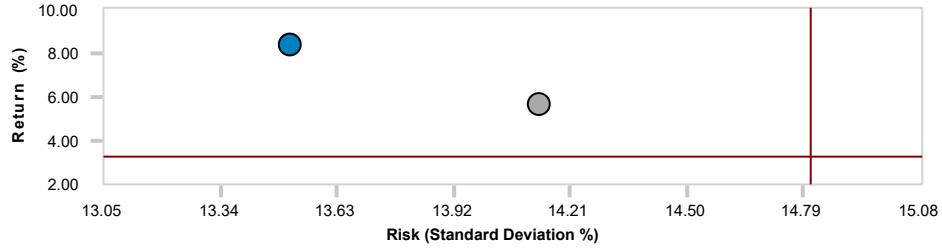
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
MFS Int'l	20	17 (85%)	1 (5%)	2 (10%)	0 (0%)
ACWIxUS Gr Index	20	2 (10%)	15 (75%)	3 (15%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
MFS Int'l	7.96	14.11
ACWIxUS Gr Index	6.07	14.86
Median	3.99	15.86

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
MFS Int'l	8.33	13.52
ACWIxUS Gr Index	5.61	14.13
Median	3.30	14.81

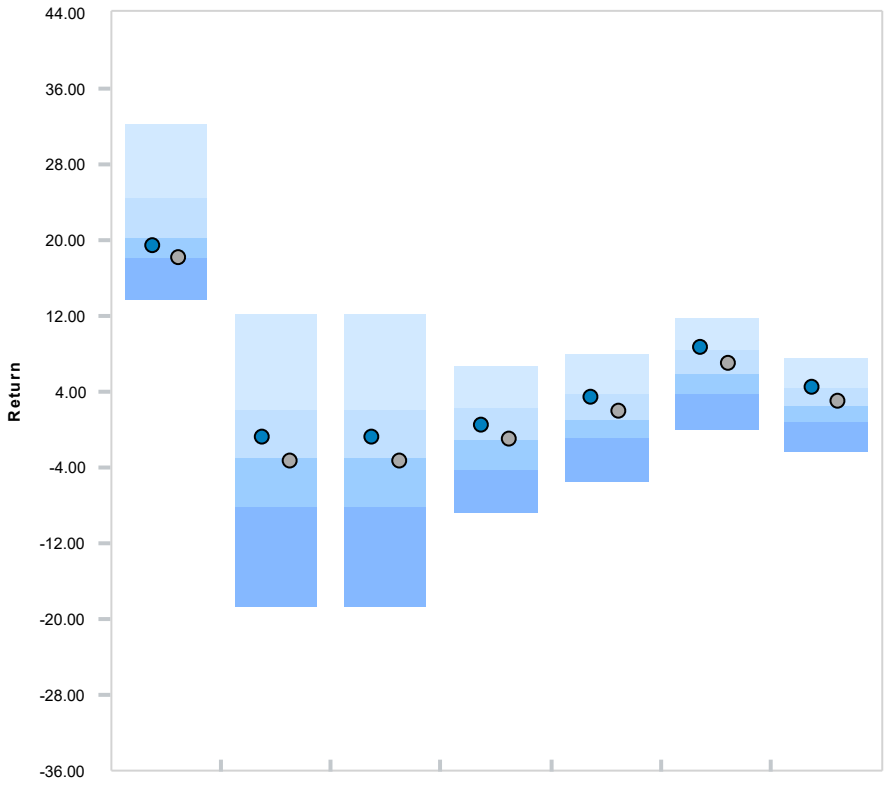
Historical Statistics - 3 Years

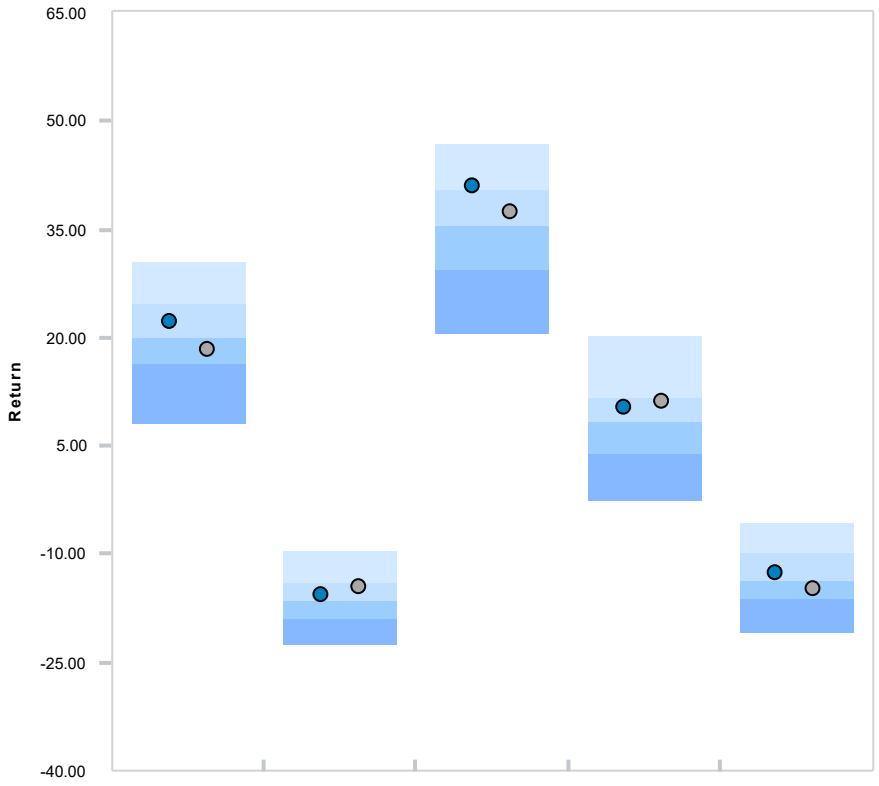
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MFS Int'l	2.79	98.68	88.18	2.16	0.60	0.49	0.93	10.14
MSCI AC World ex USA Growth Index (Net)	0.00	100.00	100.00	0.00	N/A	0.35	1.00	10.63

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MFS Int'l	2.93	101.38	86.48	2.93	0.84	0.57	0.94	9.24
MSCI AC World ex USA Growth Index (Net)	0.00	100.00	100.00	0.00	N/A	0.37	1.00	9.79

Peer Group Analysis - IM Emerging Markets Equity (MF)





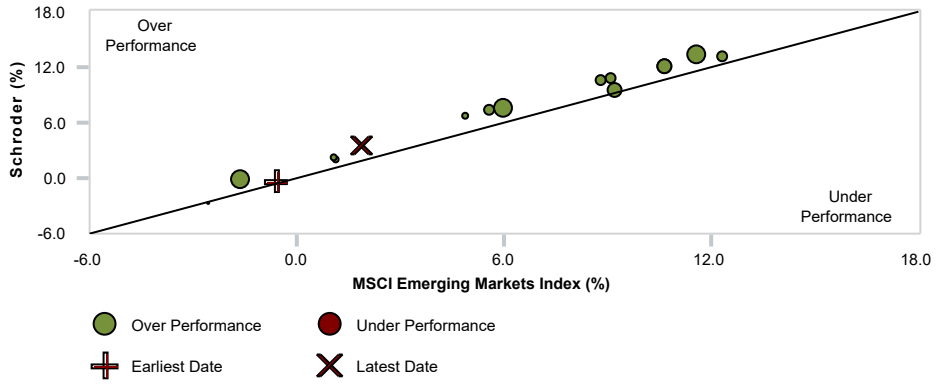
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Schroder	19.31 (61)	-0.83 (36)	-0.83 (36)	0.35 (39)	3.34 (29)	8.63 (23)	4.48 (26)
Em Mkt Index	18.08 (75)	-3.39 (53)	-3.39 (53)	-1.12 (51)	1.90 (44)	6.97 (36)	2.86 (46)
Median	20.27	-3.04	-3.04	-1.07	1.15	5.92	2.57

	2019	2018	2017	2016	2015
Schroder	22.11 (39)	-15.63 (43)	40.88 (22)	10.40 (36)	-12.70 (42)
Em Mkt Index	18.44 (62)	-14.58 (31)	37.28 (42)	11.19 (30)	-14.92 (63)
Median	20.08	-16.40	35.37	8.35	-13.66

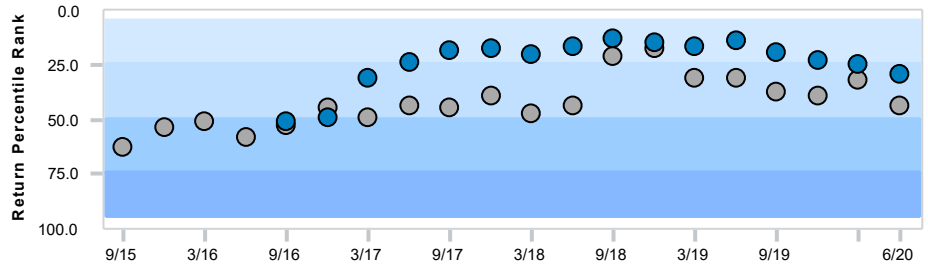
Comparative Performance

	1 Qtr Ending Mar-2020	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
Schroder	-23.21 (32)	11.22 (46)	-2.68 (34)	2.15 (38)	10.45 (49)	-8.88 (74)
MSCI Emerging Markets Index	-23.60 (35)	11.84 (31)	-4.25 (69)	0.61 (76)	9.93 (59)	-7.47 (48)
IM Emerging Markets Equity (MF) Median	-24.82	11.03	-3.46	1.60	10.38	-7.62

3 Yr Rolling Under/Over Performance - 5 Years

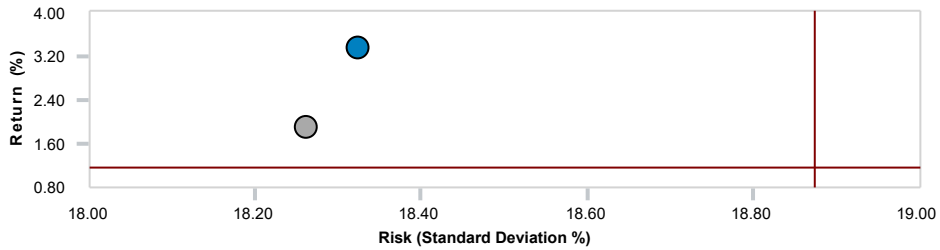


3 Yr Rolling Percentile Ranking - 5 Years



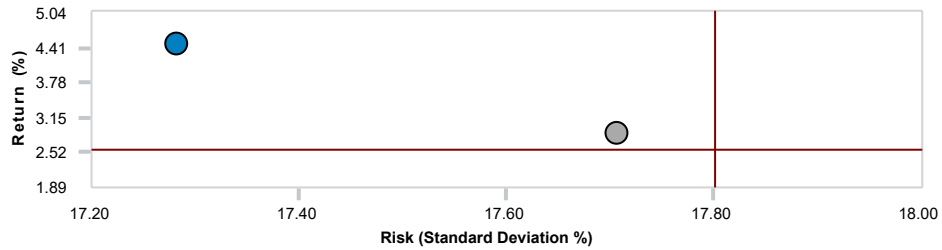
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Schroder	16	12 (75%)	3 (19%)	1 (6%)	0 (0%)
Em Mkt Index	20	2 (10%)	13 (65%)	5 (25%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Schroder	3.34	18.33
Em Mkt Index	1.90	18.26
Median	1.15	18.87

