

Executive Summary
Period Ending June 30, 2020

Town of Palm Beach Retirement System Defined Contribution Plans

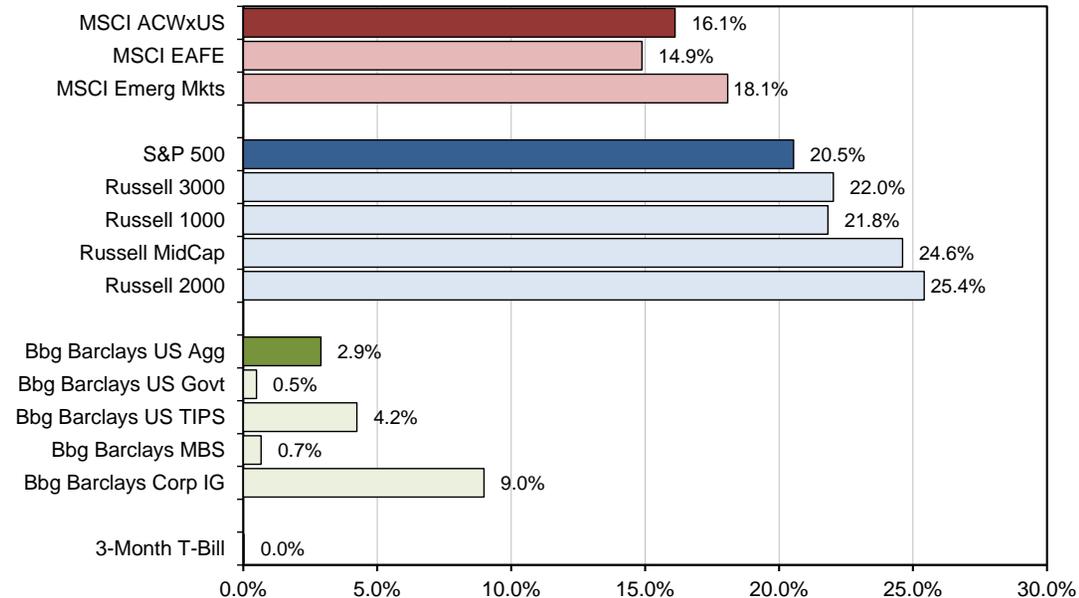


2nd Quarter 2020 Market Environment

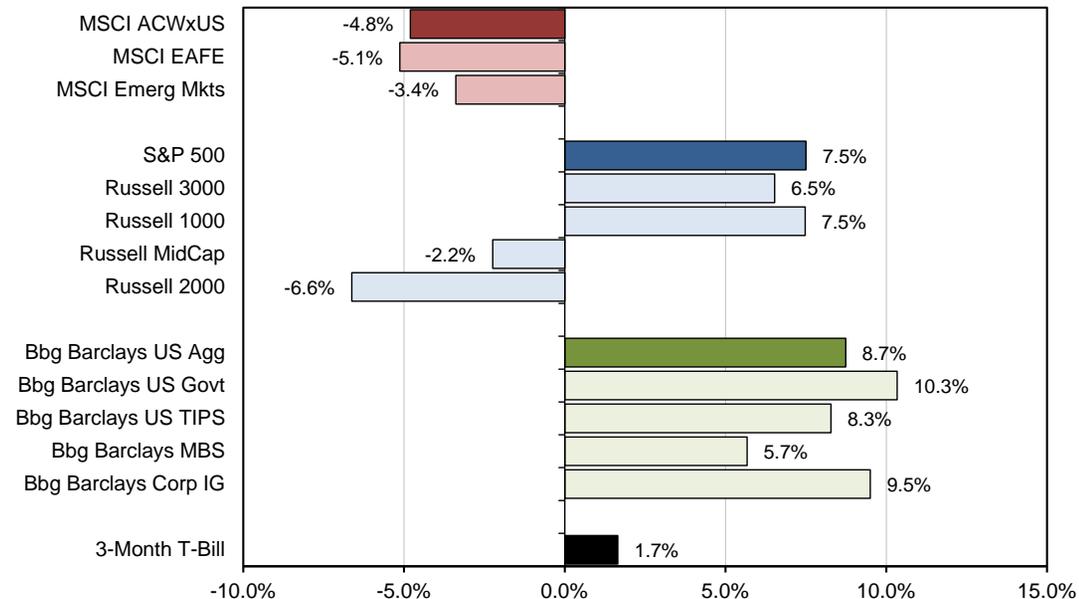


- Broad asset class returns rebounded sharply in the 2nd quarter following their harsh drawdown during the 1st quarter. The US government and Federal Reserve Bank (Fed) implemented a myriad of programs designed to provide the economy with liquidity while also mitigating the affects from the shelter-in-place 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.

Quarter Performance

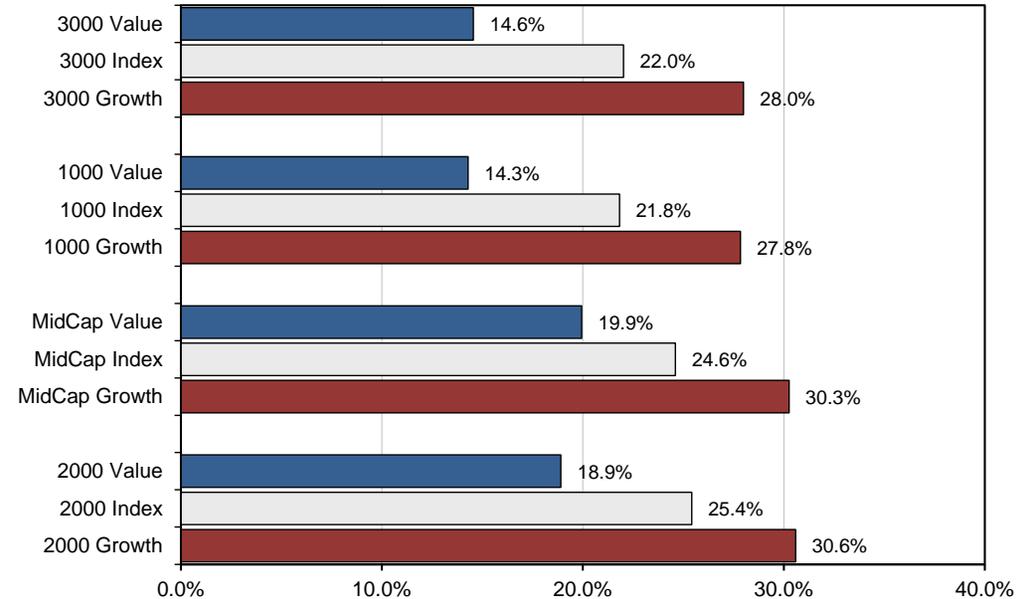


1-Year Performance

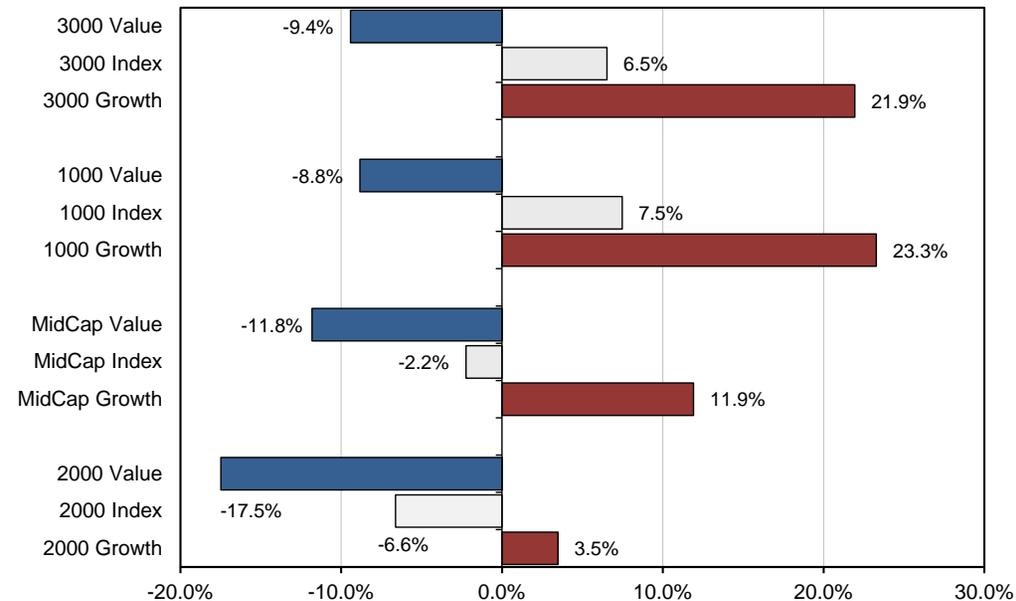


- US equity returns were strongly positive during the 2nd quarter, but results varied considerably across the style and capitalization spectrum. Following one of the sharpest drawdowns in history during the previous quarter, various capitalization and style indices experienced their strongest quarterly 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 period 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.

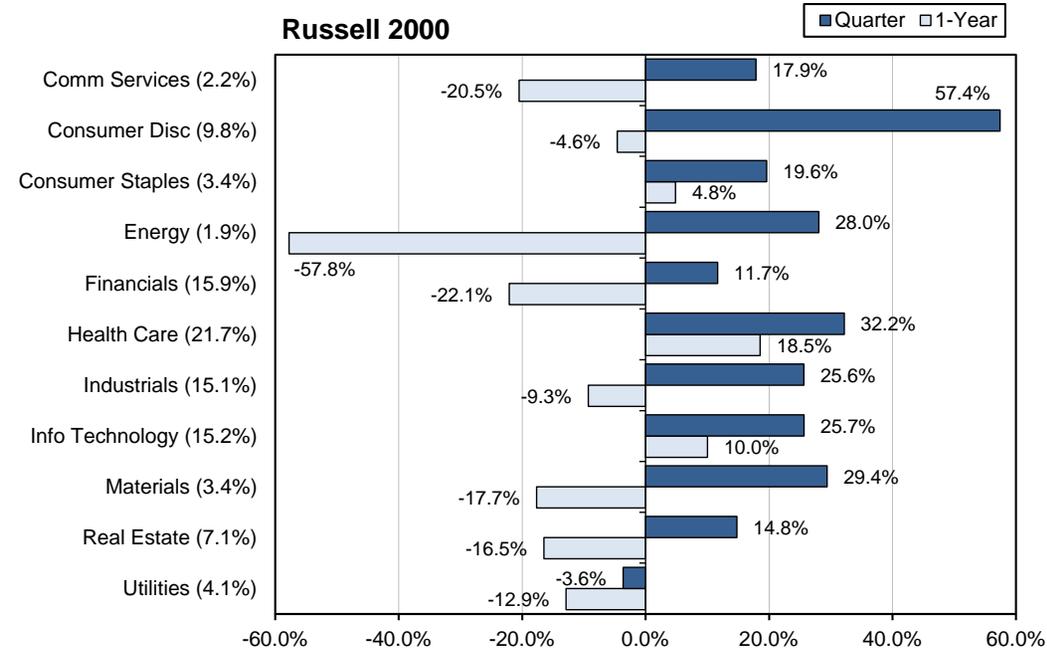
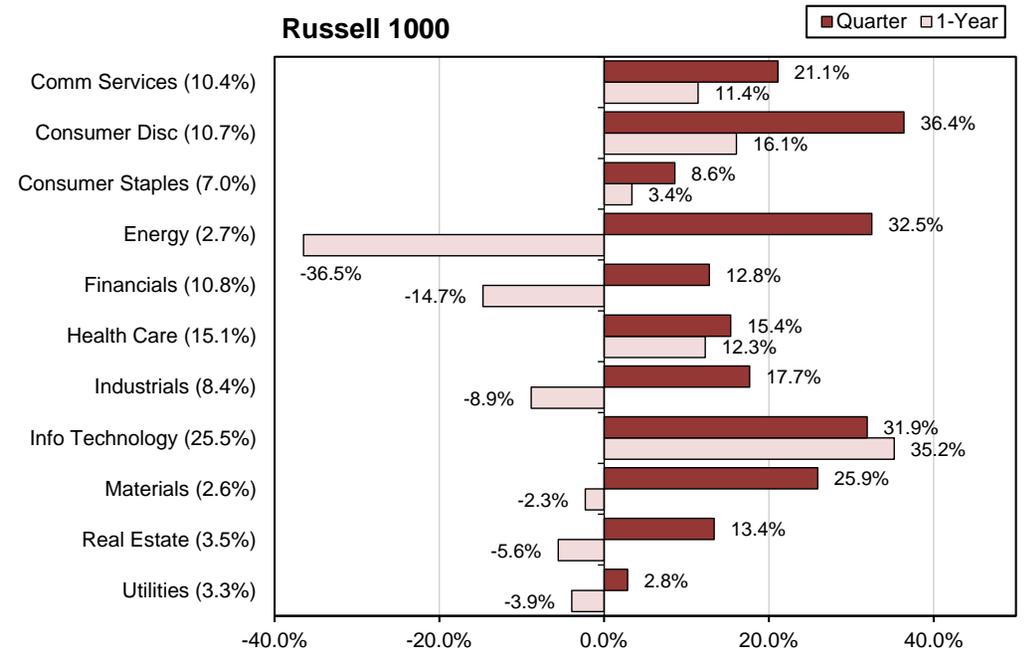
Quarter Performance - Russell Style Series



1-Year Performance - Russell Style Series



- 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%.



The Market Environment
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

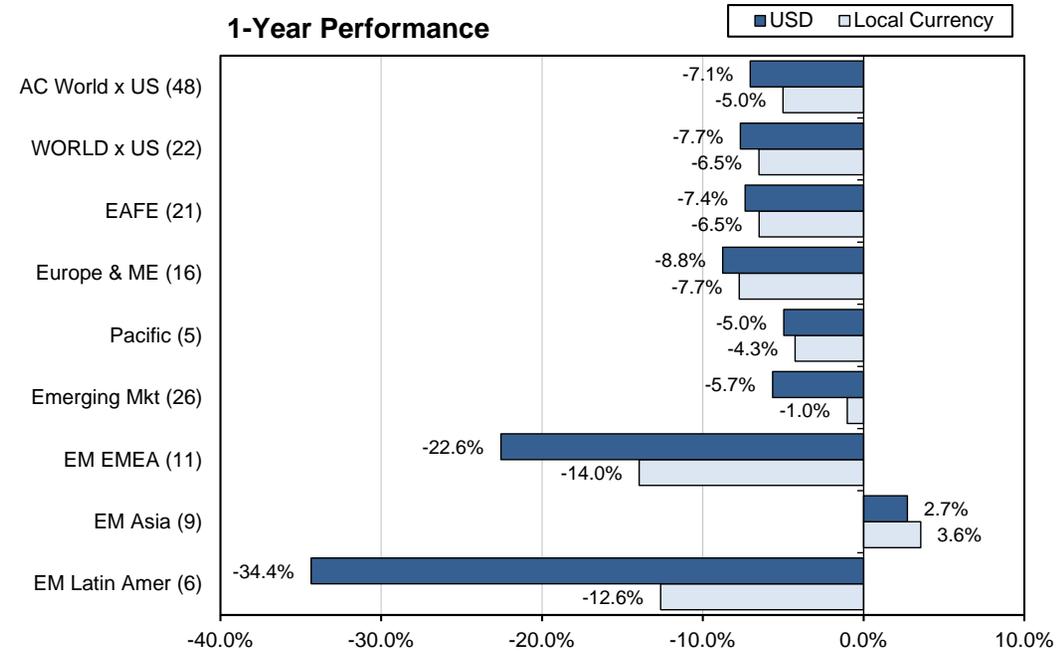
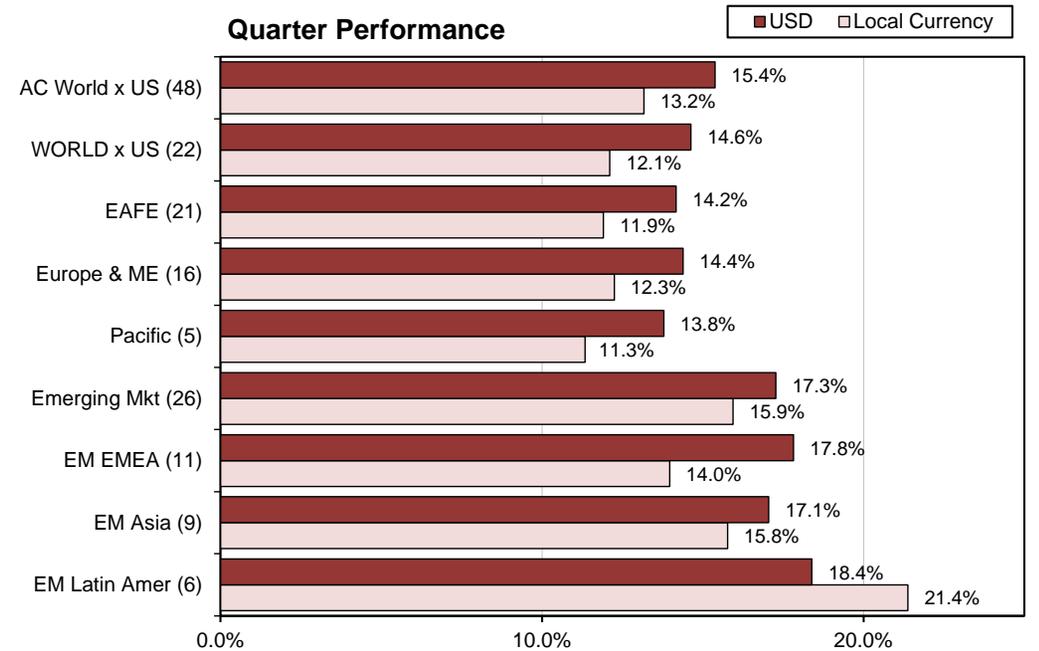
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Workhorse Group Inc	0.06%	860.8%	491.5%	Consumer Discretionary
Veritone Inc	0.02%	537.8%	77.8%	Information Technology
Novavax Inc	0.27%	513.8%	1322.4%	Health Care
Overstock.com Inc	0.06%	469.7%	109.0%	Consumer 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
Evoform 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



- 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.



The Market Environment
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%

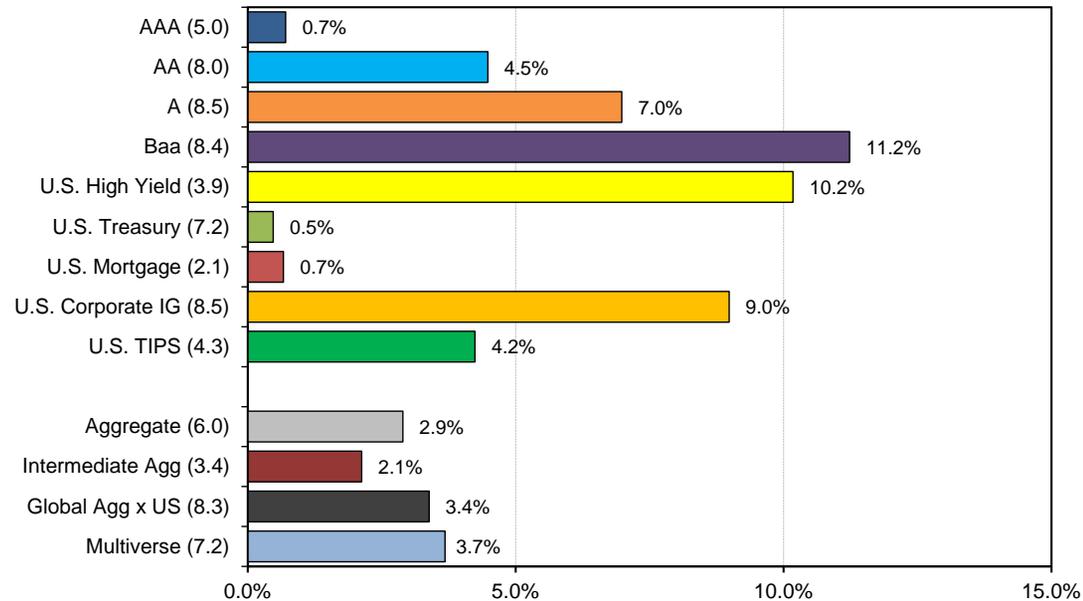
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	25.4%	16.5%	11.5%	0.9%
United Kingdom	14.1%	9.1%	7.4%	-20.8%
France	10.9%	7.1%	15.3%	-11.4%
Switzerland	10.3%	6.7%	9.7%	3.8%
Germany	9.3%	6.0%	24.5%	-4.4%
Australia	6.7%	4.4%	28.6%	-14.6%
Netherlands	4.3%	2.8%	24.0%	7.1%
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.