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Schroder	4.48	17.28
Em Mkt Index	2.86	17.71
Median	2.57	17.80

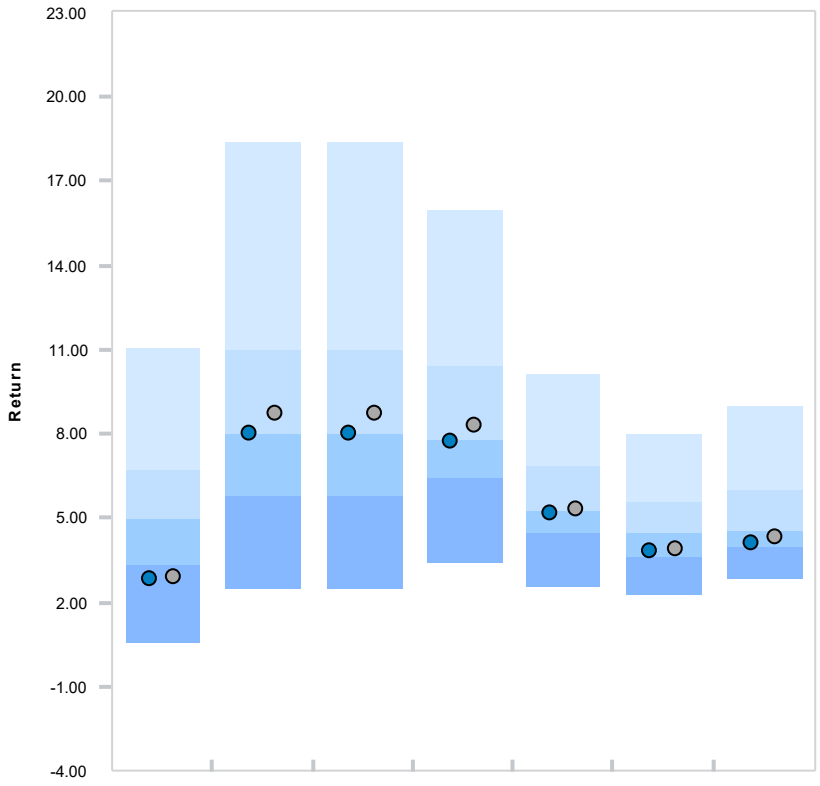
Historical Statistics - 3 Years

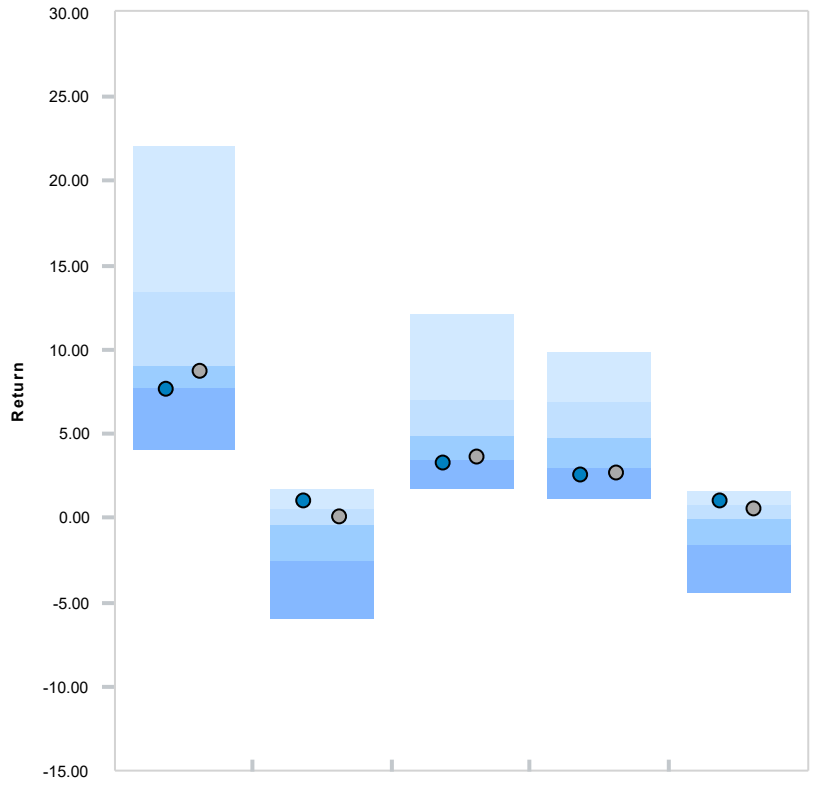
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Schroder	3.05	101.60	95.58	1.48	0.47	0.18	0.99	13.16
MSCI Emerging Markets Index	0.00	100.00	100.00	0.00	N/A	0.10	1.00	13.04

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Schroder	3.21	100.38	93.53	1.69	0.47	0.27	0.96	11.91
MSCI Emerging Markets Index	0.00	100.00	100.00	0.00	N/A	0.18	1.00	12.22

Peer Group Analysis - All Master Trust-US Fixed Income Segment





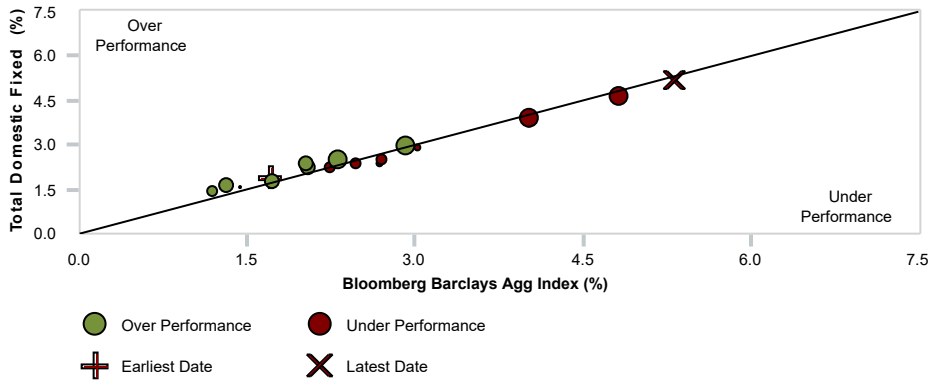
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Total Domestic Fixed	2.82 (82)	7.99 (50)	7.99 (50)	7.74 (51)	5.13 (54)	3.83 (70)	4.10 (71)
BB Agg Index	2.90 (82)	8.74 (39)	8.74 (39)	8.30 (38)	5.32 (48)	3.88 (68)	4.30 (62)
Median	4.94	7.98	7.98	7.82	5.25	4.42	4.55

	2019	2018	2017	2016	2015
Total Domestic Fixed	7.60 (77)	1.02 (13)	3.19 (83)	2.49 (85)	1.04 (17)
BB Agg Index	8.72 (58)	0.01 (37)	3.54 (73)	2.65 (82)	0.55 (32)
Median	9.09	-0.38	4.90	4.81	-0.06

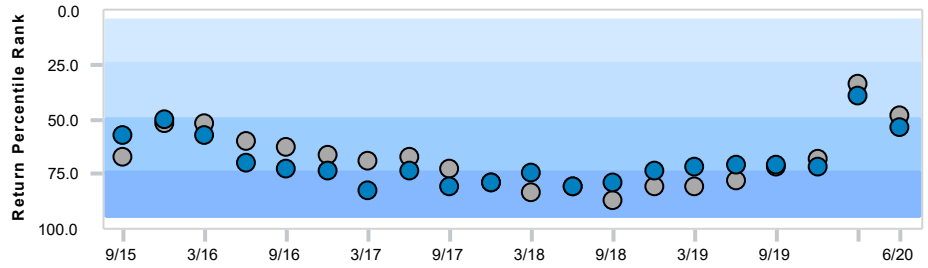
Comparative Performance

	1 Qtr Ending Mar-2020	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
Total Domestic Fixed	2.89 (21)	0.27 (64)	1.80 (67)	2.50 (77)	2.83 (72)	1.21 (26)
Bloomberg Barclays Agg Index	3.15 (20)	0.18 (69)	2.27 (41)	3.08 (48)	2.94 (66)	1.64 (10)
All Master Trust-US Fixed Income Segment Median	0.55	0.45	2.12	3.04	3.32	0.64

3 Yr Rolling Under/Over Performance - 5 Years

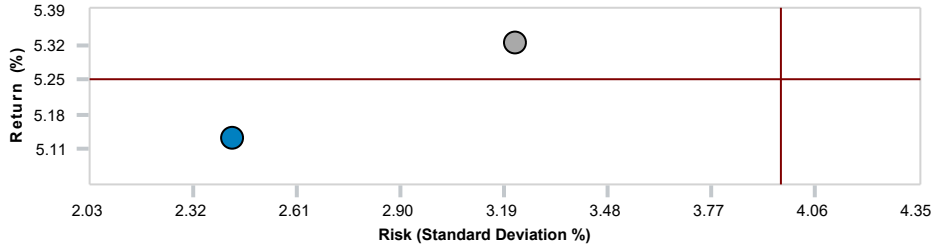


3 Yr Rolling Percentile Ranking - 5 Years



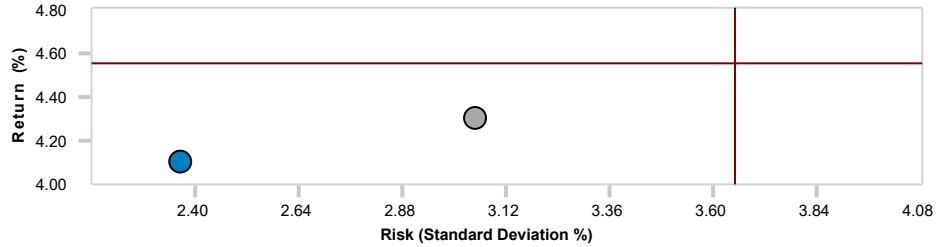
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Domestic Fixed	20	0 (0%)	2 (10%)	13 (65%)	5 (25%)
BB Agg Index	20	0 (0%)	2 (10%)	11 (55%)	7 (35%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Total Domestic Fixed	5.13	2.43
BB Agg Index	5.32	3.23
Median	5.25	3.96

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Total Domestic Fixed	4.10	2.37
BB Agg Index	4.30	3.05
Median	4.55	3.65