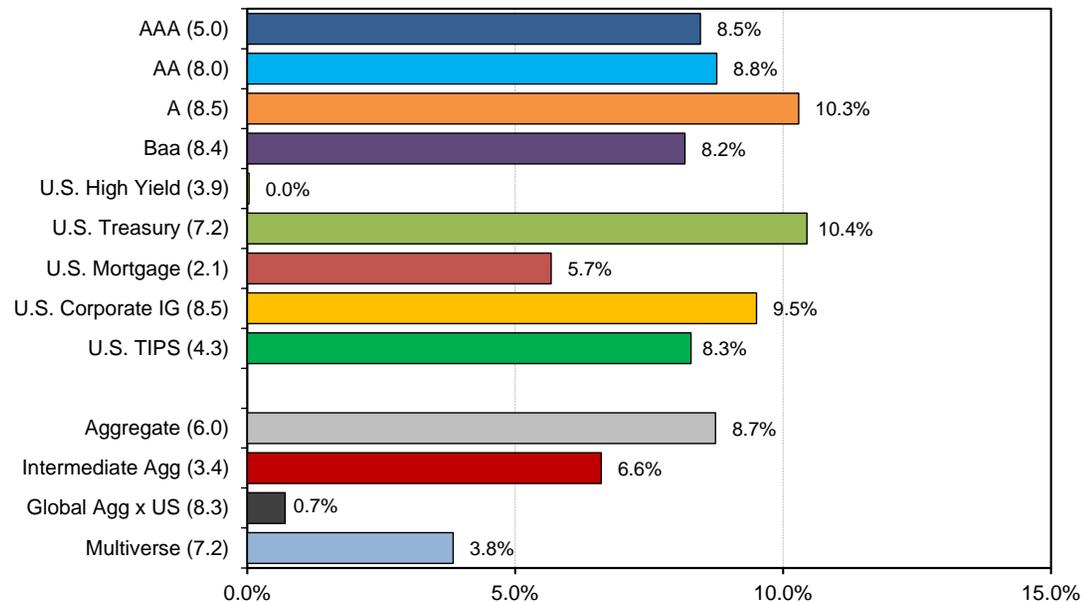


- Broad fixed income benchmarks rose sharply in the 2nd quarter as interest rates fell globally in response to the economic implications of the pandemic. The Fed continued purchasing bonds under programs announced during the first quarter to support capital markets and mitigate the damage to the economy. 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 benefitted 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.

Quarter Performance

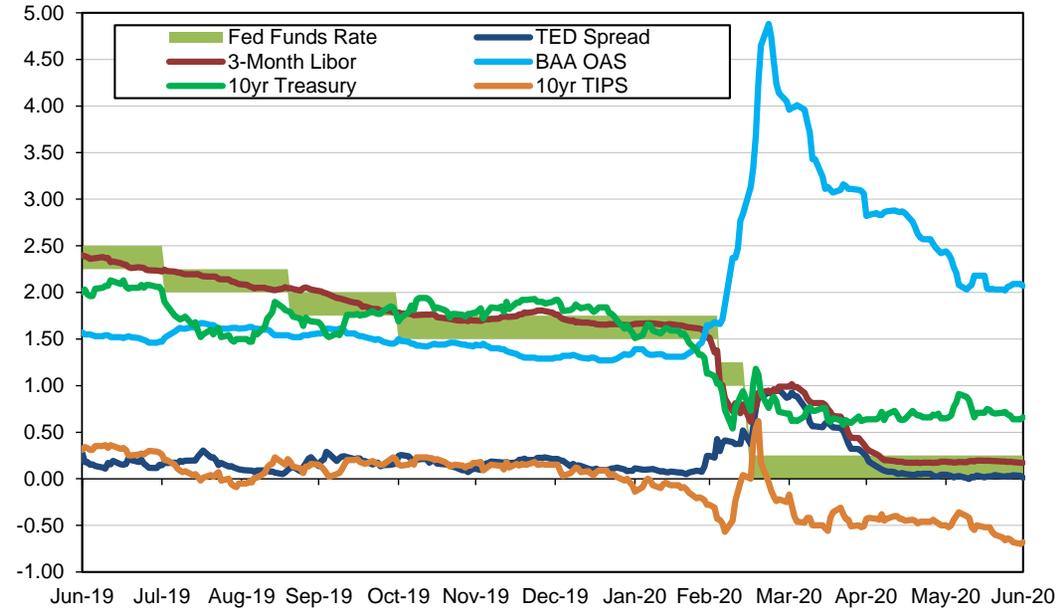


1-Year Performance

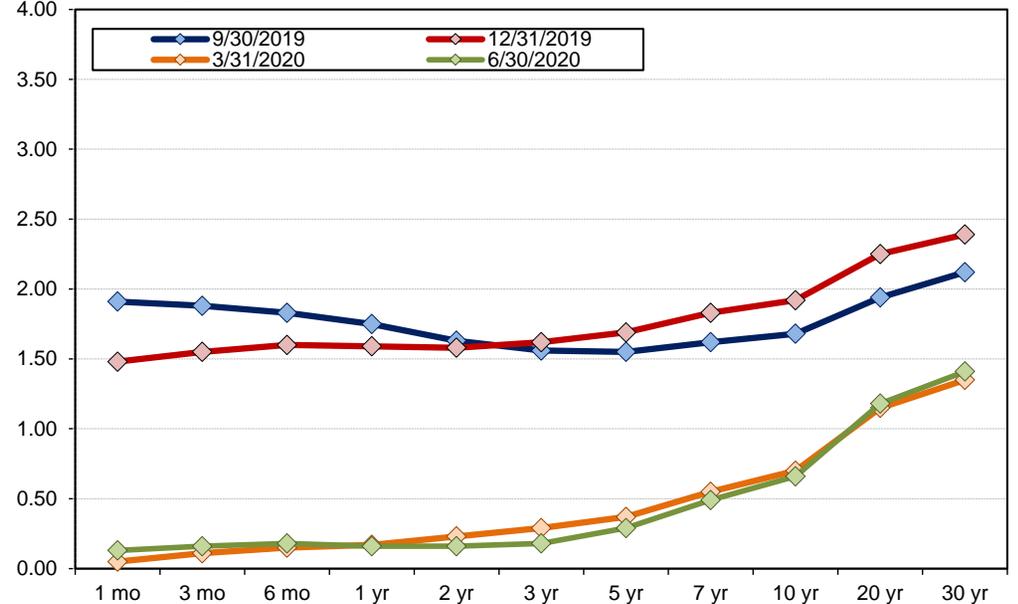


- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the yield graph to the right. The '1-Year Trailing Market Rates' chart illustrates that over the last year, the 10-year Treasury yield (green line) fell from yields of greater 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



Asset Allocation
Total 457 and 401a Plans
As of June 30, 2020

Asset Allocation Attributes	Jun-2020		Mar-2020		Dec-2019		Sep-2019	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total 457 & 401a Plans	55,373,603	100.00	48,898,097	100.00	55,531,366	100.00	53,028,687	100.00
457 Plan- 300786	40,619,190	73.35	36,182,647	74.00	40,554,934	73.03	38,989,832	73.53
401a Plan- 106397	12,288,870	22.19	10,601,518	21.68	12,541,816	22.59	11,713,936	22.09
401a Fire Share-106796	2,465,543	4.45	2,113,932	4.32	2,423,429	4.36	2,313,770	4.36



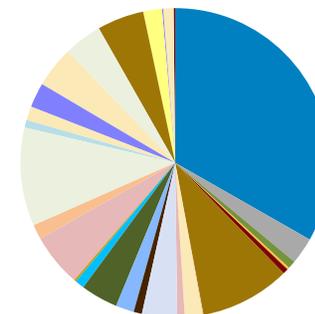
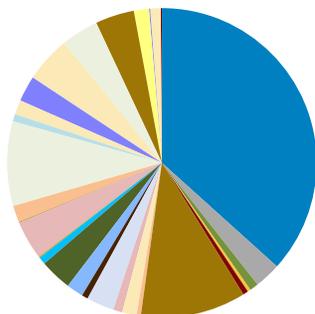
Asset Allocation
Total Fund RHS Plans
As of June 30, 2020

Asset Allocation Attributes	Jun-2020		Mar-2020		Dec-2019		Sep-2019	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total RHS Plans	4,223,701	100.00	3,662,635	100.00	4,290,676	100.00	4,008,429	100.00
RHS Old Plan	487,921	11.55	451,757	12.33	528,152	12.31	508,270	12.68
RHS Current Plan- 803116	3,735,780	88.45	3,210,878	87.67	3,762,524	87.69	3,500,159	87.32



March 31, 2020 : \$36,182,647

June 30, 2020 : \$40,619,190

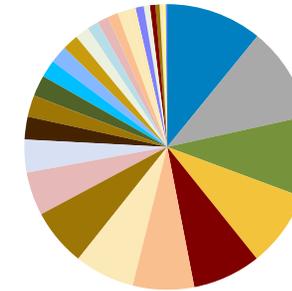
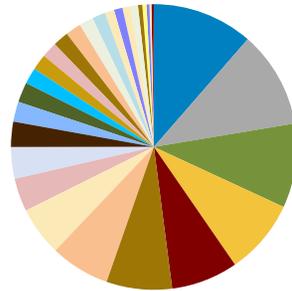


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vantage Trust Plus Fund	13,270,988	36.7	Vantage Trust Plus Fund	13,508,681	33.3
TCW Total Return Bond Fund (TGLMX)	986,368	2.7	TCW Total Return Bond Fund (TGLMX)	1,129,959	2.8
VT Vantagepoint Inflt n Focused	330,818	0.9	VT Vantagepoint Inflt n Focused	338,644	0.8
Neuberger Berman High Yeild Fixed Income (NHILX)	113,388	0.3	Neuberger Berman High Yeild Fixed Income (NHILX)	88,956	0.2
VT Retirement Income Advantage	197,273	0.5	VT Retirement Income Advantage	228,843	0.6
Vanguard 500 Index Fund (VFIAX)	3,983,657	11.0	Vanguard 500 Index Fund (VFIAX)	3,830,678	9.4
VT Parnassus Core Equity (PRBLX)	156,759	0.4	VT Parnassus Core Equity (PRBLX)	41,850	0.1
VT Vantagepoint Equity Income	546,610	1.5	VT Vantagepoint Equity Income	744,840	1.8
VT Invesco Diversified Dividend Fund (LCEYX)	344,115	1.0	VT Invesco Diversified Dividend Fund (LCEYX)	316,888	0.8
VT Fidelity Diversified Intl (FDIVX)	1,048,625	2.9	VT Fidelity Diversified Intl (FDIVX)	1,486,025	3.7
VT Victory Sycamore Est Value (VEVYX)	230,143	0.6	VT Victory Sycamore Est Value (VEVYX)	352,255	0.9
Vanguard Mid Cap Index (VIMAX)	640,705	1.8	Vanguard Mid Cap Index (VIMAX)	775,406	1.9
VT TimesSquare Mid Cap Growth (TMDPX)	1,205,177	3.3	VT TimesSquare Mid Cap Growth (TMDPX)	1,578,200	3.9
VT Vantagepoint Discovery	276,728	0.8	VT Vantagepoint Discovery	394,703	1.0
Vanguard Small Cap Index (VSMAX)	45,869	0.1	Vanguard Small Cap Index (VSMAX)	89,919	0.2
VT Oppenheimer Discovery Fund (ODIYX)	1,471,118	4.1	VT Oppenheimer Discovery Fund (ODIYX)	2,246,033	5.5
Templeton Inst. Global Equity (TGESX)	20,174	0.1	Templeton Inst. Global Equity (TGESX)	-	0.0
Vanguard Total Int'l Stock Index (VTIAX)	638,559	1.8	Vanguard Total Int'l Stock Index (VTIAX)	628,257	1.5
VT Fidelity Contrafund (FCNTX)	3,195,999	8.8	VT Fidelity Contrafund (FCNTX)	4,174,897	10.3
VT Nuveen Real Estate Secs (FARCX)	277,967	0.8	VT Nuveen Real Estate Secs (FARCX)	321,444	0.8
Vanguard Target Retirement Income (VTINX)	548,272	1.5	Vanguard Target Retirement Income (VTINX)	589,435	1.5
Vanguard Target Retirement 2015 (VTXVX)	970,867	2.7	Vanguard Target Retirement 2015 (VTXVX)	1,049,659	2.6
Vanguard Target Retirement 2020 (VTWNX)	1,743,388	4.8	Vanguard Target Retirement 2020 (VTWNX)	1,746,575	4.3
Vanguard Target Retirement 2025 (VTTVX)	1,414,307	3.9	Vanguard Target Retirement 2025 (VTTVX)	1,618,510	4.0
Vanguard Target Retirement 2030 (VTHR X)	1,467,377	4.1	Vanguard Target Retirement 2030 (VTHR X)	1,985,762	4.9
Vanguard Target Retirement 2035 (VTTHX)	576,455	1.6	Vanguard Target Retirement 2035 (VTTHX)	795,016	2.0
Vanguard Target Retirement 2040 (VFORX)	39,668	0.1	Vanguard Target Retirement 2040 (VFORX)	45,485	0.1
Vanguard Target Retirement 2045 (VTIVX)	397,976	1.1	Vanguard Target Retirement 2045 (VTIVX)	440,897	1.1
Vanguard Target Retirement 2050 (VFIFX)	43,296	0.1	Vanguard Target Retirement 2050 (VFIFX)	71,374	0.2



March 31, 2020 : \$10,601,518

June 30, 2020 : \$12,288,870

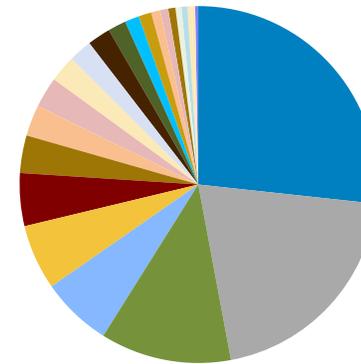
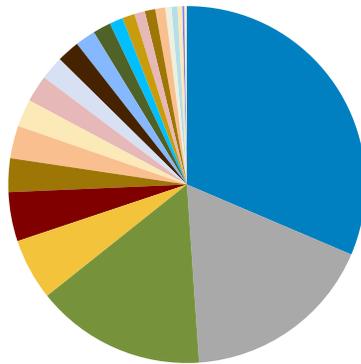


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vantage Trust Plus Fund	786,027	7.4	Vantage Trust Plus Fund	797,131	6.5
Vantage Trust Cash Management (DPCXX)	188,299	1.8	Vantage Trust Cash Management (DPCXX)	155,122	1.3
TCW Total Return Bond Fund (TGLMX)	240,483	2.3	TCW Total Return Bond Fund (TGLMX)	242,602	2.0
VT Vantagepoint Inflt'n Focused	89,312	0.8	VT Vantagepoint Inflt'n Focused	84,326	0.7
Neuberger Berman High Yeild Fixed Income (NHILX)	34,710	0.3	Neuberger Berman High Yeild Fixed Income (NHILX)	24,575	0.2
VT Retirement Income Advantage	96,169	0.9	VT Retirement Income Advantage	119,363	1.0
Vanguard 500 Index Fund (VFIAX)	801,045	7.6	Vanguard 500 Index Fund (VFIAX)	946,514	7.7
VT Parnassus Core Equity (PRBLX)	50,055	0.5	VT Parnassus Core Equity (PRBLX)	32,166	0.3
VT Vantagepoint Equity Income	13,084	0.1	VT Vantagepoint Equity Income	76,368	0.6
VT Invesco Diversified Dividend Fund (LCEYX)	186,152	1.8	VT Invesco Diversified Dividend Fund (LCEYX)	144,583	1.2
VT Fidelity Contrafund (FCNTX)	195,196	1.8	VT Fidelity Contrafund (FCNTX)	243,338	2.0
VT Victory Sycamore Est Value (VEVYX)	168,969	1.6	VT Victory Sycamore Est Value (VEVYX)	198,771	1.6
Vanguard Mid Cap Index (VIMAX)	160,243	1.5	Vanguard Mid Cap Index (VIMAX)	157,816	1.3
VT TimesSquare Mid Cap Growth (TMDPX)	188,044	1.8	VT TimesSquare Mid Cap Growth (TMDPX)	299,808	2.4
VT Vantagepoint Discovery	190,277	1.8	VT Vantagepoint Discovery	221,517	1.8
Vanguard Small Cap Index (VSMAX)	22,867	0.2	Vanguard Small Cap Index (VSMAX)	50,025	0.4
VT Oppenheimer Discovery Fund (ODIYX)	589,503	5.6	VT Oppenheimer Discovery Fund (ODIYX)	837,471	6.8
Templeton Inst. Global Equity (TGESX)	17,586	0.2	Templeton Inst. Global Equity (TGESX)	-	0.0
Vanguard Total Int'l Stock Index (VTIAX)	303,912	2.9	Vanguard Total Int'l Stock Index (VTIAX)	317,629	2.6
VT Fidelity Diversified Intl (FDIVX)	397,863	3.8	VT Fidelity Diversified Intl (FDIVX)	604,585	4.9
VT Nuveen Real Estate Secs (FARCX)	112,221	1.1	VT Nuveen Real Estate Secs (FARCX)	135,995	1.1
Vanguard Target Retirement Income (VTINX)	52,229	0.5	Vanguard Target Retirement Income (VTINX)	57,866	0.5
Vanguard Target Retirement 2015 (VTXVX)	102,282	1.0	Vanguard Target Retirement 2015 (VTXVX)	113,874	0.9
Vanguard Target Retirement 2020 (VTWNX)	1,208,019	11.4	Vanguard Target Retirement 2020 (VTWNX)	1,333,954	10.9
Vanguard Target Retirement 2025 (VTTVX)	1,011,855	9.5	Vanguard Target Retirement 2025 (VTTVX)	1,120,883	9.1
Vanguard Target Retirement 2030 (VTHRXX)	1,161,998	11.0	Vanguard Target Retirement 2030 (VTHRXX)	1,311,620	10.7
Vanguard Target Retirement 2035 (VTTHX)	901,108	8.5	Vanguard Target Retirement 2035 (VTTHX)	1,057,349	8.6
Vanguard Target Retirement 2040 (VFORX)	713,379	6.7	Vanguard Target Retirement 2040 (VFORX)	852,550	6.9
Vanguard Target Retirement 2045 (VTIVX)	378,884	3.6	Vanguard Target Retirement 2045 (VTIVX)	456,676	3.7
Vanguard Target Retirement 2050 (VFIFX)	239,749	2.3	Vanguard Target Retirement 2050 (VFIFX)	294,392	2.4



March 31, 2020 : \$2,113,932

June 30, 2020 : \$2,465,543



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vantage Trust Plus Fund	664,125	31.4	Vantage Trust Plus Fund	658,582	26.7
TCW Total Return Bond Fund (TGLMX)	38,599	1.8	TCW Total Return Bond Fund (TGLMX)	158,199	6.4
VT Vantagepoint Inflt'n Focused	20,093	1.0	VT Vantagepoint Inflt'n Focused	18,157	0.7
Neuberger Berman High Yeild Fixed Income (NHILX)	8,898	0.4	Neuberger Berman High Yeild Fixed Income (NHILX)	7,499	0.3
Vanguard 500 Index Fund (VFIAX)	117,688	5.6	Vanguard 500 Index Fund (VFIAX)	145,835	5.9
VT Parnassus Core Equity (PRBLX)	1,683	0.1	VT Parnassus Core Equity (PRBLX)	-	0.0
VT Vantagepoint Equity Income	3,014	0.1	VT Vantagepoint Equity Income	9,578	0.4
VT Invesco Diversified Dividend Fund (LCEYX)	20,032	0.9	VT Invesco Diversified Dividend Fund (LCEYX)	16,003	0.6
VT Fidelity Contrafund (FCNTX)	324,970	15.4	VT Fidelity Contrafund (FCNTX)	292,105	11.8
VT Victory Sycamore Est Value (VEVYX)	18,889	0.9	VT Victory Sycamore Est Value (VEVYX)	20,061	0.8
Vanguard Mid Cap Index (VIMAX)	94,333	4.5	Vanguard Mid Cap Index (VIMAX)	117,906	4.8
VT TimesSquare Mid Cap Growth (TMDPX)	51,751	2.4	VT TimesSquare Mid Cap Growth (TMDPX)	68,138	2.8
VT Vantagepoint Discovery	25,934	1.2	VT Vantagepoint Discovery	32,011	1.3
Vanguard Small Cap Index (VSMAX)	3,779	0.2	Vanguard Small Cap Index (VSMAX)	7,048	0.3
VT Oppenheimer Discovery Fund (ODIYX)	370,008	17.5	VT Oppenheimer Discovery Fund (ODIYX)	501,937	20.4
Templeton Inst. Global Equity (TGESX)	504	0.0	Templeton Inst. Global Equity (TGESX)	-	0.0
Vanguard Total Int'l Stock Index (VTIAX)	43,549	2.1	Vanguard Total Int'l Stock Index (VTIAX)	51,824	2.1
VT Fidelity Diversified Intl (FDIVX)	64,400	3.0	VT Fidelity Diversified Intl (FDIVX)	84,134	3.4
VT Nuveen Real Estate Secs (FARCX)	62,434	3.0	VT Nuveen Real Estate Secs (FARCX)	69,583	2.8
Vanguard Target Retirement Income (VTINX)	-	0.0	Vanguard Target Retirement Income (VTINX)	-	0.0
Vanguard Target Retirement 2020 (VTWNX)	11,741	0.6	Vanguard Target Retirement 2020 (VTWNX)	13,074	0.5
Vanguard Target Retirement 2025 (VTTVX)	52,461	2.5	Vanguard Target Retirement 2025 (VTTVX)	59,362	2.4
Vanguard Target Retirement 2030 (VTHR)	11,756	0.6	Vanguard Target Retirement 2030 (VTHR)	13,464	0.5
Vanguard Target Retirement 2035 (VTTHX)	45,241	2.1	Vanguard Target Retirement 2035 (VTTHX)	52,415	2.1
Vanguard Target Retirement 2040 (VFORX)	34,234	1.6	Vanguard Target Retirement 2040 (VFORX)	40,135	1.6
Vanguard Target Retirement 2045 (VTIVX)	23,815	1.1	Vanguard Target Retirement 2045 (VTIVX)	28,494	1.2
Vanguard Target Retirement 2050 (VFIFX)	-	0.0	Vanguard Target Retirement 2050 (VFIFX)	-	0.0



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Asset Allocation By Manager
Total RHS Old Plan
As of June 30, 2020

March 31, 2020 : \$451,757



June 30, 2020 : \$487,921

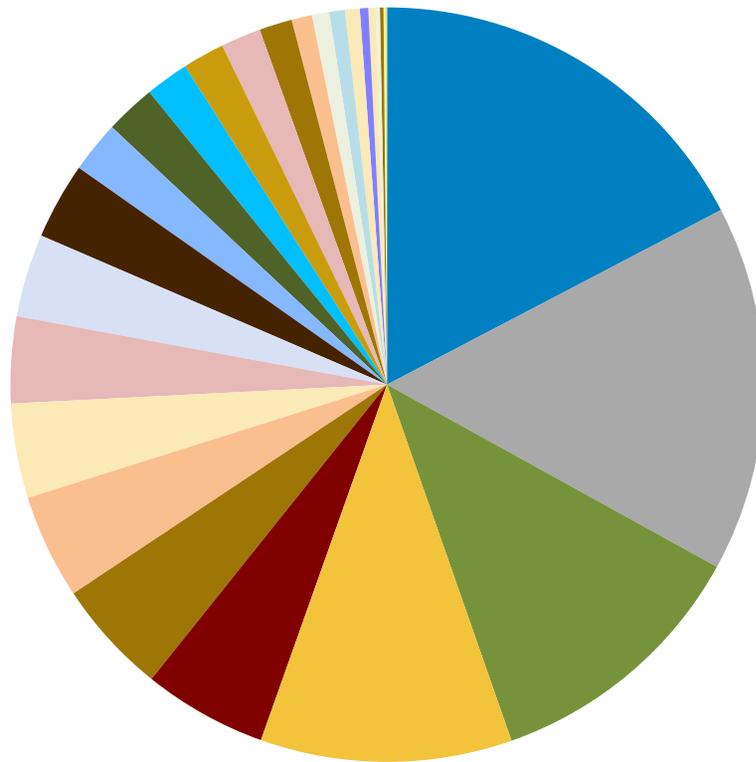


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vantagepoint PLUS Fund S3	28,532	6.3	Vantagepoint PLUS Fund S3	53,400	10.9
VT II VP Low Duration Bond Fund	291	0.1	VT II VP Low Duration Bond Fund	-	0.0
VT II VP Core Bond Index	4,177	0.9	VT II VP Core Bond Index	-	0.0
VT II VP Inflation Focused Fund	22,058	4.9	VT II VP Inflation Focused Fund	23,099	4.7
VT II VP 500 Stock Index	15,689	3.5	VT II VP 500 Stock Index	-	0.0
VT II VP Broad Market Index	49,609	11.0	VT II VP Broad Market Index	-	0.0
VT II VP Equity Income Fund	1,135	0.3	VT II VP Equity Income Fund	1,284	0.3
800533- VT II Vantagepoint Discovery	1,593	0.4	800533- VT II Vantagepoint Discovery	-	0.0
VT II VP Growth Fund	6,981	1.5	VT II VP Growth Fund	-	0.0
VT II VP Mid/Small Company Index	3,237	0.7	VT II VP Mid/Small Company Index	-	0.0
VT II VP Aggressive Opp Fund	24,638	5.5	VT II VP Aggressive Opp Fund	-	0.0
VT II VP International Fund	-	0.0	VT II VP International Fund	-	0.0
VT II VP Overseas Equity Index	3,376	0.7	VT II VP Overseas Equity Index	-	0.0
VT II VP Milestone Retirement Income Fund	73,413	16.3	VT II VP Milestone Retirement Income Fund	-	0.0
VT II VP Milestone 2010	-	0.0	VT II VP Milestone 2010	-	0.0
VT II VP Milestone 2015	43,710	9.7	VT II VP Milestone 2015	-	0.0
VT II VP Milestone 2020	30,521	6.8	VT II VP Milestone 2020	-	0.0
VT II VP Milestone 2025	64,452	14.3	VT II VP Milestone 2025	-	0.0
VT II VP Milestone 2030	17,669	3.9	VT II VP Milestone 2030	-	0.0
VT II VP Milestone 2035	-	0.0	VT II VP Milestone 2035	-	0.0
VT II VP Milestone 2040	1,042	0.2	VT II VP Milestone 2040	-	0.0
VT II VP Milestone 2045	3,412	0.8	VT II VP Milestone 2045	-	0.0
VT II VP MP Conservative Growth Fund	27,188	6.0	VT II VP MP Conservative Growth Fund	-	0.0
VT II VP MP Traditional Growth Fund	20,064	4.4	VT II VP MP Traditional Growth Fund	-	0.0
VT II VP MP Long-Term Growth Fund	5,989	1.3	VT II VP MP Long-Term Growth Fund	-	0.0
VT II VP MP Global Equity Growth Fund	2,981	0.7	VT II VP MP Global Equity Growth Fund	-	0.0
TCW Total Return Bond Fund (TGLMX)	-	0.0	TCW Total Return Bond Fund (TGLMX)	8,543	1.8
Vanguard 500 Index Fund (VFIAX)	-	0.0	Vanguard 500 Index Fund (VFIAX)	78,549	16.1
VT Fidelity Contrafund (FCNTX)	-	0.0	VT Fidelity Contrafund (FCNTX)	9,378	1.9
VT TimesSquare Mid Cap Growth (TMDPX)	-	0.0	VT TimesSquare Mid Cap Growth (TMDPX)	16,207	3.3
Vanguard Target Retirement 2015 (VTXVX)	-	0.0	Vanguard Target Retirement 2015 (VTXVX)	47,930	9.8
Vanguard Target Retirement 2020 (VTWNX)	-	0.0	Vanguard Target Retirement 2020 (VTWNX)	63,145	12.9
Vanguard Target Retirement 2025 (VTTVX)	-	0.0	Vanguard Target Retirement 2025 (VTTVX)	86,991	17.8
Vanguard Target Retirement 2030 (VTHR)	-	0.0	Vanguard Target Retirement 2030 (VTHR)	20,156	4.1
Vanguard Target Retirement 2035 (VTTHX)	-	0.0	Vanguard Target Retirement 2035 (VTTHX)	3,565	0.7
Vanguard Target Retirement 2040 (VFORX)	-	0.0	Vanguard Target Retirement 2040 (VFORX)	1,205	0.2
Vanguard Target Retirement 2045 (VTIVX)	-	0.0	Vanguard Target Retirement 2045 (VTIVX)	4,020	0.8
Vanguard Target Retirement Income (VTINX)	-	0.0	Vanguard Target Retirement Income (VTINX)	70,448	14.4



March 31, 2020 : \$3,210,878

Allocation

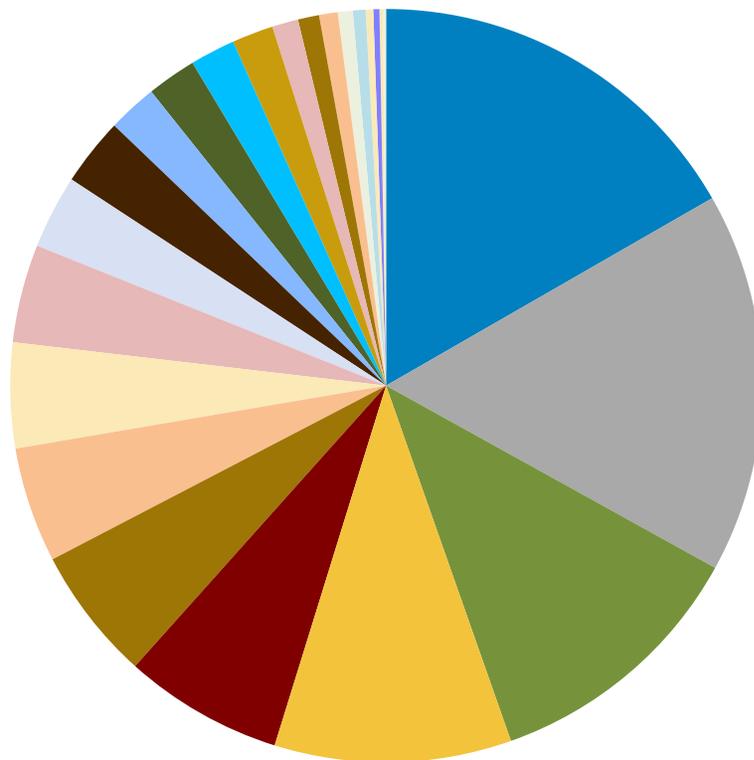


	Market Value	Allocation
VT II Cash Management	-	0.0
Vantagepoint PLUS Fund S3	119,108	3.7
VT II VP Low Duration Bond Fund	632	0.0
VT II VP Core Bond Index	45,328	1.4
VT II VP Inflation Focused Fund	20,241	0.6
VT II VP High Yield	5,952	0.2
VT II VP 500 Stock Index	170,772	5.3
VT II VP Broad Market Index	55,227	1.7
VT II VP Growth & Income Fund	23,930	0.7
VT II VP Equity Income Fund	57,654	1.8
VT II VP Growth Fund	157,587	4.9
VT II VP Mid/Small Company Index	21,497	0.7
VT II VP Aggressive Opp Fund	71,230	2.2
VT II VP Discovery Fund	28,114	0.9
VT II VP International Fund	9,787	0.3
VT II VP Overseas Equity Index	4,876	0.2
VT II VP Emerging Markets	58	0.0
VT II VP Milestone Retirement Income Fund	114,200	3.6
VT II VP Milestone 2010	-	0.0
VT II VP Milestone 2015	105,184	3.3
VT II VP Milestone 2020	346,778	10.8
VT II VP Milestone 2025	556,680	17.3
VT II VP Milestone 2030	503,680	15.7
VT II VP Milestone 2035	372,944	11.6
VT II VP Milestone 2040	130,222	4.1
VT II VP Milestone 2045	143,858	4.5
VT II VP Milestone 2050	59,753	1.9
VT II VP Milestone 2055	69,572	2.2
VT II VP MP Conservative Growth Fund	3,690	0.1
VT II VP MP Traditional Growth Fund	11,753	0.4
VT II VP MP Long-Term Growth Fund	571	0.0
VT II VP MP Global Equity Growth Fund	-	0.0
TCW Total Return Bond Fund (TGLMX)	-	0.0
Neuberger Berman High Yield Fixed Income (NHILX)	-	0.0
Vanguard 500 Index Fund (VFIAX)	-	0.0
VT Fidelity Contrafund (FCNTX)	-	0.0
VT Parnassus Core Equity (PRBLX)	-	0.0
VT TimesSquare Mid Cap Growth (TMDPX)	-	0.0
Vanguard Small Cap Index (VSMAX)	-	0.0
VT Fidelity Diversified Intl (FDIVX)	-	0.0
Vanguard Total Int'l Stock Index (VTIAX)	-	0.0
Vanguard Target Retirement 2015 (VTXVX)	-	0.0



June 30, 2020 : \$3,735,780

Allocation



	Market Value	Allocation
Vantagepoint PLUS Fund S3	214,523	5.7
TCW Total Return Bond Fund (TGLMX)	34,040	0.9
Neuberger Berman High Yield Fixed Income (NHILX)	5,755	0.2
VT II VP Inflation Focused Fund	20,471	0.5
Vanguard 500 Index Fund (VFIAX)	255,620	6.8
VT Fidelity Contrafund (FCNTX)	184,856	4.9
VT Parnassus Core Equity (PRBLX)	42,006	1.1
VT II VP Equity Income Fund	66,206	1.8
VT TimesSquare Mid Cap Growth (TMDPX)	79,396	2.1
Vanguard Small Cap Index (VSMAX)	23,896	0.6
VT II VP Discovery Fund	29,999	0.8
VT Fidelity Diversified Intl (FDIVX)	12,160	0.3
Vanguard Total Int'l Stock Index (VTIAX)	4,969	0.1
Vanguard Target Retirement 2015 (VTXVX)	108,865	2.9
Vanguard Target Retirement 2020 (VTWNX)	380,203	10.2
Vanguard Target Retirement 2025 (VTTVX)	624,122	16.7
Vanguard Target Retirement 2030 (VTHR)	609,961	16.3
Vanguard Target Retirement 2035 (VTTHX)	432,559	11.6
Vanguard Target Retirement 2040 (VFORX)	157,570	4.2
Vanguard Target Retirement 2045 (VTIVX)	168,791	4.5
Vanguard Target Retirement 2050 (VFIFX)	72,798	1.9
Vanguard Target Retirement 2055 (VFFVX)	79,313	2.1
Vanguard Target Retirement 2060 (VTTSX)	9,657	0.3
Vanguard Target Retirement Income (VTINX)	118,044	3.2



Comparative Performance
Total 457 and 401a Plans
As of June 30, 2020

Comparative Performance	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR		
Stable Value/Cash Management Funds															
Vantage Trust Plus Fund		0.56		1.22		2.46		2.43		2.35		2.27		2.21	
90 Day U.S. Treasury Bill		0.02		0.60		1.63		1.97		1.77		1.43		1.17	
Difference		0.54		0.62		0.83		0.46		0.58		0.84		1.04	
VT Cash Management		0.00	(95)	0.25	(67)	1.06	(60)	1.46	(61)	1.29	(59)	1.00	(58)	0.80	(59)
90 Day U.S. Treasury Bill		0.02	(46)	0.60	(2)	1.63	(2)	1.97	(4)	1.77	(7)	1.43	(10)	1.17	(10)
Difference		-0.02		-0.35		-0.57		-0.51		-0.48		-0.43		-0.37	
IM U.S. Taxable Money Market (MF) Median		0.02		0.30		1.15		1.55		1.38		1.08		0.86	
Bond Funds															
TCW Total Return Bond Fund (TGLMX)		3.01	(88)	7.15	(11)	9.13	(18)	8.17	(33)	5.46	(16)	3.99	(32)	4.14	(46)
Blmbg. Barc. U.S. Aggregate Index		2.90	(90)	6.14	(32)	8.74	(28)	8.30	(27)	5.32	(24)	3.88	(40)	4.30	(30)
Difference		0.11		1.01		0.39		-0.13		0.14		0.11		-0.16	
IM U.S. Broad Market Core Fixed Income (MF) Median		4.97		5.56		8.07		7.82		4.91		3.76		4.05	
VT Vantagepoint Inftn Focused		4.83	(54)	5.67	(29)	7.92	(26)	6.16	(25)	4.73	(25)	3.45	(21)	3.52	(21)
Bloomberg Barclays U.S. TIPS Index		4.24	(67)	6.01	(21)	8.28	(18)	6.54	(16)	5.05	(13)	3.60	(15)	3.75	(11)
Difference		0.59		-0.34		-0.36		-0.38		-0.32		-0.15		-0.23	
IM U.S. TIPS (MF) Median		4.99		4.56		6.49		5.17		3.96		2.83		2.93	
Neuberger Berman High Yeild Fixed Income (NHILX)		9.94	(32)	-4.75	(47)	-0.82	(39)	2.97	(34)	2.50	(38)	4.38	(46)	3.56	(42)
ICE BofAML High Yield Master II		9.61	(40)	-4.78	(48)	-1.10	(45)	3.15	(30)	2.94	(21)	5.31	(12)	4.58	(8)
Difference		0.33		0.03		0.28		-0.18		-0.44		-0.93		-1.02	
IM U.S. High Yield Bonds (MF) Median		9.16		-4.86		-1.43		2.40		2.24		4.28		3.38	
Lifetime Income Fund															
VT Retirement Income Advantage		12.96	(5)	-1.19	(59)	4.57	(32)	2.96	(76)	4.01	(44)	5.32	(22)	4.28	(28)
Retirement Income Advantage		13.66	(1)	1.37	(20)	9.08	(1)	9.60	(1)	9.15	(1)	9.43	(1)	N/A	
Difference		-0.70		-2.56		-4.51		-6.64		-5.14		-4.11		N/A	
IM Mixed-Asset Target Alloc Consv (MF) Median		9.27		-0.55		3.06		4.20		3.80		4.40		3.81	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total 457 and 401a Plans
As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
US Stock Funds														
Vanguard 500 Index Fund (VFIAX)	20.54	(37)	-3.10	(42)	7.47	(30)	8.92	(31)	10.69	(26)	12.44	(26)	10.69	(14)
S&P 500 Index	20.54	(37)	-3.08	(42)	7.51	(29)	8.95	(30)	10.73	(26)	12.48	(25)	10.73	(13)
Difference	0.00		-0.02		-0.04		-0.03		-0.04		-0.04		-0.04	
IM U.S. Large Cap Core Equity (MF) Median	19.44		-4.04		5.68		7.05		9.04		11.08		9.02	
VT Parnassus Core Equity (PRBLX)	17.86	(71)	-2.06	(29)	6.48	(43)	11.72	(6)	11.69	(15)	12.31	(29)	10.60	(16)
S&P 500 Index	20.54	(37)	-3.08	(42)	7.51	(29)	8.95	(30)	10.73	(26)	12.48	(25)	10.73	(13)
Difference	-2.68		1.02		-1.03		2.77		0.96		-0.17		-0.13	
IM U.S. Large Cap Core Equity (MF) Median	19.44		-4.04		5.68		7.05		9.04		11.08		9.02	
VT Vantagepoint Equity Income	13.82	(73)	-15.75	(58)	-8.28	(58)	-3.60	(84)	0.36	(81)	4.55	(76)	3.39	(71)
Russell 1000 Value Index	14.29	(68)	-16.26	(61)	-8.84	(65)	-0.56	(51)	1.82	(55)	5.09	(65)	4.64	(42)
Difference	-0.47		0.51		0.56		-3.04		-1.46		-0.54		-1.25	
IM U.S. Large Cap Value Equity (MF) Median	15.42		-15.32		-7.67		-0.48		2.13		5.58		4.28	
VT Invesco Diversified Dividend Fund (LCEYX)	12.33	(94)	-14.92	(44)	-7.56	(50)	0.38	(38)	1.16	(68)	2.99	(95)	4.15	(53)
Russell 1000 Value Index	14.29	(68)	-16.26	(61)	-8.84	(65)	-0.56	(51)	1.82	(55)	5.09	(65)	4.64	(42)
Difference	-1.96		1.34		1.28		0.94		-0.66		-2.10		-0.49	
IM U.S. Large Cap Value Equity (MF) Median	15.42		-15.32		-7.67		-0.48		2.13		5.58		4.28	
VT Fidelity Contrafund (FCNTX)	26.87	(61)	9.56	(61)	17.91	(75)	12.81	(85)	16.42	(70)	17.83	(62)	14.05	(59)
Russell 1000 Growth Index	27.84	(46)	9.81	(57)	23.28	(26)	17.27	(31)	18.99	(37)	19.35	(40)	15.89	(24)
Difference	-0.97		-0.25		-5.37		-4.46		-2.57		-1.52		-1.84	
IM U.S. Large Cap Growth Equity (MF) Median	27.69		10.21		21.05		15.85		18.03		18.57		14.47	
Vanguard Mid Cap Index (VIMAX)	24.96	(22)	-7.18	(15)	-0.20	(16)	3.74	(13)	6.45	(12)	9.05	(14)	6.99	(13)
Vanguard Mid Cap Hybrid	24.97	(21)	-7.20	(15)	-0.20	(16)	3.75	(12)	6.47	(11)	9.08	(13)	7.01	(11)
Difference	-0.01		0.02		0.00		-0.01		-0.02		-0.03		-0.02	
IM U.S. Mid Cap Core Equity (MF) Median	20.77		-12.42		-6.15		-1.29		2.34		5.46		3.60	
VT Victory Sycamore Est Value (VEVYX)	20.49	(39)	-14.88	(9)	-8.00	(9)	-1.35	(3)	2.76	(1)	5.98	(1)	6.17	(1)
Russell Midcap Index	24.61	(15)	-9.13	(1)	-2.24	(1)	2.67	(1)	5.79	(1)	8.37	(1)	6.76	(1)
Difference	-4.12		-5.75		-5.76		-4.02		-3.03		-2.39		-0.59	
IM U.S. Mid Cap Value Equity (MF) Median	20.13		-19.66		-13.42		-6.67		-2.01		2.22		1.36	
VT TimesSquare Mid Cap Growth (TMDPX)	28.01	(70)	3.34	(67)	12.24	(44)	13.18	(39)	14.35	(45)	14.67	(52)	11.07	(39)
Russell Midcap Growth Index	30.26	(55)	4.16	(60)	11.91	(47)	12.92	(40)	14.76	(40)	15.33	(44)	11.60	(31)
Difference	-2.25		-0.82		0.33		0.26		-0.41		-0.66		-0.53	
IM U.S. Mid Cap Growth Equity (MF) Median	30.58		5.22		11.63		11.78		14.08		14.77		10.50	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance