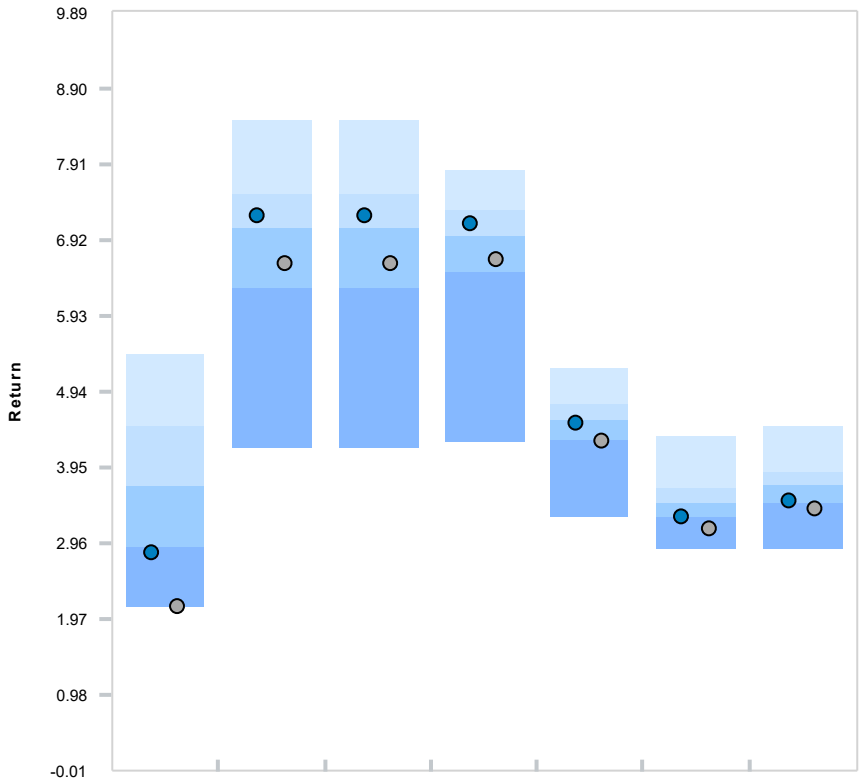
Historical Statistics - 3 Years

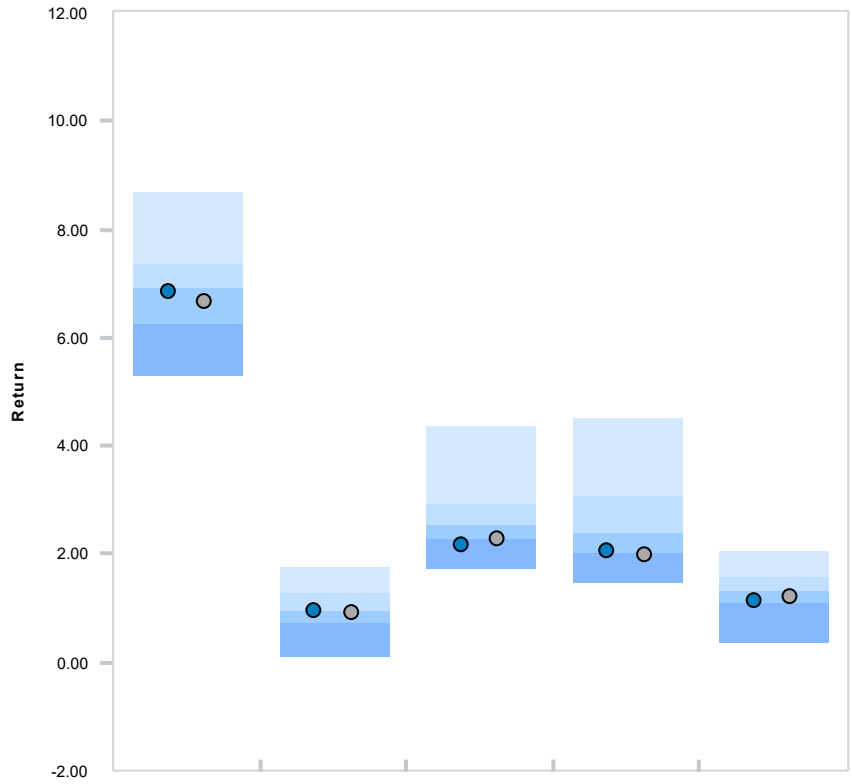
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Fixed	1.12	82.16	47.35	1.25	-0.18	1.36	0.72	0.73
Bloomberg Barclays Agg Index	0.00	100.00	100.00	0.00	N/A	1.09	1.00	1.25

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Domestic Fixed	1.06	80.03	49.79	0.89	-0.21	1.24	0.74	0.98
Bloomberg Barclays Agg Index	0.00	100.00	100.00	0.00	N/A	1.03	1.00	1.49

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





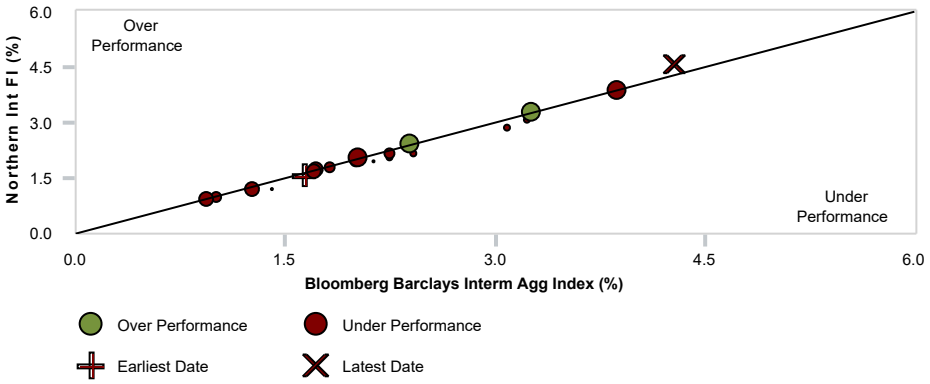
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Northern Int FI	2.83 (81)	7.23 (40)	7.23 (40)	7.12 (38)	4.53 (55)	3.30 (73)	3.51 (73)
BB Int Agg Index	2.13 (96)	6.60 (71)	6.60 (71)	6.67 (72)	4.28 (77)	3.15 (88)	3.40 (82)
Median	3.72	7.09	7.09	6.98	4.57	3.48	3.71

	2019	2018	2017	2016	2015
Northern Int FI	6.85 (55)	0.94 (50)	2.17 (83)	2.04 (75)	1.14 (69)
BB Int Agg Index	6.67 (65)	0.92 (51)	2.27 (76)	1.97 (78)	1.21 (63)
Median	6.93	0.94	2.54	2.37	1.30

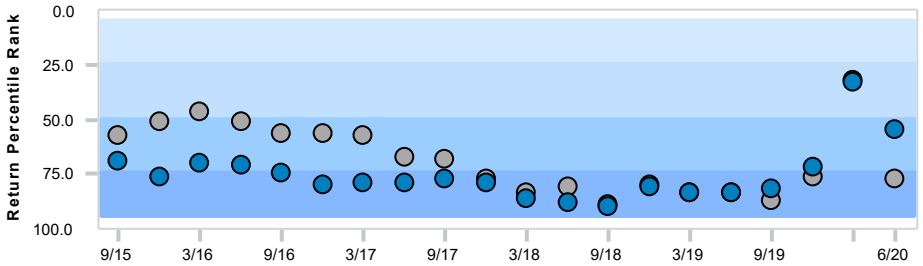
Comparative Performance

	1 Qtr Ending Mar-2020	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
Northern Int FI	2.48 (20)	0.39 (66)	1.37 (62)	2.61 (30)	2.34 (64)	1.67 (20)
Bloomberg Barclays Interm Agg Index	2.49 (20)	0.47 (47)	1.38 (58)	2.39 (69)	2.28 (70)	1.80 (9)
IM U.S. Intermediate Duration (SA+CF) Median	1.30	0.44	1.42	2.51	2.45	1.38

3 Yr Rolling Under/Over Performance - 5 Years

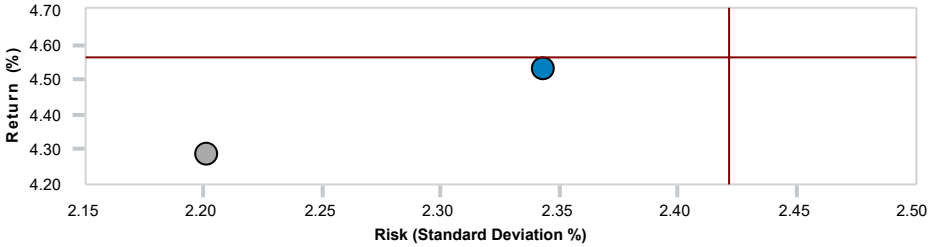


3 Yr Rolling Percentile Ranking - 5 Years



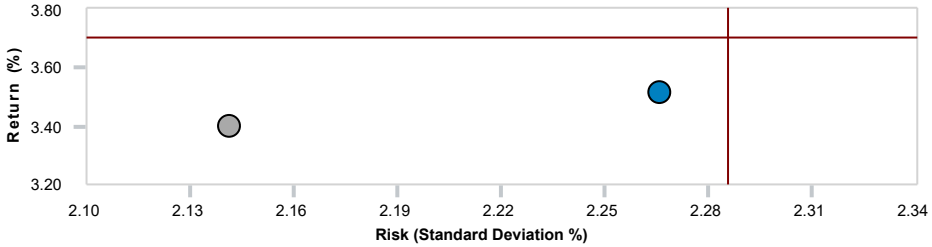
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Northern Int FI	20	0 (0%)	1 (5%)	6 (30%)	13 (65%)
BB Int Agg Index	20	0 (0%)	2 (10%)	8 (40%)	10 (50%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Northern Int FI	4.53	2.34
BB Int Agg Index	4.28	2.20
Median	4.57	2.42

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Northern Int FI	3.51	2.27
BB Int Agg Index	3.40	2.14
Median	3.71	2.29