Total 457 and 401a Plans

As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
VT Vantagepoint Discovery	26.12	(22)	-14.10	(28)	-7.59	(24)	-3.23	(13)	3.31	(9)	8.38	(5)	4.41	(18)
Russell 2000 Index	25.42	(27)	-12.98	(21)	-6.63	(20)	-4.98	(24)	2.01	(18)	7.24	(13)	4.29	(20)
Difference	0.70		-1.12		-0.96		1.75		1.30		1.14		0.12	
IM U.S. Small Cap Core Equity (MF) Median	22.39		-17.68		-11.79		-8.07		-0.91		4.19		2.33	
Vanguard Small Cap Index (VSMAX)	26.66	(20)	-11.42	(14)	-5.60	(15)	-1.75	(6)	3.99	(6)	7.59	(9)	5.40	(7)
Vanguard Small Cap Hybrid	26.66	(20)	-11.44	(14)	-5.65	(15)	-1.76	(6)	3.98	(6)	7.57	(9)	5.38	(8)
Difference	0.00		0.02		0.05		0.01		0.01		0.02		0.02	
IM U.S. Small Cap Core Equity (MF) Median	22.39		-17.68		-11.79		-8.07		-0.91		4.19		2.33	
VT Oppenheimer Discovery Fund (ODIYX)	33.89	(32)	12.60	(6)	17.99	(5)	15.39	(6)	19.03	(7)	18.96	(18)	13.11	(9)
Russell 2000 Growth Index	30.58	(52)	-3.06	(61)	3.48	(55)	1.47	(66)	7.86	(64)	11.78	(62)	6.86	(68)
Difference	3.31		15.66		14.51		13.92		11.17		7.18		6.25	
IM U.S. Small Cap Growth Equity (MF) Median	30.85		0.00		4.23		3.75		9.31		12.97		8.45	
International/Global Funds														
Vanguard Total Int'l Stock Index (VTIAX)	18.11	(56)	-10.59	(56)	-4.09	(56)	-1.79	(51)	1.09	(49)	5.53	(48)	2.42	(49)
FTSE Global ex USA All Cap Index (Net)	17.05	(68)	-11.05	(60)	-4.42	(58)	-1.99	(53)	1.10	(49)	5.62	(47)	2.42	(49)
Difference	1.06		0.46		0.33		0.20		-0.01		-0.09		0.00	
IM International Equity (MF) Median	18.60		-9.65		-3.02		-1.72		0.98		5.38		2.30	
VT Fidelity Diversified Intl (FDIVX)	21.46	(30)	-2.02	(16)	7.94	(12)	5.18	(11)	5.47	(19)	8.47	(21)	4.50	(24)
MSCI EAFE (Net) Index	14.88	(84)	-11.34	(62)	-5.13	(62)	-2.08	(53)	0.81	(52)	5.36	(51)	2.05	(54)
Difference	6.58		9.32		13.07		7.26		4.66		3.11		2.45	
IM International Equity (MF) Median	18.60		-9.65		-3.02		-1.72		0.98		5.38		2.30	
Real Estate														
VT Nuveen Real Estate Secs (FARCX)	10.65	(51)	-14.83	(22)	-9.63	(30)	0.28	(24)	1.29	(39)	0.53	(52)	4.68	(18)
Wilshire U.S. REIT Index	10.56	(53)	-17.77	(52)	-12.30	(55)	-1.54	(45)	0.23	(50)	-0.26	(64)	3.98	(25)
Difference	0.09		2.94		2.67		1.82		1.06		0.79		0.70	
IM Global Real Estate (MF) Median	10.69		-17.72		-11.77		-2.18		0.22		0.60		2.39	
Target Date Funds														
Vanguard Target Retirement Income (VTINX)	7.84	(80)	1.46	(18)	5.69	(9)	6.12	(8)	5.39	(8)	5.35	(21)	4.93	(9)
Vanguard Target Income Composite Index	7.95	(79)	1.95	(9)	6.26	(6)	6.47	(6)	5.71	(5)	5.63	(10)	5.18	(4)
Difference	-0.11		-0.49		-0.57		-0.35		-0.32		-0.28		-0.25	
IM Mixed-Asset Target Alloc Conserv (MF) Median	9.27		-0.55		3.06		4.20		3.80		4.40		3.81	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total 457 and 401a Plans
As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Target Retirement 2015 (VTXVX)	8.90	(82)	0.79	(10)	5.45	(14)	5.96	(13)	5.78	(15)	6.36	(31)	5.47	(19)
Vanguard Target 2015 Composite Index	8.95	(80)	1.28	(5)	6.07	(6)	6.36	(9)	6.12	(8)	6.67	(19)	5.74	(5)
Difference	-0.05		-0.49		-0.62		-0.40		-0.34		-0.31		-0.27	
IM Mixed-Asset Target 2015 (MF) Median	10.11		-0.68		4.32		5.17		5.14		6.00		5.02	
Vanguard Target Retirement 2020 (VTWVX)	11.40	(32)	-0.58	(35)	5.06	(17)	5.79	(15)	6.09	(10)	7.12	(16)	5.96	(8)
Vanguard Target 2020 Composite Index	11.45	(31)	0.00	(21)	5.76	(7)	6.23	(10)	6.48	(5)	7.47	(4)	6.27	(1)
Difference	-0.05		-0.58		-0.70		-0.44		-0.39		-0.35		-0.31	
IM Mixed-Asset Target 2020 (MF) Median	10.27		-1.07		4.14		4.95		5.12		6.18		5.00	
Vanguard Target Retirement 2025 (VTTVX)	13.20	(26)	-1.46	(40)	4.82	(23)	5.71	(24)	6.33	(16)	7.71	(20)	6.29	(11)
Vanguard Target 2025 Composite Index	13.22	(25)	-0.87	(28)	5.56	(13)	6.17	(14)	6.75	(8)	8.08	(4)	6.61	(4)
Difference	-0.02		-0.59		-0.74		-0.46		-0.42		-0.37		-0.32	
IM Mixed-Asset Target 2025 (MF) Median	11.97		-1.86		3.95		4.86		5.49		6.89		5.44	
Vanguard Target Retirement 2030 (VTHR3)	14.58	(33)	-2.33	(39)	4.40	(27)	5.40	(23)	6.42	(18)	8.12	(26)	6.47	(17)
Vanguard Target 2030 Composite Index	14.53	(33)	-1.78	(26)	5.10	(15)	5.85	(14)	6.83	(11)	8.50	(16)	6.79	(7)
Difference	0.05		-0.55		-0.70		-0.45		-0.41		-0.38		-0.32	
IM Mixed-Asset Target 2030 (MF) Median	13.74		-2.93		3.71		4.58		5.69		7.42		5.74	
Vanguard Target Retirement 2035 (VTTH3)	15.90	(48)	-3.24	(39)	3.90	(27)	5.08	(26)	6.45	(22)	8.52	(31)	6.62	(23)
Vanguard Target 2035 Composite Index	15.85	(48)	-2.72	(29)	4.59	(19)	5.49	(17)	6.87	(16)	8.90	(21)	6.94	(11)
Difference	0.05		-0.52		-0.69		-0.41		-0.42		-0.38		-0.32	
IM Mixed-Asset Target 2035 (MF) Median	15.75		-3.61		3.19		4.35		5.91		7.94		5.98	
Vanguard Target Retirement 2040 (VFOR3)	17.29	(45)	-4.11	(37)	3.46	(28)	4.72	(24)	6.50	(18)	8.91	(25)	6.76	(22)
Vanguard Target 2040 Composite Index	17.17	(50)	-3.69	(30)	4.04	(20)	5.11	(16)	6.88	(13)	9.28	(17)	7.08	(13)
Difference	0.12		-0.42		-0.58		-0.39		-0.38		-0.37		-0.32	
IM Mixed-Asset Target 2040 (MF) Median	17.15		-4.55		2.61		3.88		5.80		8.05		6.03	
Vanguard Target Retirement 2045 (VTIV3)	18.70	(34)	-4.90	(41)	2.97	(36)	4.43	(24)	6.41	(23)	8.97	(28)	6.79	(21)
Vanguard Target 2045 Composite Index	18.49	(45)	-4.58	(34)	3.52	(23)	4.78	(18)	6.79	(14)	9.33	(16)	7.10	(15)
Difference	0.21		-0.32		-0.55		-0.35		-0.38		-0.36		-0.31	
IM Mixed-Asset Target 2045 (MF) Median	18.24		-5.46		2.17		3.68		5.76		8.22		6.11	
Vanguard Target Retirement 2050 (VFIF3)	18.67	(46)	-4.90	(35)	3.02	(31)	4.43	(21)	6.42	(21)	8.97	(26)	6.79	(20)
Vanguard Target 2050 Composite Index	18.49	(50)	-4.58	(31)	3.52	(20)	4.78	(17)	6.79	(14)	9.33	(18)	7.10	(14)
Difference	0.18		-0.32		-0.50		-0.35		-0.37		-0.36		-0.31	
IM Mixed-Asset Target 2050 (MF) Median	18.48		-5.64		1.81		3.45		5.65		8.24		6.10	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total RHS Plans
As of June 30, 2020

Comparative Performance														
	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Stable Value/Cash Management Funds														
Vantagepoint PLUS Fund S3	0.44	(1)	0.91	(1)	1.92	(1)	1.84	(11)	1.69	(11)	1.58	(2)	1.49	(1)
90 Day U.S. Treasury Bill	0.02	(46)	0.60	(2)	1.63	(2)	1.97	(4)	1.77	(7)	1.43	(10)	1.17	(10)
Difference	0.42		0.31		0.29		-0.13		-0.08		0.15		0.32	
IM U.S. Taxable Money Market (MF) Median	0.02		0.30		1.15		1.55		1.38		1.08		0.86	
Bond Funds														
Neuberger Berman High Yield Fixed Income (NHILX)	9.94	(32)	-4.75	(47)	-0.82	(39)	2.97	(34)	2.50	(38)	4.38	(46)	3.56	(42)
ICE BofAML High Yield Master II	9.61	(40)	-4.78	(48)	-1.10	(45)	3.15	(30)	2.94	(21)	5.31	(12)	4.58	(8)
Difference	0.33		0.03		0.28		-0.18		-0.44		-0.93		-1.02	
IM U.S. High Yield Bonds (MF) Median	9.16		-4.86		-1.43		2.40		2.24		4.28		3.38	
TCW Total Return Bond Fund (TGLMX)	3.01	(88)	7.15	(11)	9.13	(18)	8.17	(33)	5.46	(16)	3.99	(32)	4.14	(46)
Blmbg. Barc. U.S. Aggregate Index	2.90	(90)	6.14	(32)	8.74	(28)	8.30	(27)	5.32	(24)	3.88	(40)	4.30	(30)
Difference	0.11		1.01		0.39		-0.13		0.14		0.11		-0.16	
IM U.S. Broad Market Core Fixed Income (MF) Median	4.97		5.56		8.07		7.82		4.91		3.76		4.05	
VT II VP Inflation Focused Fund	4.73	(55)	5.47	(33)	7.48	(32)	5.74	(36)	4.30	(41)	3.01	(43)	N/A	
Bloomberg Barclays U.S. TIPS Index	4.24	(67)	6.01	(21)	8.28	(18)	6.54	(16)	5.05	(13)	3.60	(15)	3.75	(11)
Difference	0.49		-0.54		-0.80		-0.80		-0.75		-0.59		N/A	
IM U.S. TIPS (MF) Median	4.99		4.56		6.49		5.17		3.96		2.83		2.93	
US Stock Funds														
VT II VP Equity Income Fund	13.74	(75)	-15.93	(59)	-8.63	(63)	-3.91	(86)	-0.01	(86)	4.15	(82)	N/A	
Russell 1000 Value Index	14.29	(68)	-16.26	(61)	-8.84	(65)	-0.56	(51)	1.82	(55)	5.09	(65)	4.64	(42)
Difference	-0.55		0.33		0.21		-3.35		-1.83		-0.94		N/A	
IM U.S. Large Cap Value Equity (MF) Median	15.42		-15.32		-7.67		-0.48		2.13		5.58		4.28	
VT Parnassus Core Equity (PRBLX)	17.86	(71)	-2.06	(29)	6.48	(43)	11.72	(6)	11.69	(15)	12.31	(29)	10.60	(16)
S&P 500 Index	20.54	(37)	-3.08	(42)	7.51	(29)	8.95	(30)	10.73	(26)	12.48	(25)	10.73	(13)
Difference	-2.68		1.02		-1.03		2.77		0.96		-0.17		-0.13	
IM U.S. Large Cap Core Equity (MF) Median	19.44		-4.04		5.68		7.05		9.04		11.08		9.02	
Vanguard 500 Index Fund (VFIAX)	20.54	(37)	-3.10	(42)	7.47	(30)	8.92	(31)	10.69	(26)	12.44	(26)	10.69	(14)
S&P 500 Index	20.54	(37)	-3.08	(42)	7.51	(29)	8.95	(30)	10.73	(26)	12.48	(25)	10.73	(13)
Difference	0.00		-0.02		-0.04		-0.03		-0.04		-0.04		-0.04	
IM U.S. Large Cap Core Equity (MF) Median	19.44		-4.04		5.68		7.05		9.04		11.08		9.02	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total RHS Plans
As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
VT Fidelity Contrafund (FCNTX)	26.87	(61)	9.56	(61)	17.91	(75)	12.81	(85)	16.42	(70)	17.83	(62)	14.05	(59)
Russell 1000 Growth Index	27.84	(46)	9.81	(57)	23.28	(26)	17.27	(31)	18.99	(37)	19.35	(40)	15.89	(24)
Difference	-0.97		-0.25		-5.37		-4.46		-2.57		-1.52		-1.84	
IM U.S. Large Cap Growth Equity (MF) Median	27.69		10.21		21.05		15.85		18.03		18.57		14.47	
VT Victory Sycamore Est Value (VEVYX)	20.49	(39)	-14.88	(9)	-8.00	(9)	-1.35	(3)	2.76	(1)	5.98	(1)	6.17	(1)
Russell Midcap Index	24.61	(15)	-9.13	(1)	-2.24	(1)	2.67	(1)	5.79	(1)	8.37	(1)	6.76	(1)
Difference	-4.12		-5.75		-5.76		-4.02		-3.03		-2.39		-0.59	
IM U.S. Mid Cap Value Equity (MF) Median	20.13		-19.66		-13.42		-6.67		-2.01		2.22		1.36	
AMG TimesSquare Mid Cap Growth (TMDPX)	28.01	(70)	3.34	(67)	12.24	(44)	13.18	(39)	14.35	(45)	14.67	(52)	11.07	(39)
Russell Midcap Growth Index	30.26	(55)	4.16	(60)	11.91	(47)	12.92	(40)	14.76	(40)	15.33	(44)	11.60	(31)
Difference	-2.25		-0.82		0.33		0.26		-0.41		-0.66		-0.53	
IM U.S. Mid Cap Growth Equity (MF) Median	30.58		5.22		11.63		11.78		14.08		14.77		10.50	
VT II VP Discovery Fund	25.94	(24)	-14.28	(28)	-7.96	(26)	-3.66	(16)	2.85	(11)	7.90	(7)	N/A	
Russell 2000 Index	25.42	(27)	-12.98	(21)	-6.63	(20)	-4.98	(24)	2.01	(18)	7.24	(13)	4.29	(20)
Difference	0.52		-1.30		-1.33		1.32		0.84		0.66		N/A	
IM U.S. Small Cap Core Equity (MF) Median	22.39		-17.68		-11.79		-8.07		-0.91		4.19		2.33	
Vanguard Small Cap Index (VSMAX)	26.66	(20)	-11.42	(14)	-5.60	(15)	-1.75	(6)	3.99	(6)	7.59	(9)	5.40	(7)
Vanguard Small Cap Hybrid	26.66	(20)	-11.44	(14)	-5.65	(15)	-1.76	(6)	3.98	(6)	7.57	(9)	5.38	(8)
Difference	0.00		0.02		0.05		0.01		0.01		0.02		0.02	
IM U.S. Small Cap Core Equity (MF) Median	22.39		-17.68		-11.79		-8.07		-0.91		4.19		2.33	

International/Global Funds

Vanguard Total Int'l Stock Index (VTIAX)	18.11	(56)	-10.59	(56)	-4.09	(56)	-1.79	(51)	1.09	(49)	5.53	(48)	2.42	(49)
FTSE Global ex USA All Cap Index (Net)	17.05	(68)	-11.05	(60)	-4.42	(58)	-1.99	(53)	1.10	(49)	5.62	(47)	2.42	(49)
Difference	1.06		0.46		0.33		0.20		-0.01		-0.09		0.00	
IM International Equity (MF) Median	18.60		-9.65		-3.02		-1.72		0.98		5.38		2.30	
VT Fidelity Diversified Intl (FDIVX)	21.46	(30)	-2.02	(16)	7.94	(12)	5.18	(11)	5.47	(19)	8.47	(21)	4.50	(24)
MSCI EAFE (Net) Index	14.88	(84)	-11.34	(62)	-5.13	(62)	-2.08	(53)	0.81	(52)	5.36	(51)	2.05	(54)
Difference	6.58		9.32		13.07		7.26		4.66		3.11		2.45	
IM International Equity (MF) Median	18.60		-9.65		-3.02		-1.72		0.98		5.38		2.30	

Target Date Funds

Vanguard Target Retirement 2015 (VTXVX)	8.90	(82)	0.79	(10)	5.45	(14)	5.96	(13)	5.78	(15)	6.36	(31)	5.47	(19)
Vanguard Target 2015 Composite Index	8.95	(80)	1.28	(5)	6.07	(6)	6.36	(9)	6.12	(8)	6.67	(19)	5.74	(5)
Difference	-0.05		-0.49		-0.62		-0.40		-0.34		-0.31		-0.27	
IM Mixed-Asset Target 2015 (MF) Median	10.11		-0.68		4.32		5.17		5.14		6.00		5.02	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total RHS Plans
As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Target Retirement 2020 (VTWVX)	11.40	(32)	-0.58	(35)	5.06	(17)	5.79	(15)	6.09	(10)	7.12	(16)	5.96	(8)
Vanguard Target 2020 Composite Index	11.45	(31)	0.00	(21)	5.76	(7)	6.23	(10)	6.48	(5)	7.47	(4)	6.27	(1)
Difference	-0.05		-0.58		-0.70		-0.44		-0.39		-0.35		-0.31	
IM Mixed-Asset Target 2020 (MF) Median	10.27		-1.07		4.14		4.95		5.12		6.18		5.00	
Vanguard Target Retirement 2025 (VTTVX)	13.20	(26)	-1.46	(40)	4.82	(23)	5.71	(24)	6.33	(16)	7.71	(20)	6.29	(11)
Vanguard Target 2025 Composite Index	13.22	(25)	-0.87	(28)	5.56	(13)	6.17	(14)	6.75	(8)	8.08	(4)	6.61	(4)
Difference	-0.02		-0.59		-0.74		-0.46		-0.42		-0.37		-0.32	
IM Mixed-Asset Target 2025 (MF) Median	11.97		-1.86		3.95		4.86		5.49		6.89		5.44	
Vanguard Target Retirement 2030 (VTHR3)	14.58	(33)	-2.33	(39)	4.40	(27)	5.40	(23)	6.42	(18)	8.12	(26)	6.47	(17)
Vanguard Target 2030 Composite Index	14.53	(33)	-1.78	(26)	5.10	(15)	5.85	(14)	6.83	(11)	8.50	(16)	6.79	(7)
Difference	0.05		-0.55		-0.70		-0.45		-0.41		-0.38		-0.32	
IM Mixed-Asset Target 2030 (MF) Median	13.74		-2.93		3.71		4.58		5.69		7.42		5.74	
Vanguard Target Retirement 2035 (VTTH3)	15.90	(48)	-3.24	(39)	3.90	(27)	5.08	(26)	6.45	(22)	8.52	(31)	6.62	(23)
Vanguard Target 2035 Composite Index	15.85	(48)	-2.72	(29)	4.59	(19)	5.49	(17)	6.87	(16)	8.90	(21)	6.94	(11)
Difference	0.05		-0.52		-0.69		-0.41		-0.42		-0.38		-0.32	
IM Mixed-Asset Target 2035 (MF) Median	15.75		-3.61		3.19		4.35		5.91		7.94		5.98	
Vanguard Target Retirement 2040 (VFOR3)	17.29	(45)	-4.11	(37)	3.46	(28)	4.72	(24)	6.50	(18)	8.91	(25)	6.76	(22)
Vanguard Target 2040 Composite Index	17.17	(50)	-3.69	(30)	4.04	(20)	5.11	(16)	6.88	(13)	9.28	(17)	7.08	(13)
Difference	0.12		-0.42		-0.58		-0.39		-0.38		-0.37		-0.32	
IM Mixed-Asset Target 2040 (MF) Median	17.15		-4.55		2.61		3.88		5.80		8.05		6.03	
Vanguard Target Retirement 2045 (VTIV3)	18.70	(34)	-4.90	(41)	2.97	(36)	4.43	(24)	6.41	(23)	8.97	(28)	6.79	(21)
Vanguard Target 2045 Composite Index	18.49	(45)	-4.58	(34)	3.52	(23)	4.78	(18)	6.79	(14)	9.33	(16)	7.10	(15)
Difference	0.21		-0.32		-0.55		-0.35		-0.38		-0.36		-0.31	
IM Mixed-Asset Target 2045 (MF) Median	18.24		-5.46		2.17		3.68		5.76		8.22		6.11	
Vanguard Target Retirement 2050 (VFIF3)	18.67	(46)	-4.90	(35)	3.02	(31)	4.43	(21)	6.42	(21)	8.97	(26)	6.79	(20)
Vanguard Target 2050 Composite Index	18.49	(50)	-4.58	(31)	3.52	(20)	4.78	(17)	6.79	(14)	9.33	(18)	7.10	(14)
Difference	0.18		-0.32		-0.50		-0.35		-0.37		-0.36		-0.31	
IM Mixed-Asset Target 2050 (MF) Median	18.48		-5.64		1.81		3.45		5.65		8.24		6.10	
Vanguard Target Retirement 2055 (VFFV3)	18.64	(52)	-4.95	(34)	2.95	(35)	4.40	(23)	6.40	(23)	8.96	(31)	6.77	(23)
Vanguard Target 2055 Composite Index	18.49	(55)	-4.58	(30)	3.52	(21)	4.78	(18)	6.79	(15)	9.33	(20)	7.10	(15)
Difference	0.15		-0.37		-0.57		-0.38		-0.39		-0.37		-0.33	
IM Mixed-Asset Target 2055 (MF) Median	18.68		-5.78		1.77		3.46		5.76		8.35		6.14	
Vanguard Target Retirement 2060 (VTTS3)	18.61	(54)	-4.95	(34)	2.95	(35)	4.40	(24)	6.39	(24)	8.95	(31)	6.76	(24)
Vanguard Target 2060 Composite Index	18.49	(55)	-4.58	(30)	3.52	(21)	4.78	(18)	6.79	(15)	9.33	(20)	7.10	(15)
Difference	0.12		-0.37		-0.57		-0.38		-0.40		-0.38		-0.34	
IM Mixed-Asset Target 2055 (MF) Median	18.68		-5.78		1.77		3.46		5.76		8.35		6.14	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



Comparative Performance
Total RHS Plans
As of June 30, 2020

	QTR		YTD		1 YR		2 YR		3 YR		4 YR		5 YR	
Vanguard Target Retirement Income (VTINX)	7.84	(80)	1.46	(18)	5.69	(9)	6.12	(8)	5.39	(8)	5.35	(21)	4.93	(9)
Vanguard Target Income Composite Index	7.95	(79)	1.95	(9)	6.26	(6)	6.47	(6)	5.71	(5)	5.63	(10)	5.18	(4)
Difference	-0.11		-0.49		-0.57		-0.35		-0.32		-0.28		-0.25	
IM Mixed-Asset Target Alloc Conserv (MF) Median	9.27		-0.55		3.06		4.20		3.80		4.40		3.81	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Alger replaced Nuveen 11/1/2014.



**Town of Palm Beach DC Plans
Investment Option Performance Review
As of June 30, 2020**

Fund	Manager Tenure	Style	Asset Level (millions)	Expense Ratio	Category Median Exp Ratio	*Consecutive Qtr Return & Rank		3 & 5 Year Return > Index		3 & 5 Year Rank < 50th %-tile		3 & 5 Year Sharpe Ratio < 50th %-tile		Positive 3 & 5 Year Alpha	
						YES	YES	NO (5)	NO (5)	81 (5)	71 (5)	85 (5)	71 (5)	-1.42 (5)	-1.14 (5)
VT Vantagepoint Equity Income	20.4	US Equity Large Cap Value	#N/A	70 bps	87 bps	YES	YES	NO (5)	NO (5)	81 (5)	71 (5)	85 (5)	71 (5)	-1.42 (5)	-1.14 (5)
VT Invesco Diversified Dividend Fund (LCEYX)	17.7	US Equity Large Cap Value	15,119.5	57 bps	86 bps	YES	YES	NO (5)	NO (3)	68 (5)	53 (1)	77 (3)	41	-0.52 (2)	0.41
VT Parnassus Core Equity (PRBLX)	19.3	US Equity Large Cap Blend	19,538.1	86 bps	86 bps	YES	YES	Yes	NO (1)	15	16	7	5	2.31	1.39
VT Fidelity Contrafund (FCNTX)	29.9	US Equity Large Cap Growth	128,559.1	85 bps	86 bps	YES	YES	NO (5)	NO (5)	70 (4)	59 (5)	69 (5)	50 (1)	-2.14 (5)	-1.29 (5)
VT Victory Sycamore Est Value (VEVYX)	22.1	US Equity Mid Cap	10,389.5	63 bps	100 bps	YES	YES	NO (5)	NO (1)	1	1	1	1	-2.71 (5)	-0.30 (1)
VT TimesSquare Mid Cap Growth (TMDPX)	15.4	US Equity Mid Cap	1,912.1	118 bps	100 bps	YES	YES	NO (1)	NO (5)	45	39	36	27	0.64	0.33
VT Vantagepoint Discovery	12.3	US Equity Small Cap	#N/A	78 bps	110 bps	YES	YES	Yes	Yes	9	18	8	18	1.33	0.17
VT Oppenheimer Discovery Fund (ODIYX)	14.3	US Equity Small Cap	3,417.2	84 bps	109 bps	YES	YES	Yes	Yes	7	9	6	3	11.04	6.62
VT Fidelity Diversified Intl (FDIVX)	19.3	Global Equity Large Cap	13,354.2	75 bps	96 bps	YES	YES	Yes	Yes	19	24	17	23	4.68	2.50
VT Nuveen Real Estate Secs (FARCX)	15.3	Real Estate Sector Equity	2,310.0	106 bps	100 bps	YES	YES	Yes	Yes	39	18	38	18	0.96	0.83
TCW Total Return Bond Fund (TGLMX)	10.7	US Fixed Income	6,936.4	49 bps	60 bps	YES	YES	Yes	NO (5)	16	46	15	31	-0.16 (4)	-0.22 (3)
VT Vantagepoint Infltn Focused	12.3	US Fixed Income	#N/A	61 bps	75 bps	YES	YES	NO (5)	NO (5)	25	21	29	23	-0.47 (5)	-0.28 (5)
Neuberger Berman High Yield Fixed Income (NHILX)	9.5	US Fixed Income	1,988.7	70 bps	87 bps	YES	YES	NO (5)	NO (5)	38	42	40	44	-0.41 (5)	-0.78 (5)

Index Funds	Manager Tenure	Style	Asset Level (millions)	Expense Ratio	Category Median Exp Ratio	3 & 5 Year Tracking Error <50th %-tile	
Vanguard 500 Index Fund (VFIAX)	4.3	US Equity Large Cap Blend	155,839.1	4 bps	86 bps	1	1
Vanguard Mid Cap Index (VIMAX)	22.3	US Equity Mid Cap	34,176.1	5 bps	100 bps	1	1
Vanguard Small Cap Index (VSMAX)	4.3	US Equity Small Cap	28,321.7	5 bps	109 bps	1	1
Vanguard Total Int'l Stock Index (VTIAX)	12.0	Global Equity Large Cap	22,935.4	11 bps	96 bps	1	1

Target Date Funds	Manager Tenure	Style	Asset Level (millions)	Expense Ratio	Category Median Exp Ratio	*Consecutive Qtr Return & Rank		3 & 5 Year Rank < 50th %-tile		3 & 5 Year Sharpe Ratio < 50th %-tile	
Vanguard Target Retirement Income (VTINX)	7.5	Target Date	16882.9	12 bps	65.0	YES	YES	8	9	3	2
Vanguard Target Retirement 2015 (VTXVX)	7.5	Target Date	14918.2	13 bps	56.0	YES	YES	15	19	9	5
Vanguard Target Retirement 2020 (VTWNX)	7.5	Target Date	31158.4	13 bps	65.0	YES	YES	10	8	21	19
Vanguard Target Retirement 2025 (VTTVX)	7.5	Target Date	44522.6	13 bps	65.0	YES	YES	16	11	31	26
Vanguard Target Retirement 2030 (VTHRX)	7.5	Target Date	40192.7	14 bps	68.0	YES	YES	18	17	25	24
Vanguard Target Retirement 2035 (VTTHX)	7.5	Target Date	38301.4	14 bps	67.0	YES	YES	22	23	23	21
Vanguard Target Retirement 2040 (VFORX)	7.5	Target Date	30381.6	14 bps	70.0	YES	YES	18	22	20	21
Vanguard Target Retirement 2045 (VTIVX)	7.5	Target Date	28083.5	15 bps	69.0	YES	YES	23	21	25	23
Vanguard Target Retirement 2050 (VFIFX)	7.5	Target Date	21237.5	15 bps	71.0	YES	YES	21	20	21	21

Fund meets criteria
Fund does not currently meet criteria
Fund has not met criteria for more than 4 quarters

*Less than 4 consecutive quarterly returns below the index and peer rankings below the 75th percentile
"More than 4 quarters" evaluation criteria excludes Index Funds

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
TCW Total Return Bond Fund (TGLMX)	1,129,959	0.49	5,537
Vantage Trust Plus Fund	13,508,681	0.79	106,719
VT Vantagepoint Inflt'n Focused	338,644	0.61	2,066
Neuberger Berman High Yeild Fixed Income (NHILX)	88,956	0.70	623
VT Retirement Income Advantage	228,843	1.68	3,845
Vanguard 500 Index Fund (VFIAX)	3,830,678	0.04	1,532
VT Parnassus Core Equity (PRBLX)	41,850	0.87	364
VT Vantagepoint Equity Income	744,840	0.70	5,214
VT Invesco Diversified Dividend Fund (LCEYX)	316,888	0.56	1,775
VT Fidelity Diversified Intl (FDIVX)	1,486,025	0.75	11,145
VT Victory Sycamore Est Value (VEVYX)	352,255	0.62	2,184
Vanguard Mid Cap Index (VIMAX)	775,406	0.05	388
VT TimesSquare Mid Cap Growth (TMDPX)	1,578,200	1.18	18,623
VT Vantagepoint Discovery	394,703	0.78	3,079
Vanguard Small Cap Index (VSMAX)	89,919	0.05	45
VT Oppenheimer Discovery Fund (ODIYX)	2,246,033	0.84	18,867
Templeton Inst. Global Equity (TGESX)	-		-
Vanguard Total Int'l Stock Index (VTIAX)	628,257	0.11	691
VT Fidelity Contrafund (FCNTX)	4,174,897	0.82	34,234
VT Nuveen Real Estate Secs (FARCX)	321,444	1.02	3,279
Vanguard Target Retirement Income (VTINX)	589,435	0.12	707
Vanguard Target Retirement 2015 (VTXVX)	1,049,659	0.13	1,365
Vanguard Target Retirement 2020 (VTWNX)	1,746,575	0.13	2,271
Vanguard Target Retirement 2025 (VTTVX)	1,618,510	0.13	2,104
Vanguard Target Retirement 2030 (VTHRXX)	1,985,762	0.14	2,780
Vanguard Target Retirement 2035 (VTTHX)	795,016	0.14	1,113
Vanguard Target Retirement 2040 (VFORX)	45,485	0.14	64
Vanguard Target Retirement 2045 (VTIVX)	440,897	0.15	661
Vanguard Target Retirement 2050 (VFIFX)	71,374	0.15	107
457 Plan- 300786	40,619,190	0.57	231,379

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
TCW Total Return Bond Fund (TGLMX)	242,602	0.49	1,189
Vantage Trust Plus Fund	797,131	0.79	6,297
VT Vantagepoint Inflt'n Focused	84,326	0.61	514
Neuberger Berman High Yeild Fixed Income (NHILX)	24,575	0.70	172
Vanguard 500 Index Fund (VFIAX)	946,514	0.04	379
VT Parnassus Core Equity (PRBLX)	32,166	0.87	280
VT Vantagepoint Equity Income	76,368	0.70	535
VT Invesco Diversified Dividend Fund (LCEYX)	144,583	0.56	810
VT Fidelity Contrafund (FCNTX)	243,338	0.82	1,995
Vanguard Mid Cap Index (VIMAX)	157,816	0.05	79
VT TimesSquare Mid Cap Growth (TMDPX)	299,808	1.18	3,538
VT Vantagepoint Discovery	221,517	0.78	1,728
Vanguard Small Cap Index (VSMAX)	50,025	0.05	25
VT Oppenheimer Discovery Fund (ODIYX)	837,471	0.84	7,035
Templeton Inst. Global Equity (TGESX)	-	-	-
Vanguard Total Int'l Stock Index (VTIAX)	317,629	0.11	349
VT Fidelity Diversified Intl (FDIVX)	604,585	0.75	4,534
VT Nuveen Real Estate Secs (FARCX)	135,995	1.02	1,387
Vanguard Target Retirement Income (VTINX)	57,866	0.12	69
Vanguard Target Retirement 2015 (VTXVX)	113,874	0.13	148
Vanguard Target Retirement 2020 (VTWNX)	1,333,954	0.13	1,734
Vanguard Target Retirement 2025 (VTTVX)	1,120,883	0.13	1,457
Vanguard Target Retirement 2030 (VTHR X)	1,311,620	0.14	1,836
Vanguard Target Retirement 2035 (VTTHX)	1,057,349	0.14	1,480
Vanguard Target Retirement 2040 (VFORX)	852,550	0.14	1,194
Vanguard Target Retirement 2045 (VTIVX)	456,676	0.15	685
Vanguard Target Retirement 2050 (VFIFX)	294,392	0.15	442
VT Retirement Income Advantage	119,363	1.68	2,005
401a Plan- 106397	12,288,870	0.35	43,129

**Town of Palm Beach Retirement System DC 401a Fire Share
Fee Analysis
As of June 30, 2020**

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
VT Fidelity Contrafund (FCNTX)	292,105	0.82	2,395
Vantage Trust Plus Fund	658,582	0.79	5,203
VT Invesco Diversified Dividend Fund (LCEYX)	16,003	0.56	90
Neuberger Berman High Yield Fixed Income (NHILX)	7,499	0.70	53
TCW Total Return Bond Fund (TGLMX)	158,199	0.49	775
Templeton Inst. Global Equity (TGESX)	-		-
Vanguard 500 Index Fund (VFIAX)	145,835	0.04	58
Vanguard Mid Cap Index (VIMAX)	117,906	0.05	59
Vanguard Small Cap Index (VSMAX)	7,048	0.05	4
Vanguard Target Retirement 2020 (VTWVX)	13,074	0.13	17
Vanguard Target Retirement 2025 (VTTVX)	59,362	0.13	77
Vanguard Target Retirement 2030 (VTHR)	13,464	0.14	19
Vanguard Target Retirement 2035 (VTTHX)	52,415	0.14	73
Vanguard Target Retirement 2040 (VFORX)	40,135	0.14	56
Vanguard Target Retirement 2045 (VTIVX)	28,494	0.15	43
Vanguard Target Retirement 2050 (VFIFX)	-		-
Vanguard Total Int'l Stock Index (VTIAX)	51,824	0.11	57
Vantage Trust Plus Fund	658,582	0.79	5,203
VT Fidelity Diversified Intl (FDIVX)	84,134	0.75	631
VT Nuveen Real Estate Secs (FARCX)	69,583	1.02	710
VT Oppenheimer Discovery Fund (ODIYX)	501,937	0.84	4,216
VT Parnassus Core Equity (PRBLX)	-		-
VT TimesSquare Mid Cap Growth (TMDPX)	68,138	1.18	804
VT Vantagepoint Discovery	32,011	0.78	250
VT Vantagepoint Equity Income	9,578	0.70	67
VT Vantagepoint Inftn Focused	18,157	0.61	111
VT Victory Sycamore Est Value (VEVYX)	20,061	0.72	144
Vanguard Target Retirement Income (VTINX)	-		-
401a Fire Share-106796	2,465,543	0.65	15,911



Town of Palm Beach Retirement System DC RHS

Fee Analysis

As of June 30, 2020

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
VT II VP Equity Income Fund	66,206	0.90	596
VT Parnassus Core Equity (PRBLX)	42,006	0.87	365
Vanguard 500 Index Fund (VFIAX)	255,620	0.04	102
VT Fidelity Contrafund (FCNTX)	184,856	0.82	1,516
VT TimesSquare Mid Cap Growth (TMDPX)	79,396	1.18	937
Vanguard Small Cap Index (VSMAX)	23,896	0.05	12
Vanguard Total Int'l Stock Index (VTIAX)	4,969	0.11	5
VT Fidelity Diversified Intl (FDIVX)	12,160	0.75	91
VT II VP Discovery Fund	29,999	0.98	294
Vanguard Target Retirement 2015 (VTXVX)	108,865	0.13	142
Vanguard Target Retirement 2020 (VTWNX)	380,203	0.13	494
Vanguard Target Retirement 2025 (VTTVX)	624,122	0.13	811
Vanguard Target Retirement 2030 (VTHRX)	609,961	0.14	854
Vanguard Target Retirement 2035 (VTTHX)	432,559	0.14	606
Vanguard Target Retirement 2040 (VFORX)	157,570	0.14	221
Vanguard Target Retirement 2045 (VTIVX)	168,791	0.15	253
Vanguard Target Retirement 2050 (VFIFX)	72,798	0.15	109
Vanguard Target Retirement Income (VTINX)	118,044	0.12	142
Neuberger Berman High Yield Fixed Income (NHILX)	5,755	0.70	40
TCW Total Return Bond Fund (TGLMX)	34,040	0.49	167
VT II VP Inflation Focused Fund	20,471	0.81	166
Vantagepoint PLUS Fund S3	214,523	0.99	2,124
RHS Current Plan- 803116	3,735,780	0.27	10,183



**Town of Palm Beach Retirement System DC Prior RHS
Fee Analysis
As of June 30, 2020**

	Market Value (\$)	Estimated Annual Fee (%)	Estimated Annual Fee (\$)
VT II VP Equity Income Fund	1,284	0.90	12
VT Parnassus Core Equity (PRBLX)	-		-
Vanguard 500 Index Fund (VFIAX)	78,549	0.04	31
VT Fidelity Contrafund (FCNTX)	9,378	0.82	77
VT Victory Sycamore Est Value (VEVYX)	-		-
VT TimesSquare Mid Cap Growth (TMDPX)	16,207	1.18	191
Vanguard Small Cap Index (VSMAX)	-		-
Vanguard Total Int'l Stock Index (VTIAX)	-		-
VT Fidelity Diversified Intl (FDIVX)	-		-
Vanguard Target Retirement 2015 (VTXVX)	47,930	0.13	62
Vanguard Target Retirement 2020 (VTWNX)	63,145	0.13	82
Vanguard Target Retirement 2025 (VTTVX)	86,991	0.13	113
Vanguard Target Retirement 2030 (VTHRX)	20,156	0.14	28
Vanguard Target Retirement 2035 (VTTHX)	3,565	0.14	5
Vanguard Target Retirement 2040 (VFORX)	1,205	0.14	2
Vanguard Target Retirement 2045 (VTIVX)	4,020	0.15	6
Vanguard Target Retirement 2050 (VFIFX)	-		-
Vanguard Target Retirement Income (VTINX)	70,448	0.12	85
TCW Total Return Bond Fund (TGLMX)	8,543	0.49	42
Neuberger Berman High Yeild Fixed Income (NHILX)	-		-
VT II VP Inflation Focused Fund	23,099	0.81	187
Vantagepoint PLUS Fund S3	53,400	0.99	529
RHS Old Plan	487,921	0.30	1,452



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Vanguard Target Retirement Inv
Target Date Fund Universe Ranges
As of June 30, 2020

Asset Class	2060+	2055	2050	2045	2040	2035	2030	2025	2020	2015	Retirement
Equity Range											
Maximum	100%	100%	100%	95%	95%	90%	85%	75%	65%	55%	45%
Minimum	50%	50%	50%	45%	45%	40%	35%	25%	15%	10%	5%
Fixed Income Range											
Maximum	20%	20%	30%	35%	40%	50%	55%	65%	70%	75%	85%
Minimum	0%	0%	0%	5%	5%	10%	15%	20%	25%	35%	45%
Cash Range											
Maximum	20%	20%	30%	30%	30%	30%	30%	30%	35%	35%	35%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other Range											
Maximum	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Minimum	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Target Date Universe	61	54	55	52	54	54	51	56	54	37	39

Morningstar Definitions:

1. Cash - The percentage of the fund's assets in cash. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
2. Other - The percentage of the fund's assets in other instruments. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
3. Target Date Universe - Based on the number of unique glide paths in the Morningstar Target Date Universe. Only one share class is selected to represent the fund manager.