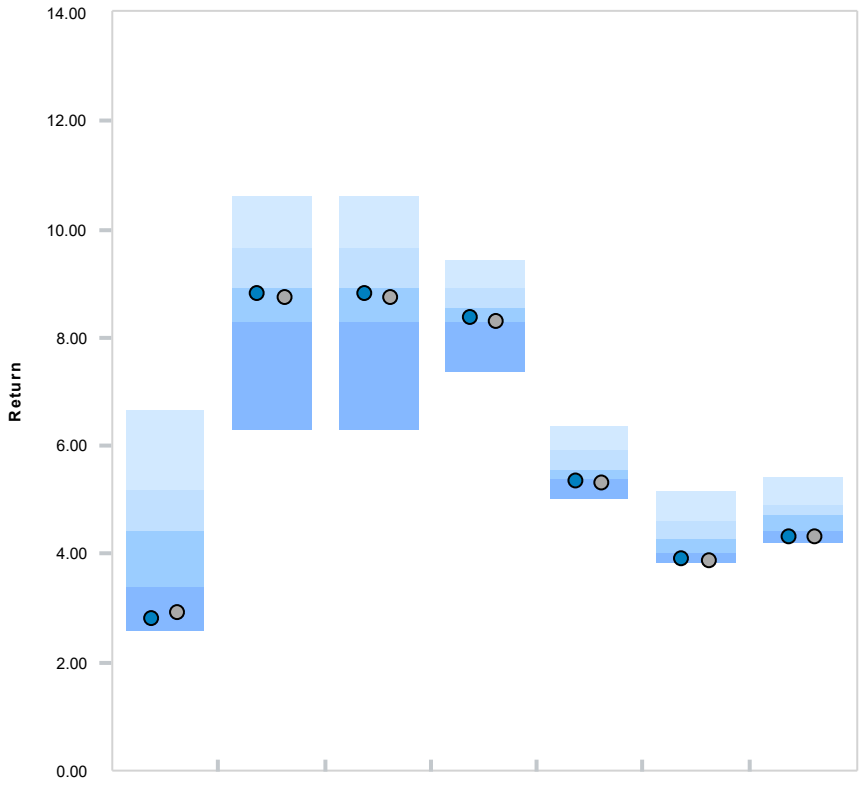
Historical Statistics - 3 Years

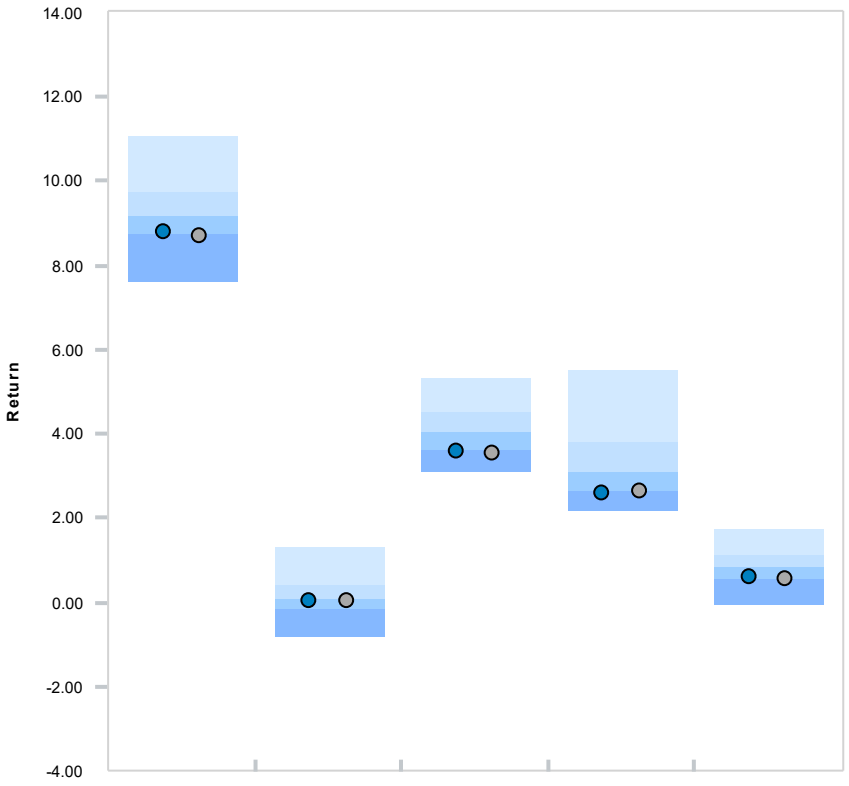
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Northern Int FI	0.44	105.92	106.66	0.05	0.54	1.16	1.05	0.82
Bloomberg Barclays Interm Agg Index	0.00	100.00	100.00	0.00	N/A	1.14	1.00	0.84

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Northern Int FI	0.39	104.43	106.66	-0.03	0.30	1.04	1.04	1.04
Bloomberg Barclays Interm Agg Index	0.00	100.00	100.00	0.00	N/A	1.05	1.00	1.04

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





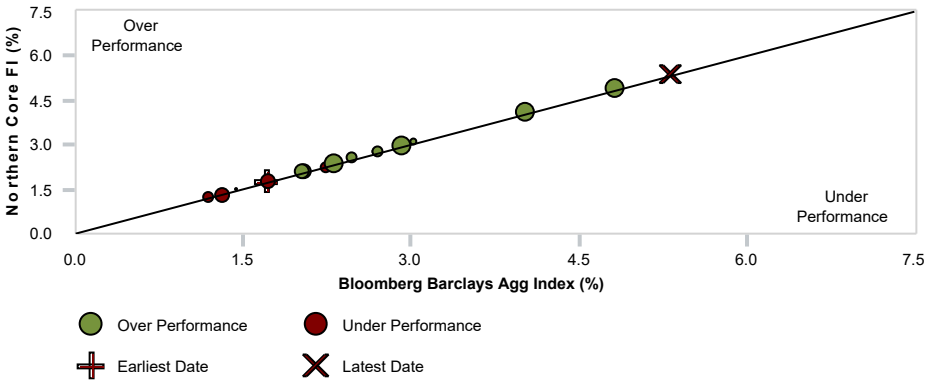
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Northern Core FI	2.80 (92)	8.79 (65)	8.79 (65)	8.37 (70)	5.35 (81)	3.90 (91)	4.32 (89)
BB Agg Index	2.90 (90)	8.74 (68)	8.74 (68)	8.30 (75)	5.32 (84)	3.88 (92)	4.30 (90)
Median	4.42	8.93	8.93	8.54	5.57	4.28	4.70

	2019	2018	2017	2016	2015
Northern Core FI	8.77 (72)	0.05 (53)	3.56 (81)	2.60 (81)	0.58 (71)
BB Agg Index	8.72 (78)	0.01 (61)	3.54 (83)	2.65 (75)	0.55 (76)
Median	9.19	0.06	4.04	3.10	0.82

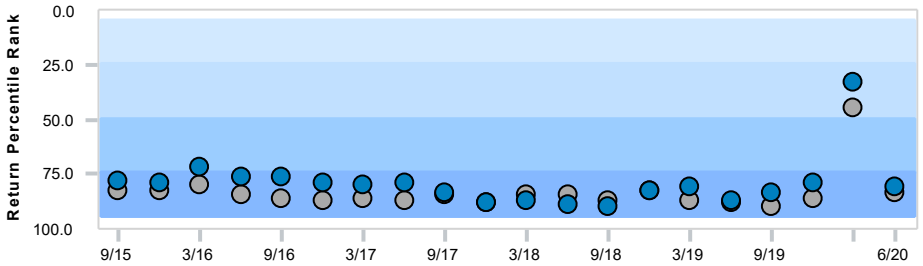
Comparative Performance

	1 Qtr Ending Mar-2020	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
Northern Core FI	3.30 (14)	0.16 (64)	2.28 (66)	3.10 (60)	2.98 (72)	1.63 (28)
Bloomberg Barclays Agg Index	3.15 (23)	0.18 (58)	2.27 (70)	3.08 (70)	2.94 (82)	1.64 (25)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	1.93	0.22	2.33	3.13	3.22	1.40

3 Yr Rolling Under/Over Performance - 5 Years

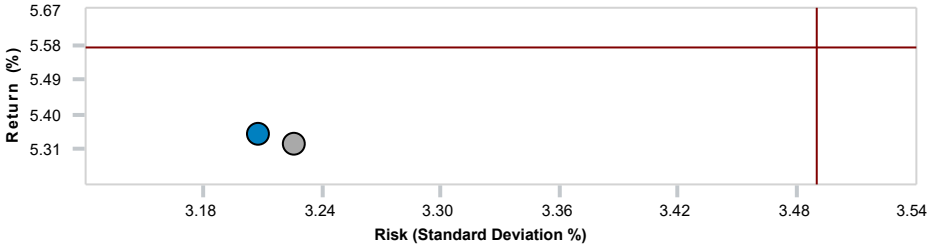


3 Yr Rolling Percentile Ranking - 5 Years



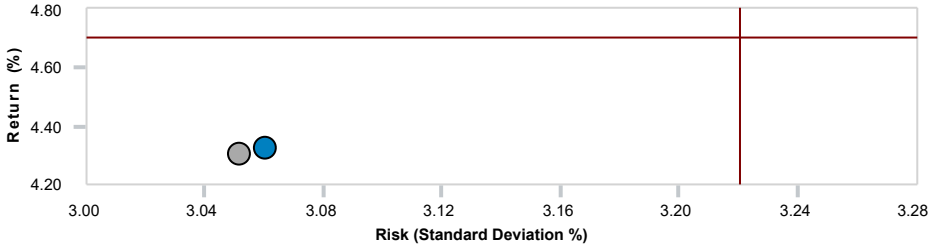
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Northern Core FI	20	0 (0%)	1 (5%)	1 (5%)	18 (90%)
BB Agg Index	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Northern Core FI	5.35	3.21
BB Agg Index	5.32	3.23
Median	5.57	3.49

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Northern Core FI	4.32	3.06
BB Agg Index	4.30	3.05
Median	4.70	3.22

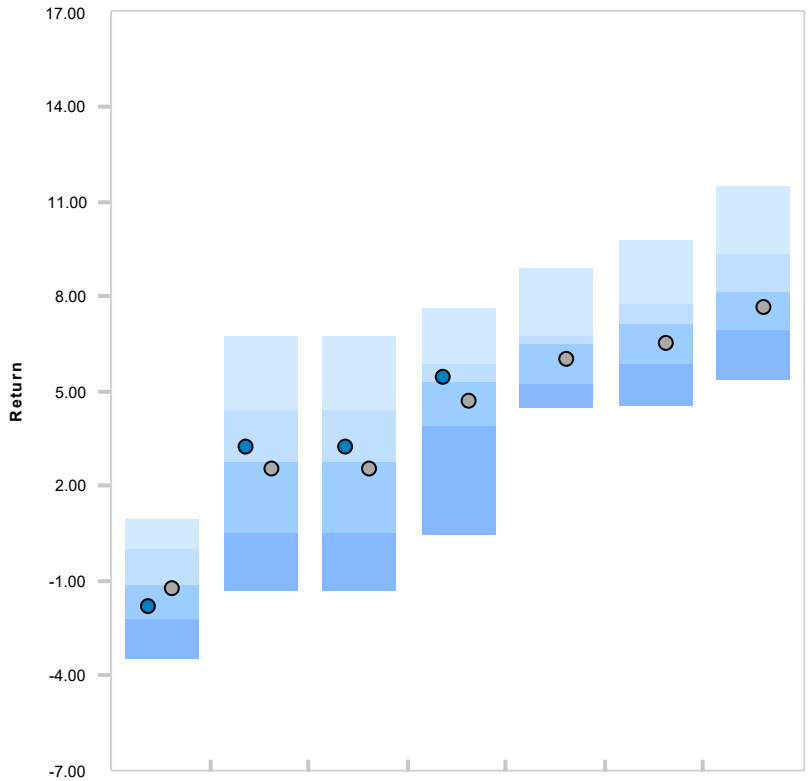
Historical Statistics - 3 Years

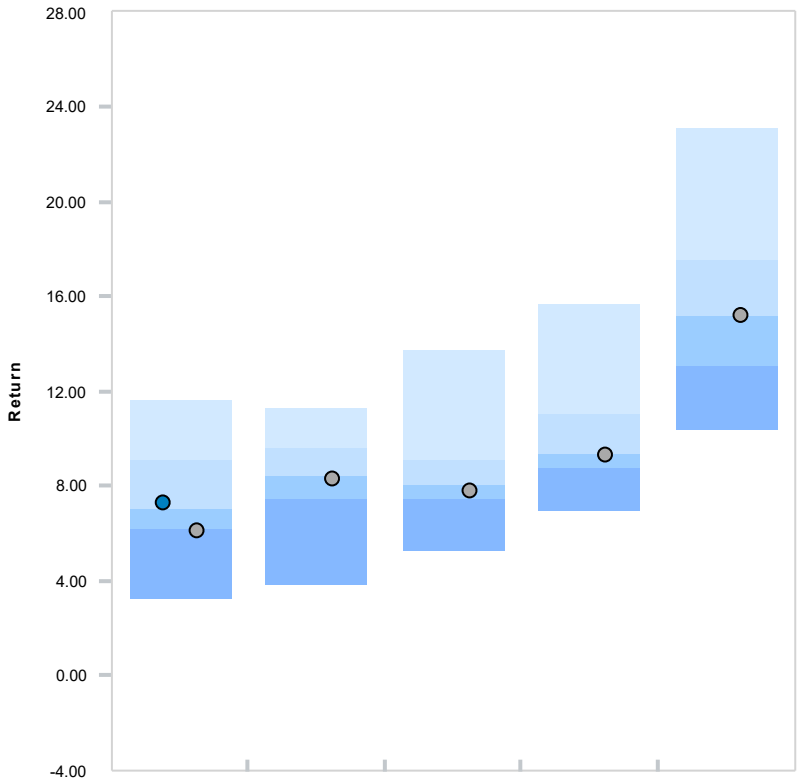
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Northern Core FI	0.11	99.72	97.93	0.05	0.22	1.10	0.99	1.23
Bloomberg Barclays Agg Index	0.00	100.00	100.00	0.00	N/A	1.09	1.00	1.25