Vanguard Target Retirement Inv
Target Date Fund Asset Allocation
As of June 30, 2020

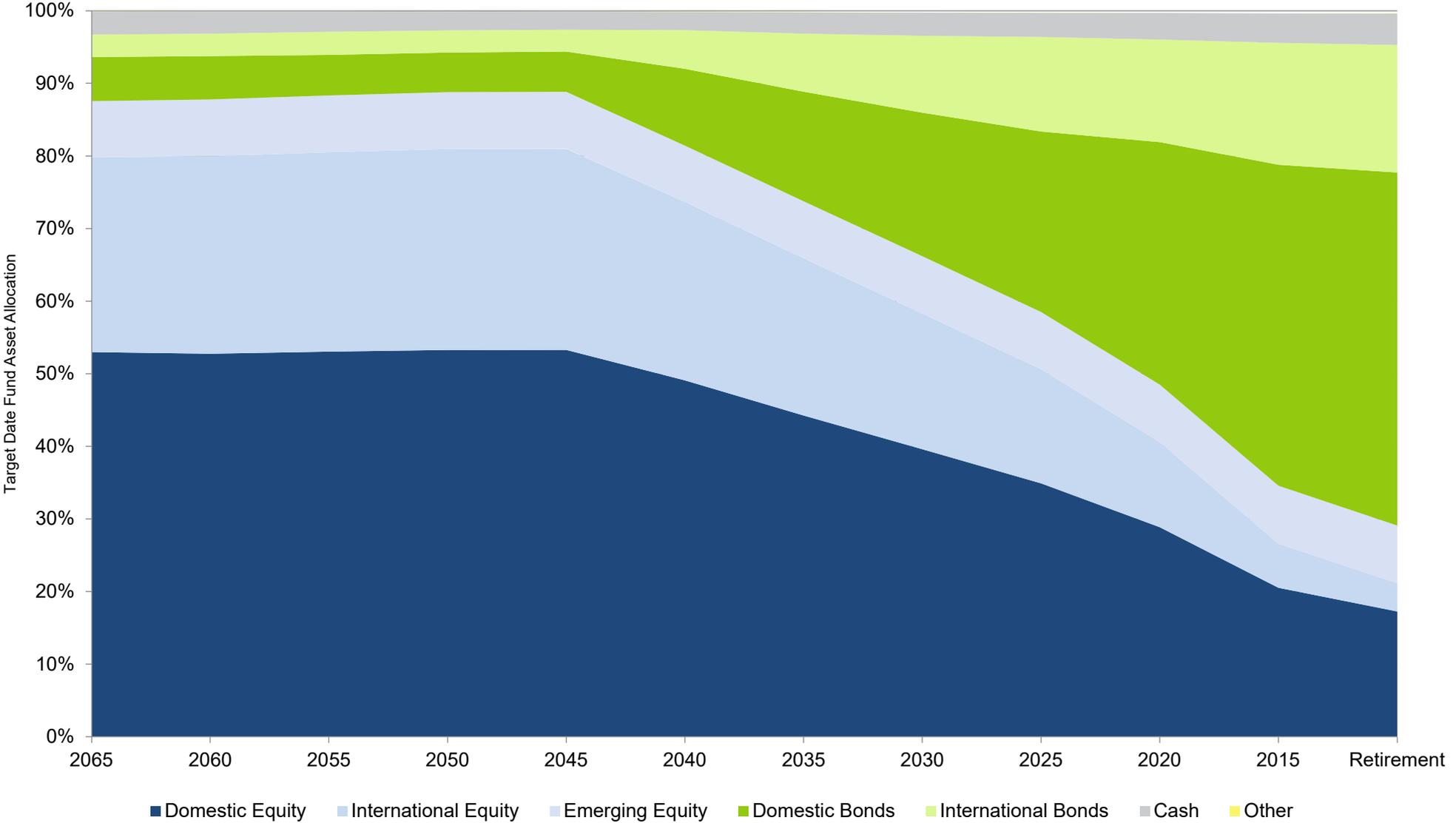
Asset Class	2065	2060	2055	2050	2045	2040	2035	2030	2025	2020	2015	Retirement
Total Equity	88%	88%	88%	89%	89%	81%	74%	66%	59%	49%	35%	29%
Domestic Equity	53%	53%	53%	53%	53%	49%	44%	40%	35%	29%	20%	17%
International Equity	27%	27%	27%	28%	28%	25%	22%	19%	16%	12%	6%	4%
Emerging Equity	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Total Fixed Income	9%	9%	9%	9%	9%	16%	23%	30%	38%	48%	61%	66%
Domestic Bonds	6%	6%	6%	5%	6%	11%	15%	20%	25%	33%	44%	49%
International Bonds	3%	3%	3%	3%	3%	5%	8%	11%	13%	14%	17%	18%
Cash	3%	4%	4%	4%								
Other	0%											
Total	100%											

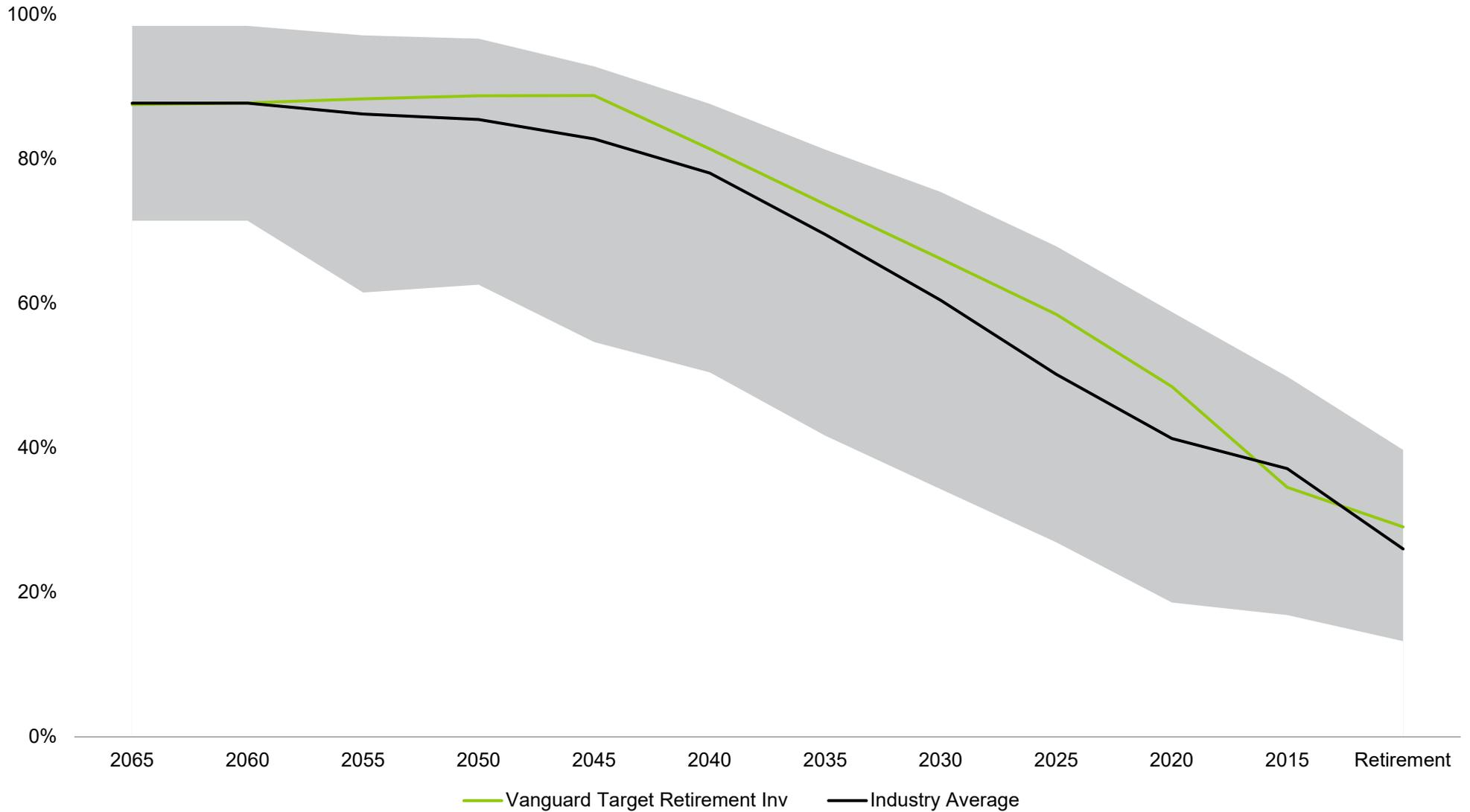
Terminal Equity Date:	7 years after Retirement
Active/Passive/Blend Allocation:	Passive

Morningstar Definitions:

1. Cash - The percentage of the fund's assets in cash. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.
2. Other - The percentage of the fund's assets in other instruments. This figure is calculated separately for the short and long positions of the portfolio, and the sum of the asset allocation of each will not necessarily equal 100%.







1. Industry Range (Gray Bar) - Represents the equity allocation range of the Target Date Funds in the universe.

2. Industry Average - The average equity allocation of the investments included in the universe.



Safe harbor: something (as a statutory or regulatory provision) that provides protection (as from a penalty or liability).¹

Fiduciary Safe Harbor Examples:

1. Investment options
2. Fund mapping
3. Qualified Default Investment Alternatives (QDIA)
4. Automatic small balance distributions
5. Retirement income

The DOL recently unveiled new safe harbor protections for electronic disclosures that will take effect July 26, 2020. Under the new rule, plan sponsors will be allowed to make better use of modern technology in ways that are more efficient and reduce plan costs to the benefit of plan participants.² Plan sponsors are not required to adopt these provisions, and while technically only applicable to ERISA plans, non-ERISA plans can choose to adopt them as well.

According to the Employee Benefits Security Administration (EBSA), it is anticipated that over 10 years the new safe harbor protections will save plans approximately \$3.2 billion net, annualized to \$349 million per year.²

¹ Definition sourced from the Merriam-Webster dictionary

² Based on excerpts from the Default Electronic Disclosure by Employee Pension Benefit Plans Under ERISA available at www.federalregister.gov/d/2020-10951



A Qualified Default Investment Alternative (QDIA) is a default investment option chosen by plan fiduciaries for participants who fail to make an investment election for their account balances. The intent is to ensure that an investment qualifying as a QDIA is appropriate as a single investment capable of meeting a participant's long-term retirement savings needs. The DOL's final regulation outlines all eligible QDIA options including the three main types as summarized below:¹

- A product with a mix of investments that consider the individual's age or retirement date (an example of such a product could be a life-cycle or target retirement date fund);
- An investment service that allocates contributions among existing plan options to provide an asset mix that consider the individual's age or retirement date (an example of such a service could be managed accounts);
- A product with a mix of investments that consider the characteristics of the group of employees, rather than everyone (an example of such a product could be a balanced fund);

In evaluating a particular investment for consideration as a QDIA, the fiduciary must engage in an objective, thorough, and analytical process that considers all relevant facts and circumstances and then act accordingly. While QDIA regulation is specifically for ERISA plans; it is considered an industry best practice for all plans.²

¹ Based on excerpts from Regulation Relating to Qualified Default Investment Alternatives in Participant-Directed Individual Account Plans DOL Fact Sheet April 2008

² CFR 2550.404a-1



Due to the significant growth in Target Date Fund (TDF) usage, the DOL issued general guidance to assist plan fiduciaries in reviewing TDFs including the steps below:

- Establish a process for comparing and selecting TDFs that considers plan demographics and complies with the Investment Policy Statement
- Establish a process for periodic review
- Understand the fund's investments – the allocation in different asset classes (stocks, bonds, cash), individual investments, and how these will change over time
- Review the fund's fees and investment expenses
- Develop effective participant communications
- Take advantage of available sources of information to evaluate the fund recommendations you received regarding the selection process
- Document the process

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On June 3, 2020, the DOL published an Information Letter permitting plan sponsors to utilize private equity in certain pre-diversified investment options like target date funds, risk-based funds and balanced funds as long as the investments include sufficient liquidity with readily available market values to ensure participants can take distributions and make exchanges among the plan's investment line-up.

The letter also states that plan fiduciaries should consider the following when evaluating an investment option with a private equity component:

- Does adding the investment offer participants the opportunity to invest among more diversified investment options within an appropriate range of expected returns, fees, and risks over a multi-year period?
- Is the investment overseen by investment professionals with the capabilities, experience and stability to manage an asset allocation fund that includes private equity?
- Is the allocation in private equity designed to address the unique characteristics associated with such an investment, including cost, complexity, disclosures, liquidity and valuation?
- Do the fund characteristics align with the plan's features and participant profile?
- Have participants been furnished adequate information regarding the characteristics and risks of the fund to be able to make an informed investment decision?

It is important to note the letter does not authorize adding private equity as a standalone option, as these types of investments present distinct legal and operational issues.



Quarterly	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
Follow procedures, including documentation of all meetings and decisions	✓	✓		
Review of plan investments and compliance with investment policy statement	✓	✓		
Fiduciary education	✓	✓		
Periodically				
Investment policy statement review	✓			
Review QDIA selection				
Plan fee analysis	✓			
Plan recordkeeping & administration services review				
Employee education review		✓		
Review of ancillary products, if applicable (self-directed brokerage, managed accounts, etc.)				
Other Projects				
Implemented share class conversions and other fund lineup changes		✓		
Performed searches for Large Cap Growth and Large Cap Value funds		✓		



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

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

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

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

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Large Cap Value Equity Manager Analysis
June 30, 2020

Town of Palm Beach Retirement System Defined Contribution Plans



Purpose for this Manager Evaluation Report

The purpose of this search is to evaluate options for the replacement of Vantagepoint Equity Income.

Investment Options for this Manager Evaluation Report

Firm Name	Strategy Name	Vehicle	Management Fee	Investment Minimum
Brandywine Global Investment Management, LLC	Brandywine Dynamic Large Cap Value IS (LMBGX)*	MF	0.65%	\$1,000,000
Dodge & Cox	Dodge & Cox Stock (DODGX)	MF	0.52%	\$2,500
Massachusetts Financial Services Company	MFS Value R6 (MEIKX)	MF	0.47%	None
Vanguard Group, Inc. Subadvisors: Wellington Management, Vanguard Group	Vanguard Equity Income Admiral (VEIRX)	MF	0.18%	None
ICMA-RC Subadvisors: T. Rowe Price, JP Morgan, Yacktman Asset Mgmt, State Street Global Advisors, Wellington Mgmt	Vantagepoint Equity Income R5	Collective Trust	0.70%	None

*Brandywine Dynamic LCV separate account will be used as a proxy for Brandywine Dynamic LCV IS (LMBGX) due to its longer performance/data history. The composite net return stream will be used.

Definition and Characteristics

US Large Cap Value is typically defined as US-based companies with a market capitalization over \$5 billion that have lower price-to-book and price-to-earnings ratios and lower forecasted growth rates. The primary benchmark for strategies in this space is the Russell 1000 Value Index. The index contains those stocks with lower than average price-to-book and price-to-earnings ratios and lower 3-yr forecasted growth rates within the Russell 1000 on Russell's annual reconstitution day, typically calculated at the end of May. The Financials sector dominates the index, accounting for over 25% of the weight by market cap. The Energy, Healthcare, Industrials, Consumer Staples, and Technology sectors also all have meaningful weights. The index contains approximately 700 individual names, but the largest companies by market cap dominate the index. The weighted average market cap of the index typically exceeds \$100 billion, while the median market cap is less than \$10 billion. The five largest names account for almost 15% of the index.

Role within a Portfolio

The primary role of a US Large Cap Value strategy is to provide diversified exposure to the US stock market with a style tilt toward those names with attractive valuations. The value style factor has historically shown to perform well over long periods. Stocks in the value space often demonstrate lower price volatility and higher dividend rates. Active managers in the space typically look for mispricing in a stock's valuation relative to its future business prospects. Within the portfolio, a Large Cap Value strategy is usually paired with a Large Cap Growth strategy to provide additional diversification across different economic environments.

Benchmark and Peer Group

This US Large Cap Value search report will use the following benchmark and peer group:

Index – Russell 1000 Value: Consists of the stocks in the Russell 1000 Index with lower than average forecasted growth rates and lower price-to-book and price-to-earnings ratios.

Morningstar Category - Large Value: Large Value portfolios invest primarily in big US companies that are less expensive or growing more slowly than other Large Cap stocks. Stocks in the top 70% of the capitalization of the US equity market are defined as Large Cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

Investment Option Comparison

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm
Firm Information				
Year Founded	1/1/1986	1/1/1930	1/1/1924	1/1/1975
US Headquarters Location	Philadelphia, PA	San Francisco, CA	Boston, MA	Malvern, PA
Number of Major Global Offices	6	2	9	12
Year Began Managing Ext. Funds	1/1/1986	1/1/1930	1/1/1924	1/1/1975
Firm AUM (\$ M)	74,817	326,700	435,000	4,000,000
Ownership Type	Subsidiary	Independent	Subsidiary	Mutual Company
Largest Owner (Name)	Franklin Templeton	Not Disclosed	SunLife Financial	Not Disclosed
Employee Ownership (%)	0	100	6	0
Qualify as Emerging Manager?	No	No	No	No

Strategy Information

Inception Date	1/1/2007	1/4/1965	2/1/1989	3/31/1988
Open/Closed	Open	Open	Open	Open
Primary Benchmark	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value	Russell 1000 Value
Secondary Benchmark	S&P 500	S&P 500	None	FTSE High Dividend Yield
Peer Universe	US Large Cap Value	US Large Cap Value	US Large Cap Value	US Large Cap Value
Outperformance Estimate (%)	2-4	1-3	1-2	1-2
Tracking Error Estimate (%)	4-6	3-5	2-4	2-4
Strategy AUM (\$ M)	641	102,100	78,114	39,200
Strategy AUM as % Firm Assets	1	31	17	1
Estimated Capacity (\$ M)	25,000	120,000	Approaching Capacity	40,000
Investment Approach - Primary	Top-Down	Bottom-up	Bottom-up	Bottom-up
Investment Approach - Secondary	Quantitative	Fundamental	Fundamental	Hybrid

The source of data and figures provided is generally the respective managers. Certain data represents AndCo's view and could differ from the manager's interpretation. The most current AUM of each strategy may therefore differ from what is currently stated.



	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm
Team Information				
Decision Making Structure	PM-Led	Committee	PM-Led	Multi-Manager
Number of Decision Makers	3	8	3	3
Names of Decision Makers	M. Fleisher, H. Otto, S. Tonkovich	8 Person Committee Team	S. Gorham, N. Chitkara, K. Cannan	M. Reckmeyer, J. Stetler, B. Guo
Date Began Managing Strategy	2007, 2007, 2007	1992-2019	2002, 2006, 2019	2007, 2003, 2016
Date Began with Firm	1997, 1988, 1989	1983-2009	1989, 1997, 2013	1994, 1982, 2007
Number of Products Managed by Team	9	5	3	18
Number of Investment Analysts	5	27	64	70
Investment Analyst Team Structure	Generalists	Sector/Industry Specialists	Sector/Industry Specialists	Combination

Portfolio Construction Information

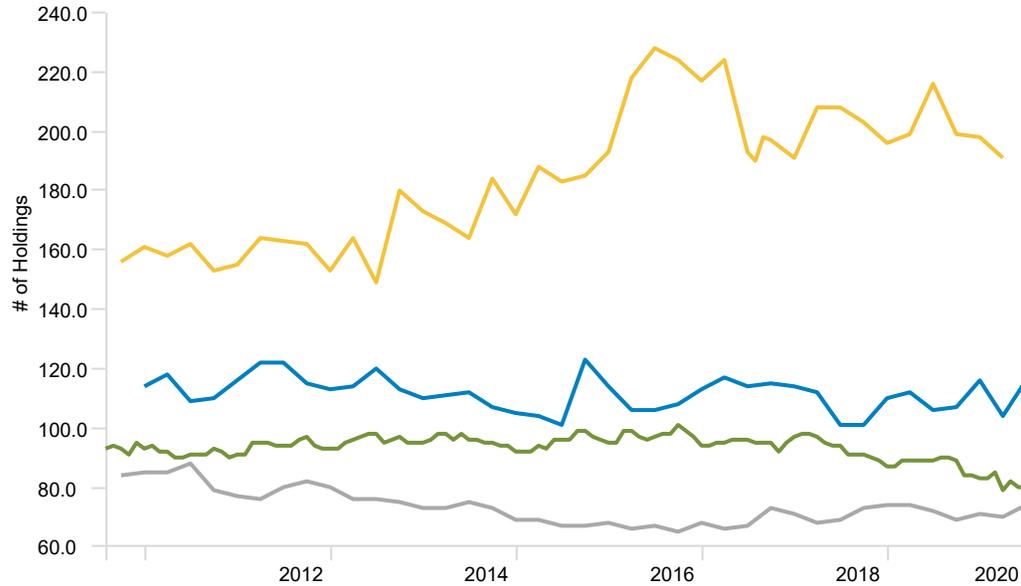
	Value	Value	Value	Value
Broad Style Category	Value	Value	Value	Value
Style Bias	Relative Value	Traditional Value	Relative Value	Dividend-Oriented
Sector Constraint Type	Benchmark Relative	None	None	Benchmark Relative
Sector Constraints (%)	+/-15	None	None	+/-10
Typical Sector/s Overweight	Consumer Discretionary	Tech, Communications	Industrials	Consumer Staples
Typical Sector/s Underweight	Real Estate, Utilities	Utilities, Real Estate	Energy, Real Estate	Financials
Typical Number of Holdings	75-150	60-90	80-100	160-220
Average Full Position Size (%)	1-3	1-3	1	2-3
Maximum Position Size (%)	5	5	5, 1.5x	5
Annual Typical Asset Turnover (%)	80-100	30-45	20-40	20-40
Annual Typical Name Turnover (%)	80-100	15-20	10-20	20-40
Maximum Cash Allocation (%)	5	10	2	None
Maximum Foreign Exposure (%)	0	20	10	25

The source of data and figures provided is generally the respective managers. Certain data represents AndCo's view and could differ from the manager's interpretation. The most current AUM of each strategy may therefore differ from what is currently stated.