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Northern Core FI	0.13	99.98	99.10	0.01	0.14	1.03	1.00	1.51
Bloomberg Barclays Agg Index	0.00	100.00	100.00	0.00	N/A	1.03	1.00	1.49

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





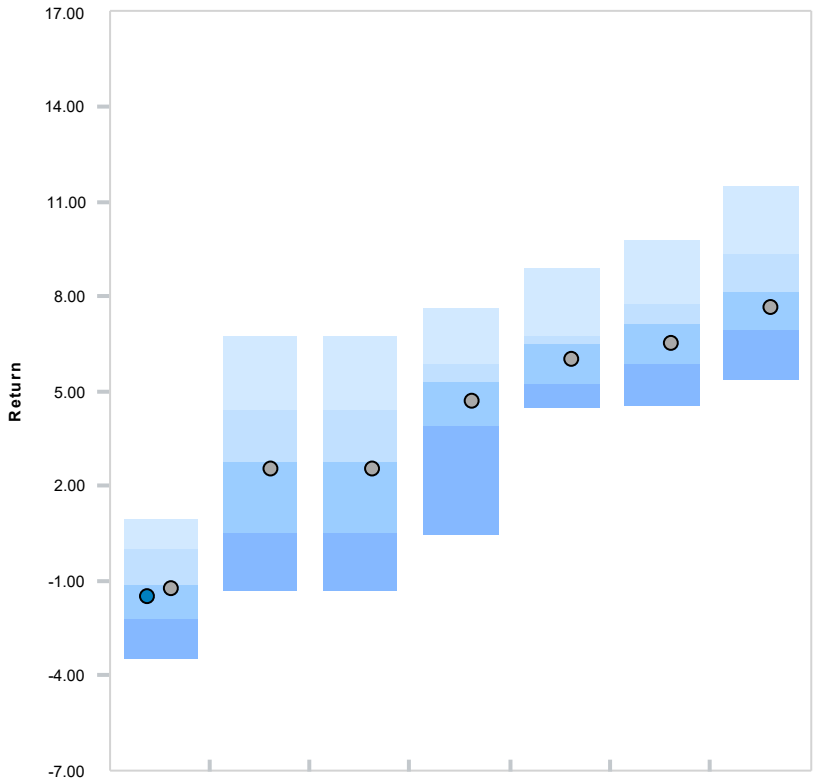
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Clarion Lion Properties	-1.82 (71)	3.21 (45)	3.21 (45)	5.46 (36)	N/A	N/A	N/A
NCREIF ODEC	-1.27 (67)	2.56 (63)	2.56 (63)	4.71 (61)	5.99 (66)	6.52 (66)	7.63 (63)
Median	-1.14	2.78	2.78	5.30	6.54	7.15	8.15

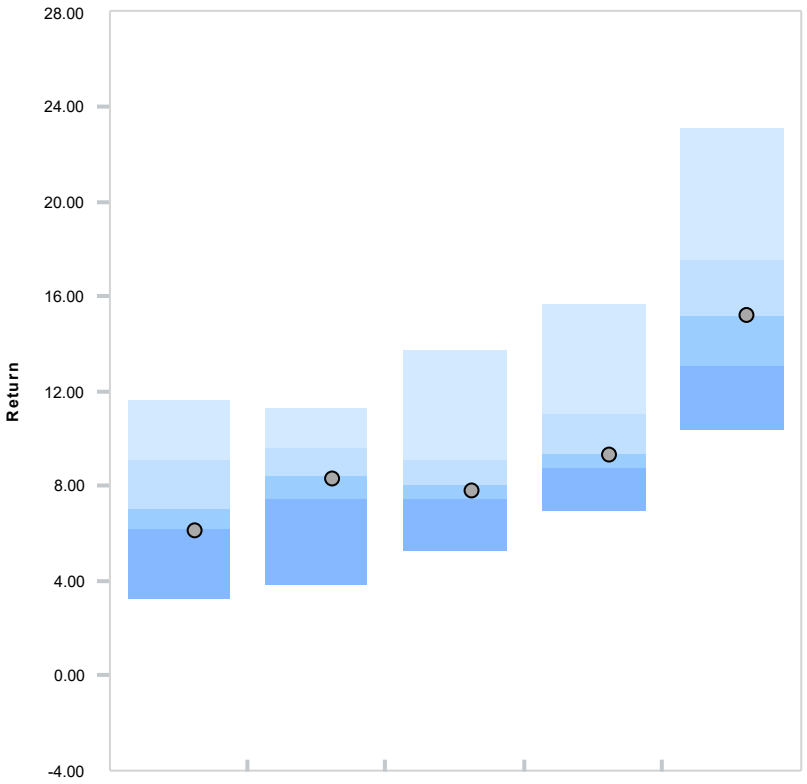
	2019	2018	2017	2016	2015
Clarion Lion Properties	7.26 (45)	N/A	N/A	N/A	N/A
NCREIF ODEC	6.08 (77)	8.25 (55)	7.80 (57)	9.27 (52)	15.17 (51)
Median	7.02	8.42	8.08	9.35	15.23

Comparative Performance

	1 Qtr Ending Mar-2020	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
Clarion Lion Properties	1.39 (47)	1.99 (35)	1.66 (60)	1.43 (52)	2.00 (45)	2.03 (22)
NCREIF Fund Index-Open End Diversified Core Index (EW)	0.92 (67)	1.53 (58)	1.39 (75)	1.34 (61)	1.69 (76)	1.62 (58)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.31	1.61	1.75	1.44	1.99	1.73

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
Principal Enh Prop Fd	-1.49 (69)	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF ODCE	-1.27 (67)	2.56 (63)	2.56 (63)	4.71 (61)	5.99 (66)	6.52 (66)	7.63 (63)
Median	-1.14	2.78	2.78	5.30	6.54	7.15	8.15

	2019	2018	2017	2016	2015
Principal Enh Prop Fd	N/A	N/A	N/A	N/A	N/A
NCREIF ODCE	6.08 (77)	8.25 (55)	7.80 (57)	9.27 (52)	15.17 (51)
Median	7.02	8.42	8.08	9.35	15.23

Comparative Performance

	1 Qtr Ending Mar-2020	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
Principal Enh Prop Fd	1.04 (66)	2.82 (13)	N/A	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	0.92 (67)	1.53 (58)	1.39 (75)	1.34 (61)	1.69 (76)	1.62 (58)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.31	1.61	1.75	1.44	1.99	1.73

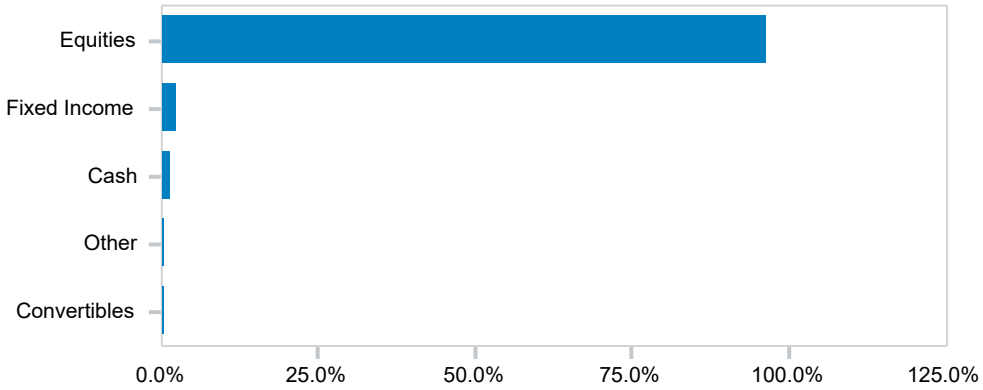
Fund Information

Fund Name :	JPMorgan Trust II: JPMorgan Equity Income Fund; Class R6 Shares	Portfolio Assets :	$29,554 Million
Fund Family :	JPMorgan Funds	Portfolio Manager :	Hart/Silberman/Brandon
Ticker :	OIEJX	PM Tenure :	2012--2019--2019
Inception Date :	01/31/2012	Fund Style :	IM Equity Income (MF)
Fund Assets :	$12,651 Million	Style Benchmark :	S&P 500 Index
Portfolio Turnover :	23%		

Fund Investment Policy

The Fund seeks current income through regular payment of dividends with the secondary goal of capital appreciation. The Fund invests 80% of its net assets in the equity securities of corporations that regularly pay dividends, including common stocks and debt securities and preferred stock convertible to common stock.