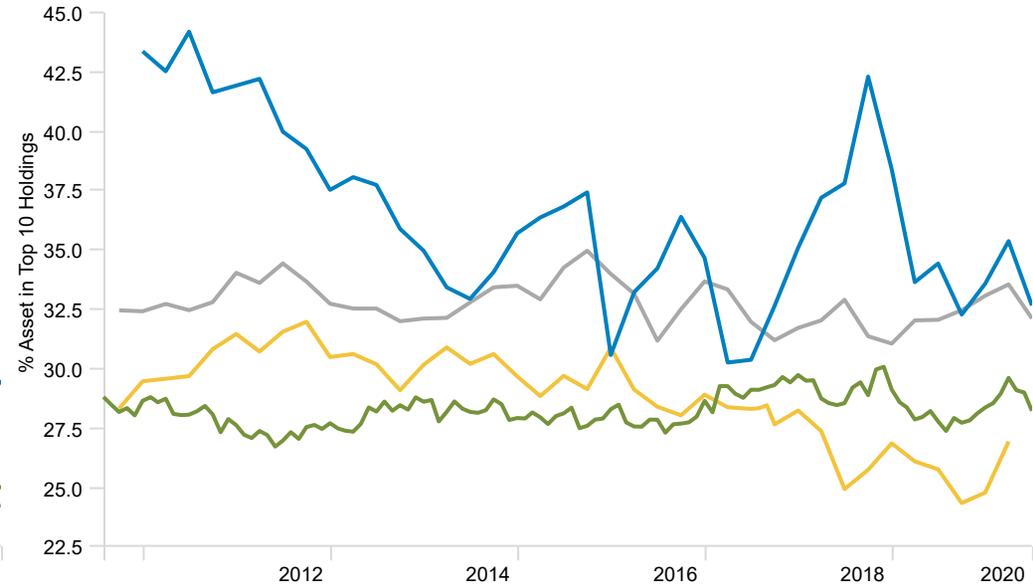


	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
COMPOSITION						
# of Holdings	116	74	80	191	1	838
% Asset in Top 10 Holdings	32.66	32.11	28.22	26.92	100.00	16.91
Asset Alloc Cash %	2.29	0.59	1.76	3.62	3.90	0.00
Asset Alloc Equity %	97.71	99.41	98.24	96.38	95.81	100.00
Asset Alloc Bond %	0.00	0.00	0.00	0.00	0.00	0.00
Asset Alloc Other %	0.00	0.00	0.00	0.00	0.36	0.00
CHARACTERISTICS						
Average Market Cap (mil)	77,205.05	53,025.93	76,052.97	79,281.25	51,288.01	55,156.46
P/E Ratio (TTM)	15.62	13.12	18.44	13.76	16.05	19.23
P/B Ratio (TTM)	3.27	1.41	2.37	1.94	1.83	1.96
LT Earn Growth	7.16	7.35	6.20	7.37	7.80	7.25
Dividend Yield	2.93	3.27	2.69	4.15	3.37	2.92
ROE % (TTM)	37.03	10.32	21.92	23.96	18.19	14.69
GICS SECTORS %						
Energy %	1.44	9.40	2.79	4.90	4.62	4.83
Materials %	2.85	1.29	3.65	2.39	3.98	4.61
Industrials %	21.61	8.81	17.46	10.41	11.48	12.25
Consumer Discretionary %	14.70	2.93	1.06	4.85	6.63	7.01
Consumer Staples %	5.88	0.86	7.28	13.51	9.30	8.33
Healthcare %	12.39	17.84	19.96	19.14	14.05	14.42
Financials %	13.84	25.72	25.14	16.24	19.82	18.42
Information Technology %	21.21	19.93	11.02	11.73	13.50	9.80
Communication Services %	2.82	13.22	3.50	6.97	6.97	9.43
Utilities %	3.27	0.00	7.79	8.36	6.02	6.15
Real Estate %	0.00	0.00	0.35	1.51	3.64	4.77
MARKET CAPITALIZATION						
Market Cap Giant %	33.28	25.41	33.40	50.31	27.96	32.18
Market Cap Large %	47.56	48.94	55.97	35.66	38.64	38.85
Market Cap Mid %	16.15	20.69	8.87	8.19	23.83	25.57
Market Cap Small %	0.72	0.73	0.00	0.95	2.73	2.72
Market Cap Micro %	0.00	0.00	0.00	0.05	0.01	0.00

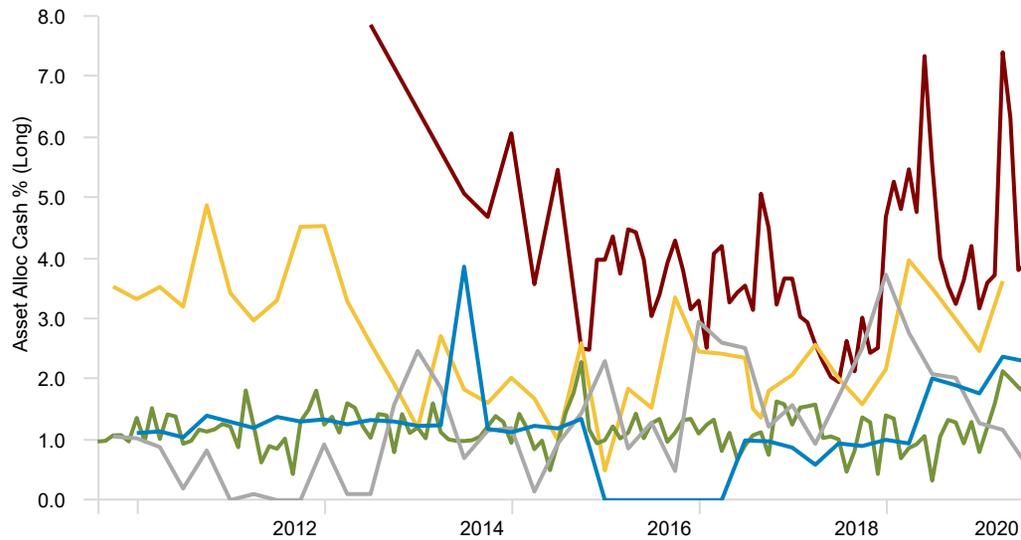
Historical Number of Holdings



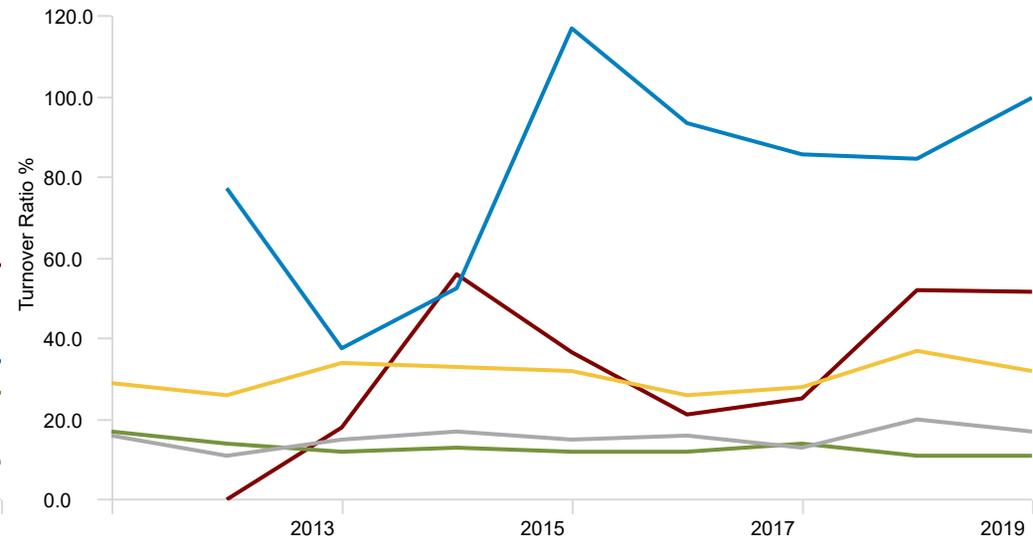
Historical Percentage of Assets in Top 10 Holdings



Historical Cash Allocation



Historical Portfolio Turnover



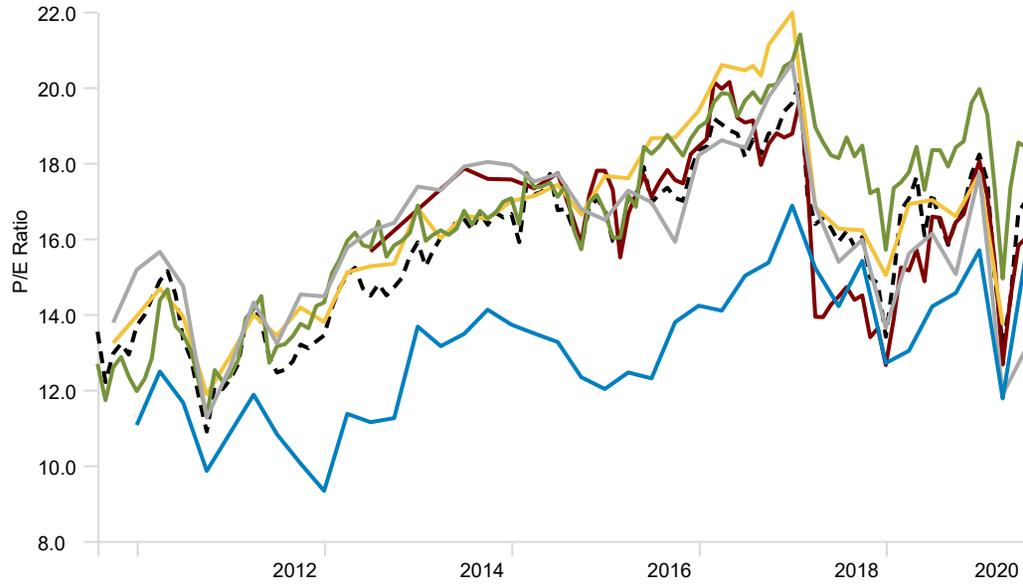
— Brandywine Dynamic Large Cap Value
— Vanguard Equity-Income Adm

— Dodge & Cox Stock
◆ Vantagepoint Equity Income R5

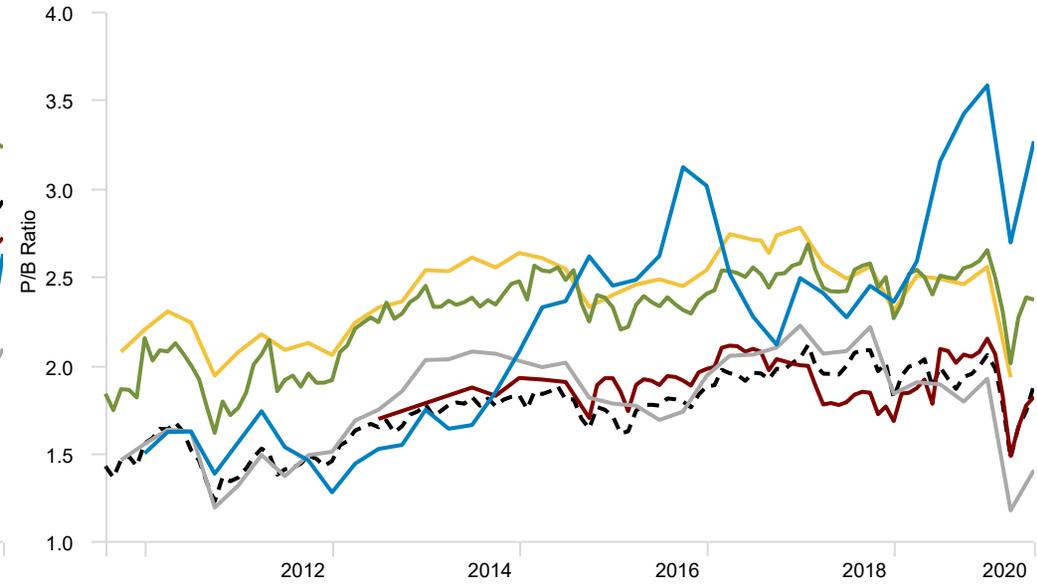
— MFS Value R6



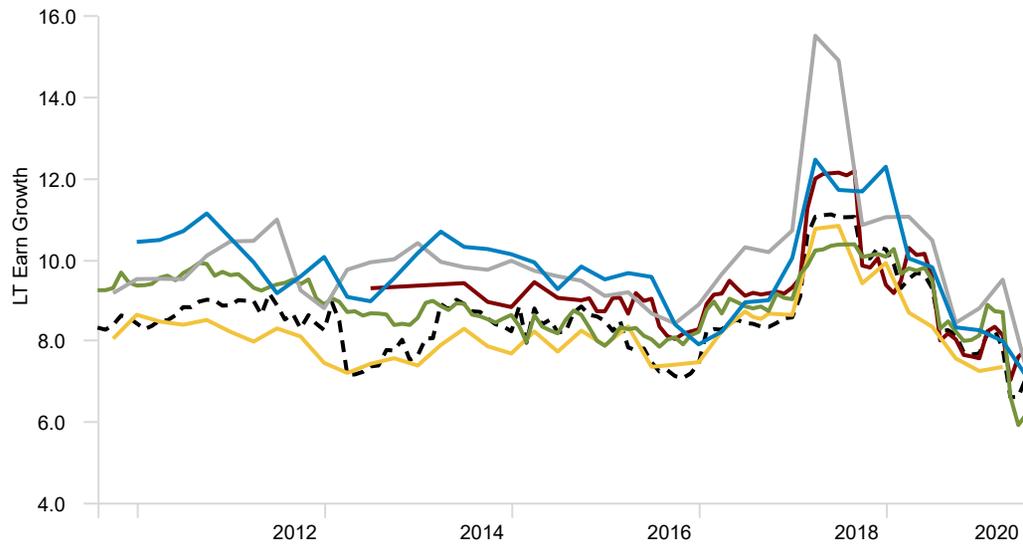
Historical P/E Ratio



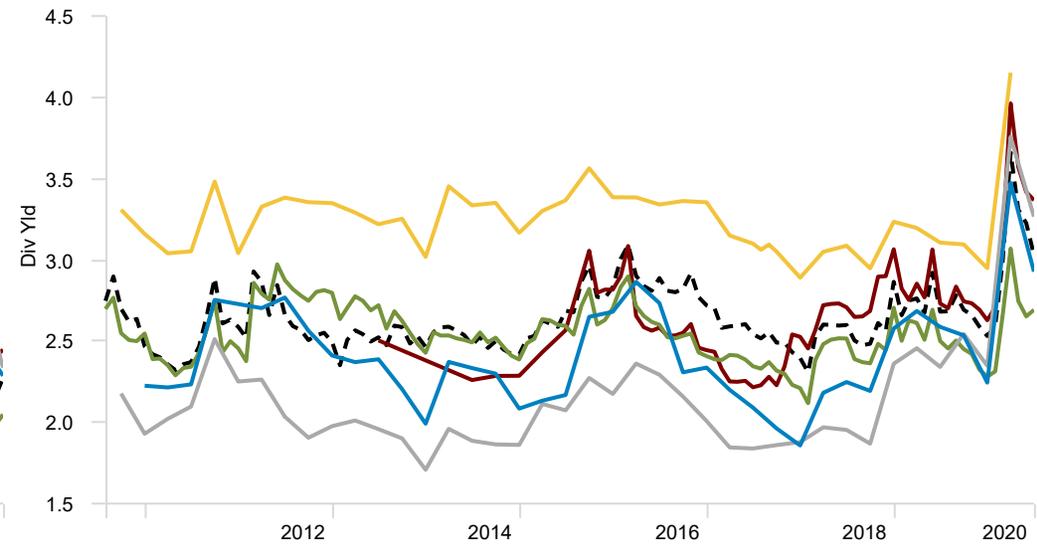
Historical P/B Ratio



Historical Earnings Growth



Historical Dividend Yield



— Brandywine Dynamic Large Cap Value
— Vanguard Equity-Income Adm

— Dodge & Cox Stock
◆ Vantagepoint Equity Income R5

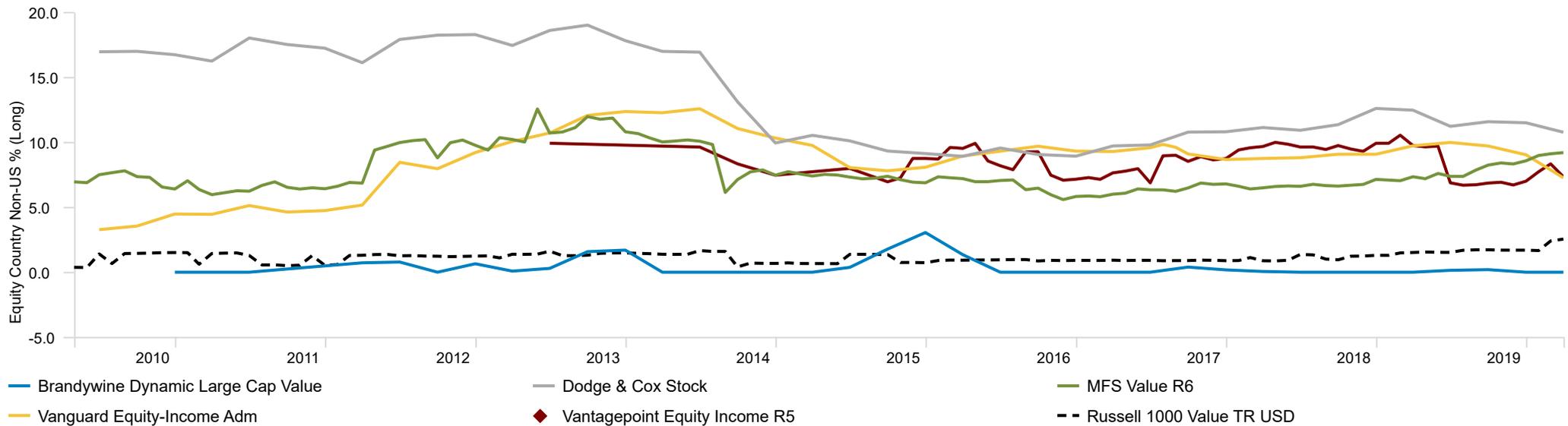
— MFS Value R6
- - Russell 1000 Value TR USD



Current Portfolio Region Allocation

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Equity Country United States %	100.00	89.09	90.58	92.45	92.02	97.45
Equity Region North America %	100.00	89.09	91.80	93.40	92.99	97.45
Equity Region Latin America %	0.00	0.00	0.00	0.00	0.01	0.03
Equity Region United Kingdom %	0.00	3.94	2.12	1.68	1.13	1.21
Equity Region Europe dev %	0.00	6.98	5.34	4.66	3.80	1.14
Equity Region Europe emrg %	0.00	0.00	0.00	0.00	0.00	0.00
Equity Region Japan %	0.00	0.00	0.00	0.00	0.00	0.00
Equity Region Australasia %	0.00	0.00	0.00	0.00	0.00	0.00
Equity Region Asia dev %	0.00	0.00	0.00	0.27	1.97	0.00
Equity Region Asia emrg %	0.00	0.00	0.74	0.00	0.10	0.17
Equity Region Africa/Middle East %	0.00	0.00	0.00	0.00	0.00	0.00
Equity Region Developed %	100.00	100.00	99.26	100.00	99.90	99.83
Equity Region Emerging %	0.00	0.00	0.74	0.00	0.10	0.17