Asset Allocation As of 05/31/2020



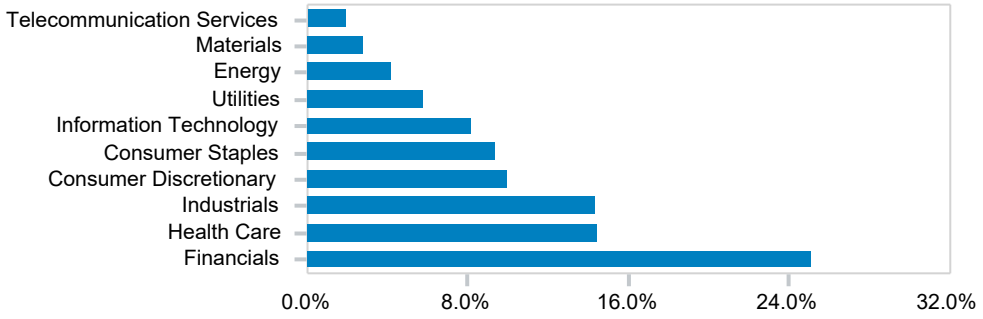
Top Ten Securities As of 05/31/2020

JPMorgan Prime Money Market Fund;IM	3.7 %
Johnson & Johnson ORD	2.6 %
Bank of America Corp ORD	2.6 %
Comcast Corp ORD	2.5 %
CME Group Inc ORD	2.5 %
Bristol-Myers Squibb Co ORD	2.4 %
BlackRock Inc ORD	2.2 %
Microsoft Corp ORD	2.2 %
Home Depot Inc ORD	2.1 %
Texas Instruments Inc ORD	2.1 %

Fund Characteristics As of 05/31/2020

Total Securities	91
Avg. Market Cap	$157,533 Million
P/E	23.8
P/B	4.7
Div. Yield	2.9%
Annual EPS	6.6
5Yr EPS	8.9
3Yr EPS Growth	12.8

Sector/Quality Allocation As of 05/31/2020



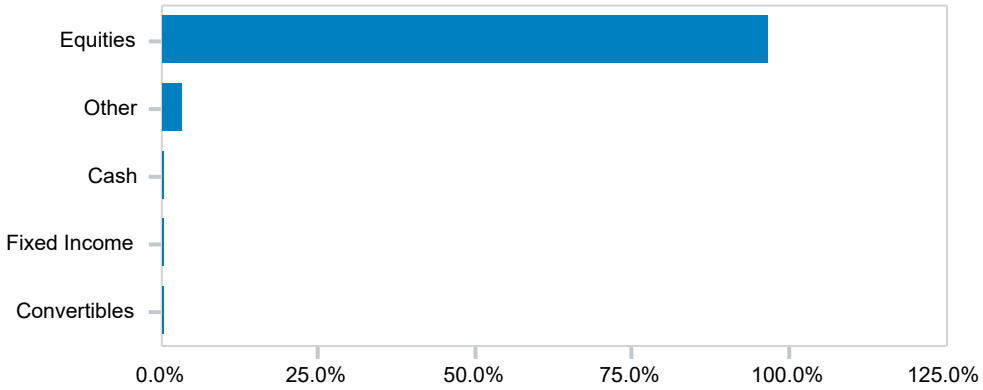
Fund Information

Fund Name :	Vanguard Fenway Funds: Vanguard Equity Income Fund; Admiral Shares	Portfolio Assets :	$34,085 Million
Fund Family :	Vanguard Group Inc	Portfolio Manager :	Stetler/Reckmeyer/Guo
Ticker :	VEIRX	PM Tenure :	2003--2007--2016
Inception Date :	08/13/2001	Fund Style :	IM Equity Income (MF)
Fund Assets :	$29,350 Million	Style Benchmark :	S&P 500 Index
Portfolio Turnover :	32%		

Fund Investment Policy

The Fund seeks to provide an above-average level of current income and reasonable long-term capital appreciation. It invests in common stocks of mid-size and large companies whose stocks typically pay above-average levels of dividend income and are, in the opinion of the advisor, undervalued relative to similar stocks.

Asset Allocation As of 03/31/2020



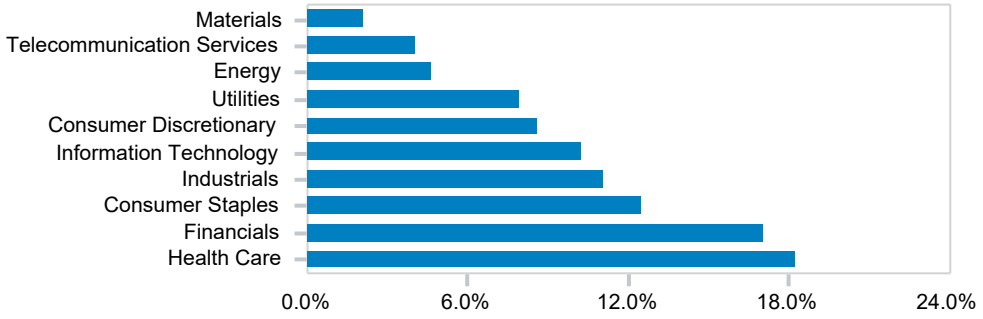
Top Ten Securities As of 03/31/2020

Johnson & Johnson ORD	3.9 %
JPMorgan Chase & Co ORD	3.3 %
Vanguard Market Liquidity Fund	3.1 %
Verizon Communications Inc ORD	3.0 %
Cisco Systems Inc ORD	2.9 %
Intel Corp ORD	2.6 %
Pfizer Inc ORD	2.5 %
Comcast Corp ORD	2.4 %
Merck & Co Inc ORD	2.3 %
Procter & Gamble Co ORD	2.1 %

Fund Characteristics As of 03/31/2020

Total Securities	191
Avg. Market Cap	$123,333 Million
P/E	18.7
P/B	4.5
Div. Yield	3.7%
Annual EPS	12.6
5Yr EPS	8.2
3Yr EPS Growth	14.4

Sector/Quality Allocation As of 03/31/2020



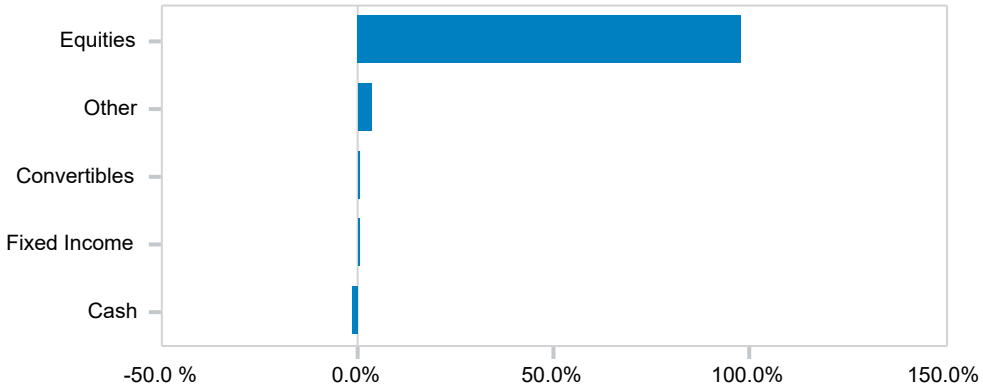
Fund Information

Fund Name :	MFS Series Trust II: MFS Growth Fund; Class R6 Shares	Portfolio Assets :	$31,561 Million
Fund Family :	MFS Investment Management	Portfolio Manager :	Fischman/Gordon
Ticker :	MFEKX	PM Tenure :	2011--2017
Inception Date :	08/26/2011	Fund Style :	IM U.S. Large Cap Growth Equity (MF)
Fund Assets :	$11,650 Million	Style Benchmark :	Russell 1000 Growth Index
Portfolio Turnover :	11%		

Fund Investment Policy

The Fund seeks to provide long-term growth of capital. The Fund invests primarily in common stocks that MFS believes are early in their life cycle and has the potential to become major enterprises (emerging growth companies).

Asset Allocation As of 05/31/2020



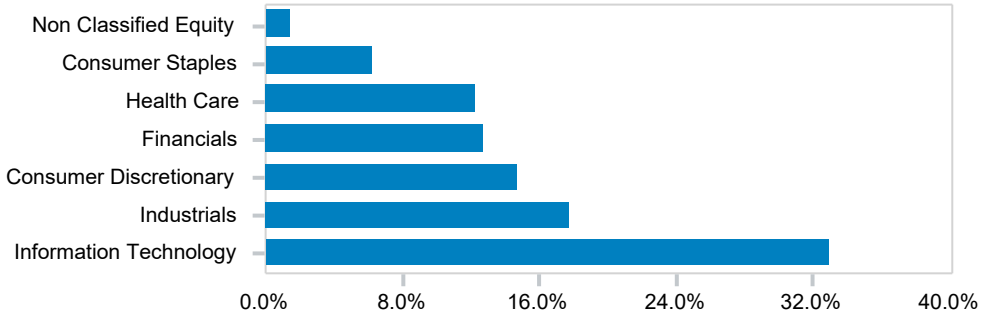
Top Ten Securities As of 05/31/2020

Microsoft Corp ORD	9.3 %
Amazon.com Inc ORD	7.4 %
Adobe Inc ORD	4.5 %
Alphabet Inc ORD	4.2 %
Visa Inc ORD	3.9 %
Mastercard Inc ORD	3.5 %
MFS Institutional Money Market	3.5 %
Facebook Inc ORD	2.4 %
Salesforce.Com Inc ORD	2.1 %
Thermo Fisher Scientific Inc ORD	2.1 %

Fund Characteristics As of 05/31/2020

Total Securities	78
Avg. Market Cap	$404,527 Million
P/E	43.8
P/B	12.0
Div. Yield	0.9%
Annual EPS	16.6
5Yr EPS	19.9
3Yr EPS Growth	26.3

Sector/Quality Allocation As of 05/31/2020



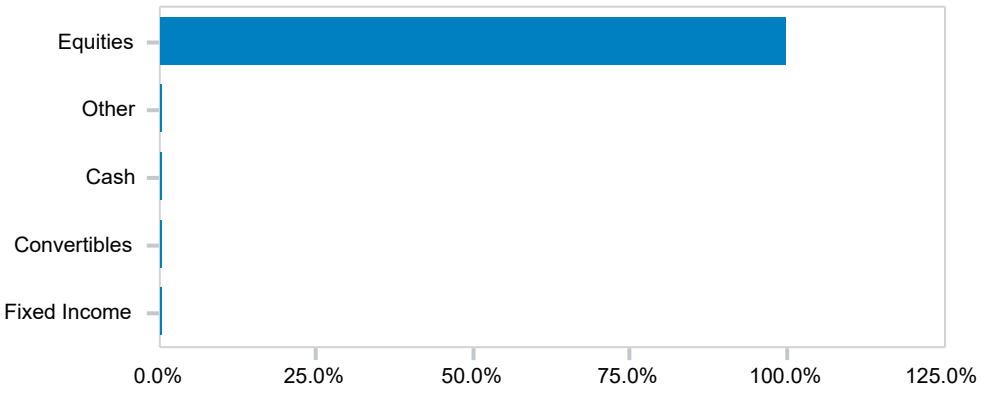
Fund Information

Fund Name :	Principal Funds, Inc: MidCap Fund; Institutional Class Shares	Portfolio Assets :	$21,882 Million
Fund Family :	Principal Global Investors LLC	Portfolio Manager :	Nolin/Rozycki
Ticker :	PCBIX	PM Tenure :	2001--2013
Inception Date :	03/01/2001	Fund Style :	IM U.S. Multi-Cap Growth Equity (MF)
Fund Assets :	$11,686 Million	Style Benchmark :	Russell 3000 Growth Index
Portfolio Turnover :	14%		

Fund Investment Policy

The Fund seeks long-term growth of capital by investing primarily in common stocks and other equity securities of medium-capitalization firms. Stock selection is pursued with a goal of creating a "blended portfolio" of growth and value stocks.

Asset Allocation As of 05/31/2020



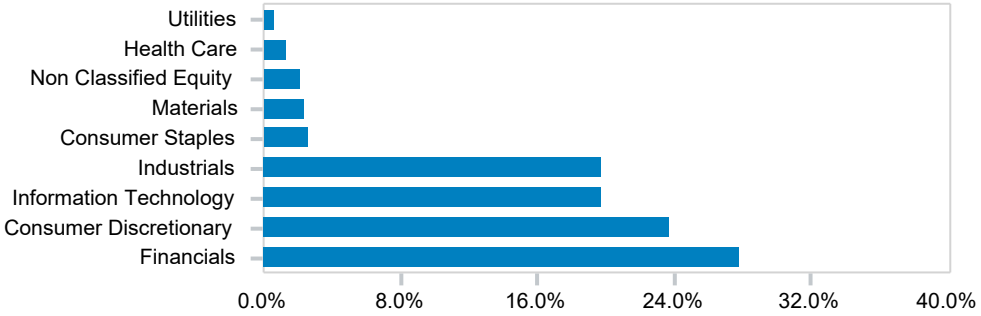
Top Ten Securities As of 05/31/2020

TransDigm Group Inc ORD	4.1 %
Brookfield Asset Management Inc	3.9 %
Carmax Inc ORD	3.4 %
SBA Communications Corp ORD	3.2 %
Autodesk Inc ORD	2.8 %
O'Reilly Automotive Inc ORD	2.8 %
Black Knight Inc ORD	2.8 %
Copart Inc ORD	2.7 %
Wix.Com Ltd ORD	2.6 %
Markel Corp ORD	2.4 %

Fund Characteristics As of 05/31/2020

Total Securities	86
Avg. Market Cap	$22,154 Million
P/E	34.4
P/B	7.6
Div. Yield	1.6%
Annual EPS	25.7
5Yr EPS	18.8
3Yr EPS Growth	23.9

Sector/Quality Allocation As of 05/31/2020



Portfolio Characteristics (Benchmark: Russell 2000 Growth Index)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($)	4,024,928,275	2,490,662,225
Median Mkt. Cap ($)	2,856,457,375	879,601,800
Price/Earnings ratio	38.9	28.1
Price/Book ratio	4.4	4.4
5 Yr. EPS Growth Rate (%)	21.0	13.2
Current Yield (%)	0.1	0.5
Beta (5 Years, Monthly)	0.88	1.00
Number of Stocks	53	1,081

Top Ten Equity Holdings (Benchmark: Russell 2000 Growth Index)

	Portfolio Wt	Benchmark Wt	Active Wt	Qtr Rtrn
SPS Commerce Inc	3.5	0.3	3.2	61.5
LHC Group Inc	3.4	0.6	2.8	24.3
Descartes Systems Group Inc (The)	3.2	0.0	3.2	53.8
Repay Holdings Corp	3.2	0.1	3.1	71.6
Ollie's Bargin Outlet Holdings	3.2	0.0	3.2	110.7
RealPage Inc	3.0	0.0	3.0	22.8
Grand Canyon Education Inc	3.0	0.0	3.0	18.7
Alarm.com Holdings Inc	2.9	0.3	2.6	66.6
Envestnet Inc	2.7	0.4	2.3	36.7
Chegg Inc	2.6	0.0	2.6	88.0

Ten Best Performers (Benchmark: Russell 2000 Growth Index)

	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
Wix.com Ltd	1.4	0.0	1.4	154.1
Kornit Digital Ltd	1.4	0.0	1.4	114.5
Ollie's Bargin Outlet Holdings	3.2	0.0	3.2	110.7
Chegg Inc	2.6	0.0	2.6	88.0
Independent Bank Group Inc	1.1	0.0	1.1	72.5
Repay Holdings Corp	3.2	0.1	3.1	71.6
Boot Barn Holdings Inc	1.6	0.1	1.5	66.7
Alarm.com Holdings Inc	2.9	0.3	2.6	66.6
Paylocity Holding Corp	2.1	0.0	2.1	65.2
Trex Co Inc	1.4	0.0	1.4	62.3

Ten Worst Performers (Benchmark: Russell 2000 Growth Index)

	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
Haemonetics Corp	1.6	0.0	1.6	-10.1
Ameris Bancorp	1.0	0.0	1.0	-0.1
Tabula Rasa HealthCare Inc	1.8	0.1	1.7	4.7
Construction Partners inc	1.9	0.0	1.9	5.2
LeMaitre Vascular Inc	1.2	0.0	1.2	6.3
Omnicell Inc	1.2	0.3	0.9	7.7
Neogenomics Inc	1.1	0.4	0.7	12.2
Solarwinds Corp	1.5	0.0	1.5	12.8
Virtusa Corp	1.3	0.1	1.2	14.3
HealthEquity Inc	2.3	0.5	1.8	16.0

Buy and Hold Sector Attribution (Benchmark: Russell 2000 Growth Index)

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Total
Communication Services	1.0	2.3	45.71	24.26	0.22	0.08	0.30
Consumer Discretionary	12.7	9.6	58.20	55.24	0.37	0.78	1.15
Consumer Staples	1.6	3.4	18.81	19.99	-0.02	0.18	0.16
Energy	0.0	0.3	0.00	45.75	0.00	-0.04	-0.04
Financials	2.2	5.9	27.98	18.04	0.22	0.46	0.68
Health Care	24.0	33.9	19.19	31.33	-2.91	-0.10	-3.02
Industrials	12.5	17.5	37.58	28.16	1.17	0.11	1.28
Information Technology	42.1	18.2	39.96	30.14	4.14	-0.04	4.10
Materials	0.0	2.7	0.00	26.83	0.00	0.09	0.09
Real Estate	0.0	4.4	0.00	18.60	0.00	0.51	0.51
Utilities	0.0	1.9	0.00	0.12	0.00	0.56	0.56
Cash	3.9	0.0	0.00	0.00	0.00	-1.20	-1.20
Total	**100.0**	**100.0**	**34.87**	**30.29**	**3.19**	**1.39**	**4.58**

Portfolio Comparison

	Summit Creek
Market Capitalization (%)	
12000M To 16000M	4.0
8000M To 12000M	9.1
5000M To 8000M	16.9
3000M To 5000M	24.2
1000M To 3000M	22.9
500M To 1000M	16.6
200M To 500M	2.5
Cash	3.9

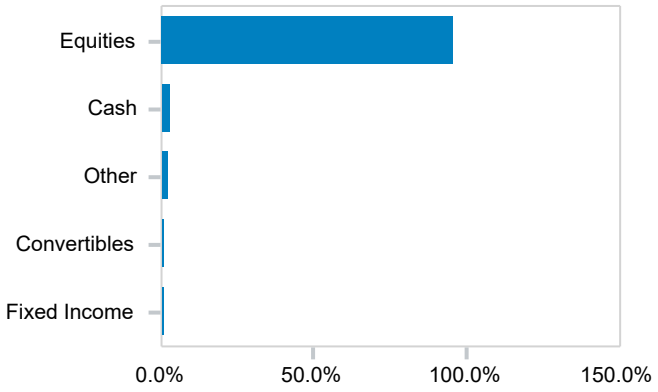
Fund Information

Fund Name :	Templeton Institutional Funds: International Equity Series; Primary Shares	Portfolio Assets :	$915 Million
Fund Family :	Franklin Templeton Investments	Portfolio Manager :	Nori/Docal/Nagle
Ticker :	TFEQX	PM Tenure :	1999--2001--2018
Inception Date :	10/18/1990	Fund Style :	IM International Multi-Cap Value Equity (MF)
Fund Assets :	$915 Million	Style Benchmark :	MSCI EAFE IMI Value
Portfolio Turnover :	37%		

Fund Investment Policy

The Fund seeks long-term capital growth through a flexible policy of investing in equity securities and debt obligations of companies and governments outside the United States.

Asset Allocation As of 03/31/2020



Top Ten Securities As of 03/31/2020

E.ON SE ORD	3.4 %
Deutsche Telekom AG ORD	3.4 %
Total SA ORD	3.4 %
Sanofi SA ORD	3.0 %
Samsung Electronics Co Ltd ORD	2.9 %
Takeda Pharmaceutical Co Ltd ORD	2.8 %
Vodafone Group PLC ORD	2.8 %
Kirin Holdings Co Ltd ORD	2.6 %
Roche Holding AG Par	2.4 %
Bayer AG ORD	2.3 %

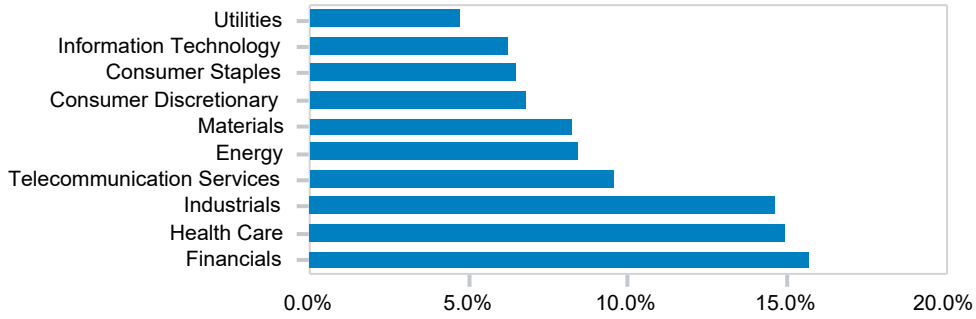
Top 5 Countries As of 03/31/2020

Japan	26.0 %
Germany	14.5 %
France	10.3 %
United Kingdom	10.1 %
Hong Kong	7.7 %

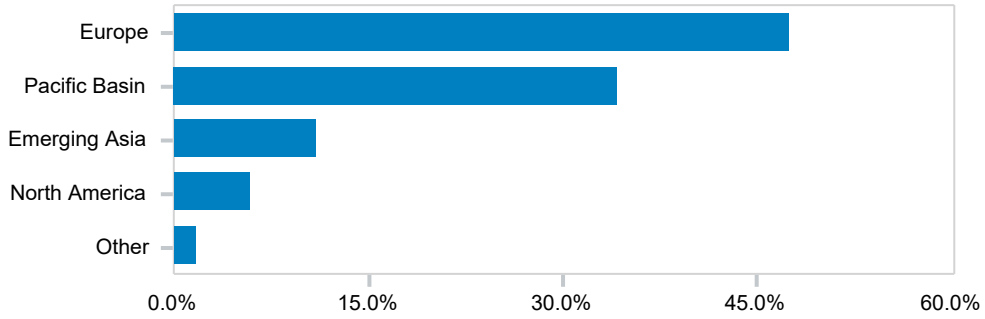
Fund Characteristics As of 03/31/2020

Total Securities	64
Avg. Market Cap	$54,823 Million
P/E	18.5
P/B	1.5
Div. Yield	4.6%
Annual EPS	-2.0
5Yr EPS	3.3
3Yr EPS Growth	4.9

Sector/Quality Allocation As of 03/31/2020



Regional Allocation As of 03/31/2020



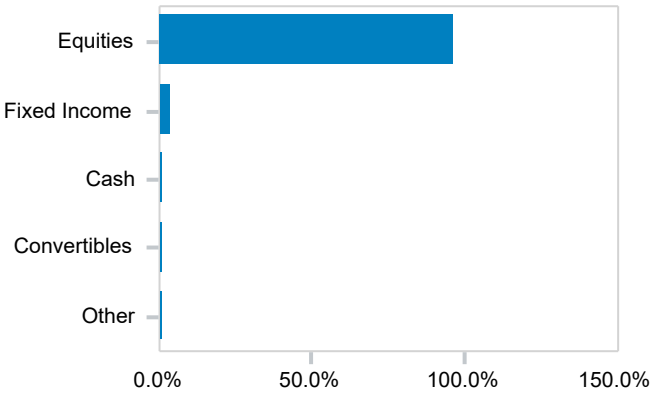
Fund Information

Fund Name :	Hartford Mutual Funds II, Inc: Hartford Schroders Emerging Markets Equity Fund; Class I Shares	Portfolio Assets :	$3,503 Million
Fund Family :	Hartford Mutual Funds	Portfolio Manager :	Team Managed
Ticker :	SEMNX	PM Tenure :	
Inception Date :	03/31/2006	Fund Style :	IM Emerging Markets Equity (MF)
Fund Assets :	$1,683 Million	Style Benchmark :	MSCI Emerging Markets Index
Portfolio Turnover :	43%		

Fund Investment Policy

The Fund seeks capital appreciation. Under normal circumstances, the Fund invests at least 80% of its assets in equity securities of emerging companies, or those issuers listed or domiciled in, deriving a substantial portion of their revenues from, or having a substantial portion of their assets in emerging markets.

Asset Allocation As of 05/31/2020



Top Ten Securities As of 05/31/2020

Tencent Holdings Ltd ORD	7.5 %
Alibaba Group Holding Ltd DR	6.7 %
Taiwan Semiconductor Manufacturing	5.6 %
Samsung Electronics Co Ltd ORD	4.7 %
Morgan Stanley Inst Liq Treasury	3.5 %
JD.com Inc DR	3.3 %
SK Hynix Inc ORD	3.1 %
Ping An Insurance Group Co of China	2.8 %
Sberbank Rossii PAO DR	2.2 %
AIA Group Ltd ORD	1.8 %

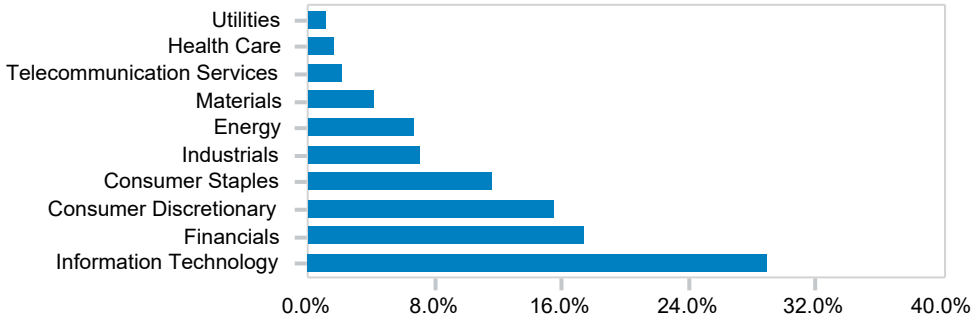
Top 5 Countries As of 05/31/2020

China	34.1 %
Korea	14.6 %
Taiwan	12.1 %
Russian Federation	7.6 %
Brazil	7.4 %

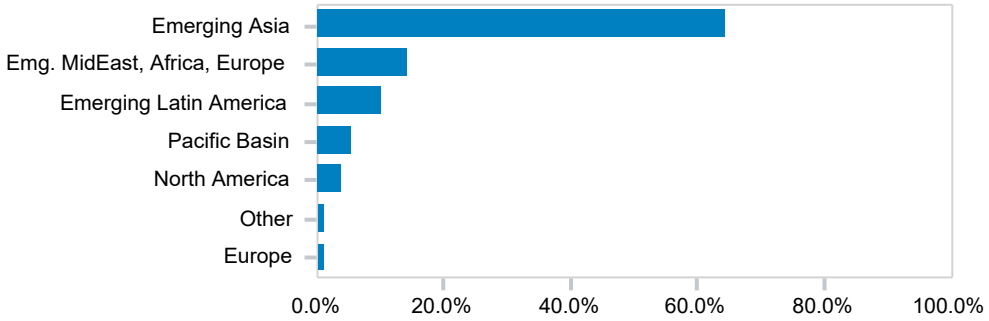
Fund Characteristics As of 05/31/2020

Total Securities	117
Avg. Market Cap	$139,288 Million
P/E	25.4
P/B	4.1
Div. Yield	2.9%
Annual EPS	14.6
5Yr EPS	17.9
3Yr EPS Growth	21.8

Sector/Quality Allocation As of 05/31/2020



Regional Allocation As of 05/31/2020



Comparative Performance

	QTR	FYTD	1 YR	3 YR	5 YR	10 YR
Police Total Fund	**14.22**	**3.54**	**3.54**	**8.15**	**8.09**	**10.16**
Policy	15.19	3.69	3.69	6.96	7.21	10.21
Total Domestic Equity	**22.02**	**5.65**	**5.65**	**11.94**	**10.98**	**13.90**
Russell 3000 Index	22.03	6.53	6.53	10.04	10.03	13.72
MFS Growth	24.68	20.88	20.88	20.32	16.73	N/A
Russell 1000 Growth Index	27.84	23.28	23.28	18.99	15.89	17.23
JPM Equity Inc (OIEJX)	13.27	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	14.29	-8.84	-8.84	1.82	4.64	10.41
Vanguard Equity Inc (VEIRX)	12.67	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	14.29	-8.84	-8.84	1.82	4.64	10.41
Principal Mid Cap	24.86	4.20	4.20	12.14	11.15	15.42
Russell Midcap Index	24.61	-2.24	-2.24	5.79	6.76	12.35
Summit Creek	35.60	10.68	10.68	16.05	11.63	N/A
Russell 2000 Growth Index	30.58	3.48	3.48	7.86	6.86	12.92
Total International Equity	**16.09**	**-3.04**	**-3.04**	**2.03**	**3.60**	**5.47**
MSCI AC World ex USA Index(Net)	16.12	-4.80	-4.80	1.13	2.26	4.97
Templeton	12.82	-10.81	-10.81	-4.36	-1.58	3.37
MSCI EAFE Value Index (Net)	12.43	-14.48	-14.48	-4.43	-1.59	3.53
MFS Int'l	17.31	3.31	3.31	7.96	8.33	N/A
MSCI AC World ex USA Growth Index (Net)	19.11	5.80	5.80	6.07	5.61	7.04
Schroder	19.31	-0.83	-0.83	3.34	4.48	N/A
MSCI Emerging Markets Index (Net)	18.08	-3.39	-3.39	1.90	2.86	3.27

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

	QTR	FYTD	1 YR	3 YR	5 YR	10 YR
Total Domestic Fixed Income	**2.82**	**7.99**	**7.99**	**5.13**	**4.10**	**3.66**
Blmbg. Barc. U.S. Aggregate Index	2.90	8.74	8.74	5.32	4.30	3.82
Northern Interm Fixed	2.83	7.23	7.23	4.53	3.51	N/A
Bloomberg Barclays Intermed Aggregate Index	2.13	6.60	6.60	4.28	3.40	3.14
Northern Core Fixed	2.80	8.79	8.79	5.35	4.32	3.86
Blmbg. Barc. U.S. Aggregate Index	2.90	8.74	8.74	5.32	4.30	3.82
Total Real Estate	**-1.98**	**2.55**	**2.55**	**N/A**	**N/A**	**N/A**
NCREIF Fund Index-Open End Diversified Core (EW)	-1.27	2.56	2.56	5.99	7.63	10.90
Clarion Lion Properties	-2.08	2.13	2.13	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-1.27	2.56	2.56	5.99	7.63	10.90
Principal Enhanced Property Fund, LP	-1.49	N/A	N/A	N/A	N/A	N/A
NCREIF Fund Index-Open End Diversified Core (EW)	-1.27	2.56	2.56	5.99	7.63	10.90
Infrastructure						
Lazard	11.16	-1.00	-1.00	5.44	10.14	N/A
S&P Global Infrastructure Index	13.87	-14.76	-14.76	-0.89	2.62	6.92
FTSE Developed Core Infrast 50/50 Index (Net)	10.31	-8.96	-8.96	2.47	5.54	9.09

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

	% of Portfolio	Market Value ($)	Estimated Annual Fee (%)	Estimated Annual Fee ($)
Police Total Fund	**100.00**	**36,358,657**	**0.59**	**214,879**
Domestic Equity				
JPM Equity Inc (OIEJX)	8.63	3,139,037	0.49	15,381
Vanguard Equity Inc (VEIRX)	8.70	3,161,694	0.18	5,691
MFS Growth	21.35	7,764,151	0.60	46,585
Principal Mid Cap	4.36	1,586,511	0.68	10,788
Summit Creek	8.18	2,972,376	1.00	29,724
International Equity				
Templeton	6.37	2,315,498	0.79	18,292
MFS Int'l	7.62	2,768,732	0.75	20,765
Schroder	3.92	1,425,317	1.23	17,531
Domestic Fixed Income				
Northern Interm Fixed	6.39	2,322,507	0.06	1,394
Northern Core Fixed	6.52	2,371,473	0.06	1,423
Real Estate				
Clarion Lion Properties	4.49	1,633,510	1.10	17,969
Principal Enhanced Property Fund, LP	3.12	1,134,707	1.20	13,616
Infrastructure				
Lazard	4.80	1,746,571	0.90	15,719
Cash				
Securian (Cash)	3.81	1,386,360		-
City Reserve - Police account	1.49	540,629		-
Cash	0.25	89,587		-

Historical Hybrid Composition

Allocation Mandate	Weight (%)
Oct-2001	
Russell 1000 Index	40.00
Russell Midcap Index	6.00
Russell 2000 Index	9.00
Blmbg. Barc. U.S. Aggregate Index	16.00
MSCI Emerging Markets (Net) Index	4.00
MSCI EAFE (Net) Index	15.00
NCREIF Fund Index-ODCE (VW)	2.50
S&P Global Infrastructure	5.00
FTSE NAREIT Equity REIT Index	2.50
Aug-2011	
Russell 1000 Index	40.00
Russell Midcap Index	6.00
Russell 2000 Index	9.00
Blmbg. Barc. U.S. Aggregate Index	16.00
MSCI Emerging Markets (Net) Index	4.00
MSCI EAFE (Net) Index	15.00
NCREIF Fund Index-ODCE (VW)	5.00
S&P Global Infrastructure	5.00
Aug-2017	
Russell 3000 Index	52.00
MSCI AC World ex USA (Net)	19.00
Blmbg. Barc. U.S. Aggregate Index	16.00
NCREIF Fund Index-ODCE (VW)	8.00
S&P Global Infrastructure	5.00
Feb-2019	
Russell 3000 Index	51.00
MSCI AC World ex USA (Net)	19.00
Blmbg. Barc. U.S. Aggregate Index	16.00
NCREIF Fund Index-Open End Diversified Core (EW)	8.00
S&P Global Infrastructure	5.00
90 Day U.S. Treasury Bill	1.00

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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