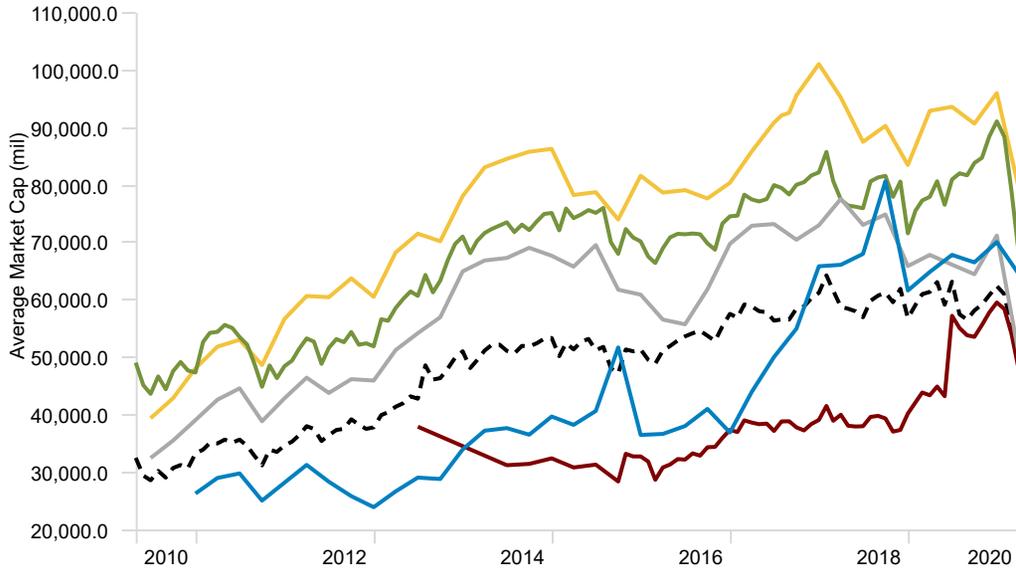
Historical Non-US Portfolio Exposure



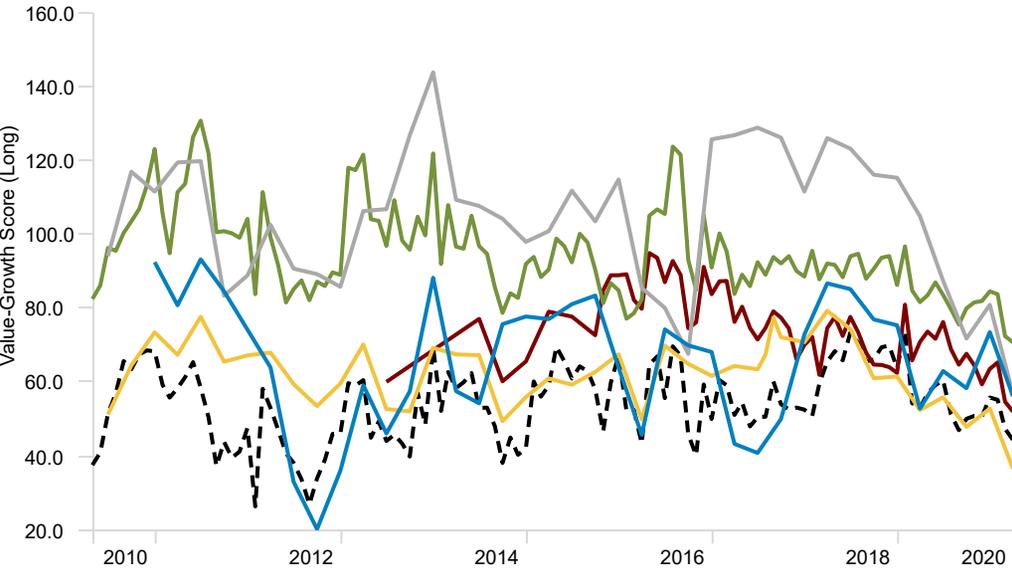
Style Allocation

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Equity Style Large Value %	44.09	52.56	47.28	55.68	39.95	46.40
Equity Style Large Core %	32.75	13.57	39.84	27.07	24.61	26.20
Equity Style Large Growth %	0.00	10.24	3.66	3.22	4.17	1.42
Equity Style Mid Value %	14.30	12.18	1.98	7.04	11.99	11.59
Equity Style Mid Core %	4.38	4.83	3.81	0.97	6.91	8.53
Equity Style Mid Growth %	1.21	1.40	0.12	0.13	0.49	2.57
Equity Style Small Value %	0.76	1.42	0.00	0.72	2.09	1.96
Equity Style Small Core %	0.14	0.54	0.00	0.28	0.86	0.72
Equity Style Small Growth %	0.00	0.00	0.00	0.00	0.14	0.31

Historical Average Market Capitalization



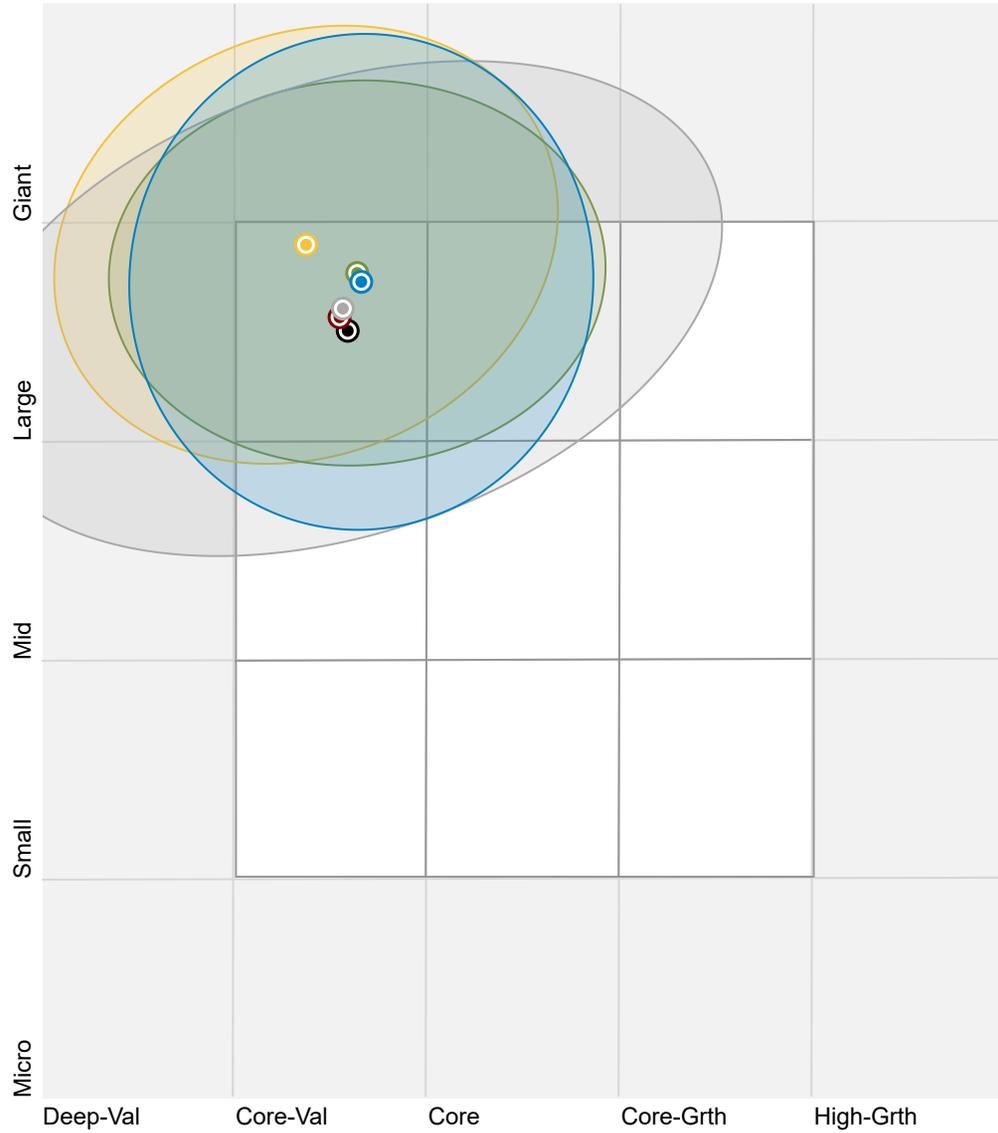
Historical Value - Growth Score



— Brandywine Dynamic Large Cap Value
 — Dodge & Cox Stock
 — MFS Value R6
— Vanguard Equity-Income Adm
 ◆ Vantagepoint Equity Income R5
 - - Russell 1000 Value TR USD

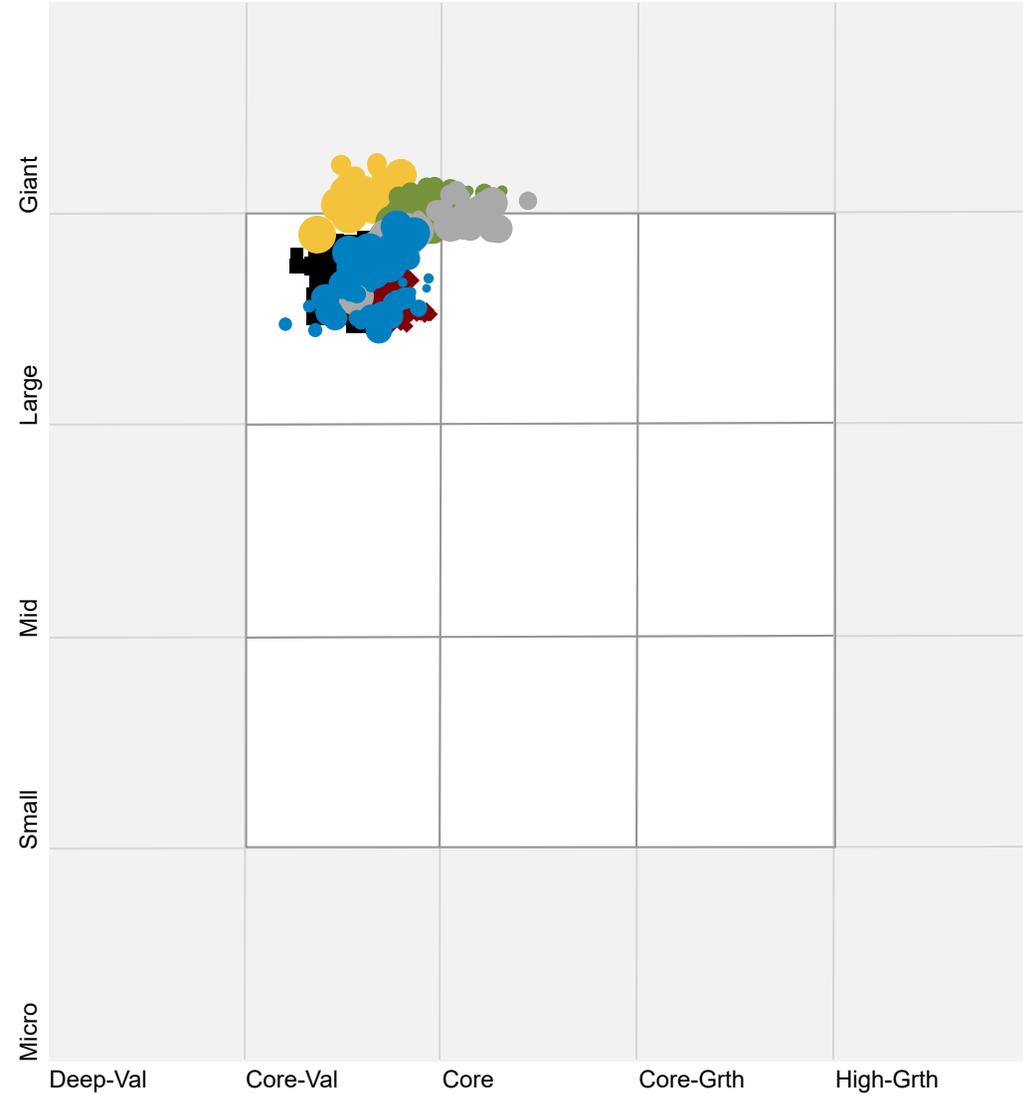


Current Portfolio Holdings-Style Map



Historical Holdings-Based Style Trail

Time Period: 7/31/2010 to 6/30/2020



● Brandywine Dynamic Large Cap Value

● Dodge & Cox Stock

● MFS Value R6

● Vanguard Equity-Income Adm

◆ Vantagepoint Equity Income R5

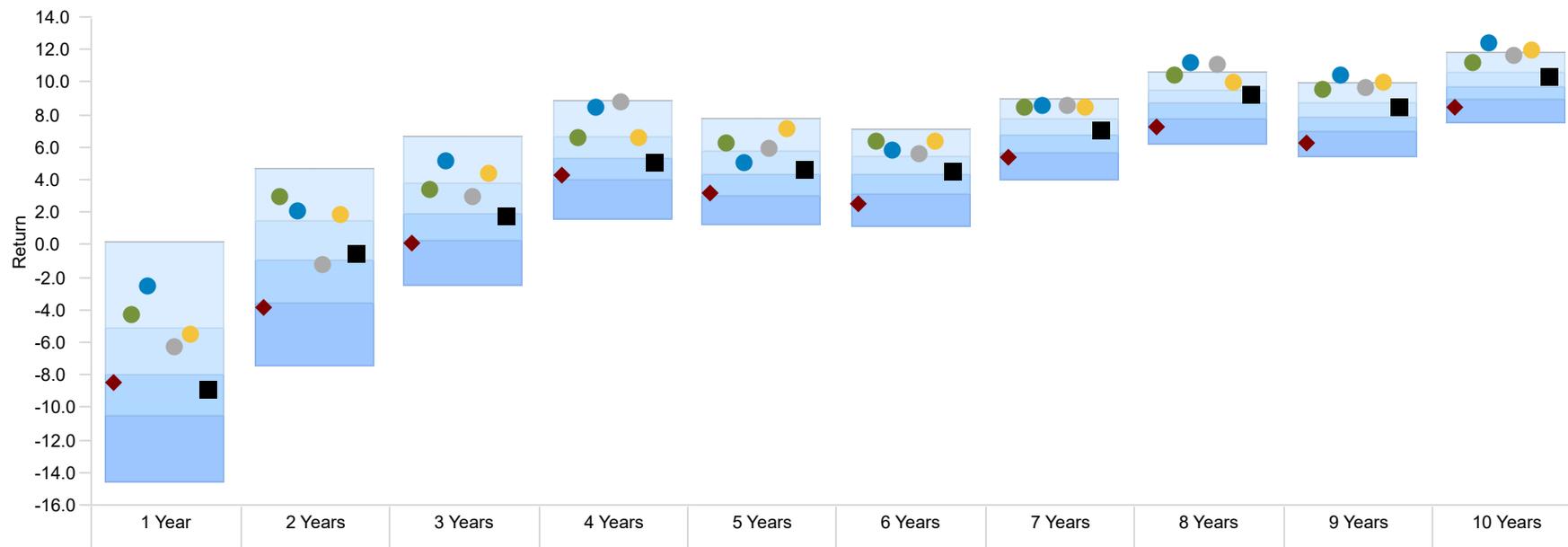
■ Russell 1000 Value TR USD



Quantitative Review



Peer Group (5-95%): Funds - U.S. - Large Value



	1 Year	Rank	2 Years	Rank	3 Years	Rank	4 Years	Rank	5 Years	Rank	6 Years	Rank	7 Years	Rank	8 Years	Rank	9 Years	Rank	10 Years	Rank
Brandywine Dynamic Large Cap Value	-2.53	12	2.12	20	5.25	13	8.49	7	5.10	35	5.82	20	8.63	9	11.28	2	10.51	2	12.46	2
Dodge & Cox Stock	-6.21	33	-1.17	53	2.99	34	8.88	5	5.93	23	5.70	22	8.62	9	11.16	2	9.75	8	11.71	6
MFS Value R6	-4.28	18	3.04	12	3.40	29	6.60	26	6.27	19	6.38	11	8.51	11	10.53	6	9.58	10	11.21	15
Vanguard Equity-Income Adm	-5.45	28	1.86	23	4.44	19	6.68	24	7.15	9	6.46	10	8.50	11	10.07	14	9.99	4	12.02	4
Vantagepoint Equity Income R5	-8.48	55	-3.77	77	0.18	76	4.36	68	3.21	71	2.59	84	5.42	80	7.26	86	6.34	87	8.47	84
Russell 1000 Value TR USD	-8.84	59	-0.56	46	1.82	52	5.09	55	4.64	45	4.56	44	7.11	39	9.23	33	8.52	28	10.41	30

● Brandywine Dynamic Large Cap Value

● Dodge & Cox Stock

● MFS Value R6

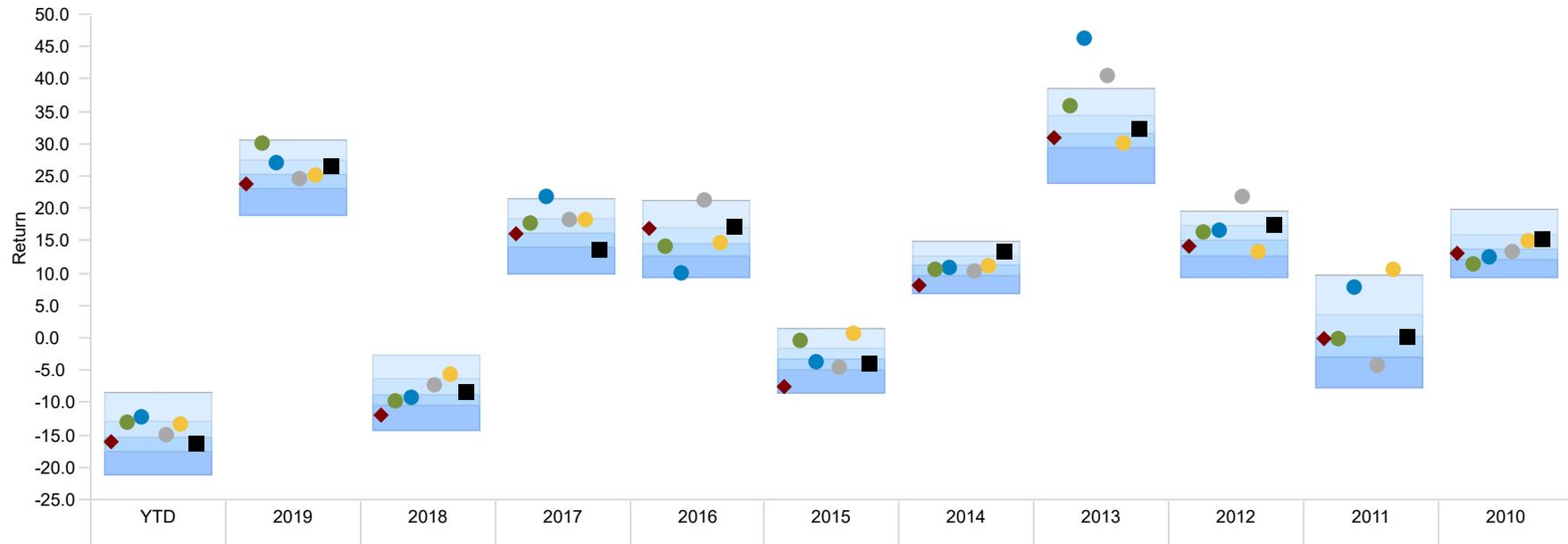
● Vanguard Equity-Income Adm

◆ Vantagepoint Equity Income R5

■ Russell 1000 Value TR USD



Peer Group (5-95%): Funds - U.S. - Large Value



	YTD	Rank	2019	Rank	2018	Rank	2017	Rank	2016	Rank	2015	Rank	2014	Rank	2013	Rank	2012	Rank	2011	Rank	2010	Rank
Brandywine Dynamic Large Cap Value	-12.16	18	27.31	27	-9.07	56	21.95	4	10.12	91	-3.66	55	10.98	54	46.45	1	16.72	31	8.03	8	12.53	69
Dodge & Cox Stock	-14.98	46	24.83	57	-7.07	30	18.33	25	21.28	5	-4.49	68	10.40	63	40.55	3	22.01	3	-4.08	81	13.49	54
MFS Value R6	-12.81	23	30.18	6	-9.78	67	17.86	30	14.25	53	-0.42	14	10.68	59	35.95	14	16.57	33	-0.05	52	11.54	83
Vanguard Equity-Income Adm	-13.31	29	25.35	50	-5.65	20	18.49	24	14.82	46	0.86	7	11.38	46	30.19	67	13.58	66	10.69	4	14.99	34
Vantagepoint Equity Income R5	-15.87	56	23.98	66	-11.71	83	16.21	51	17.02	26	-7.52	92	8.13	88	31.08	58	14.33	58	0.04	51	13.28	57
Russell 1000 Value TR USD	-16.26	60	26.54	33	-8.27	43	13.66	78	17.34	23	-3.83	58	13.45	16	32.53	41	17.51	21	0.39	47	15.51	28

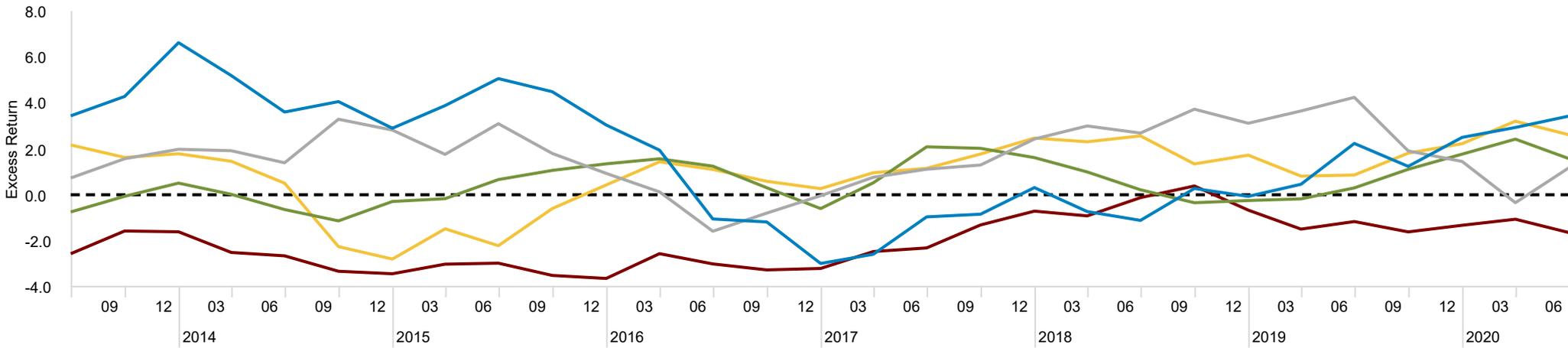
- Brandywine Dynamic Large Cap Value
- Dodge & Cox Stock
- MFS Value R6
- Vanguard Equity-Income Adm
- ◆ Vantagepoint Equity Income R5
- Russell 1000 Value TR USD



Rolling Excess Returns

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Value TR USD

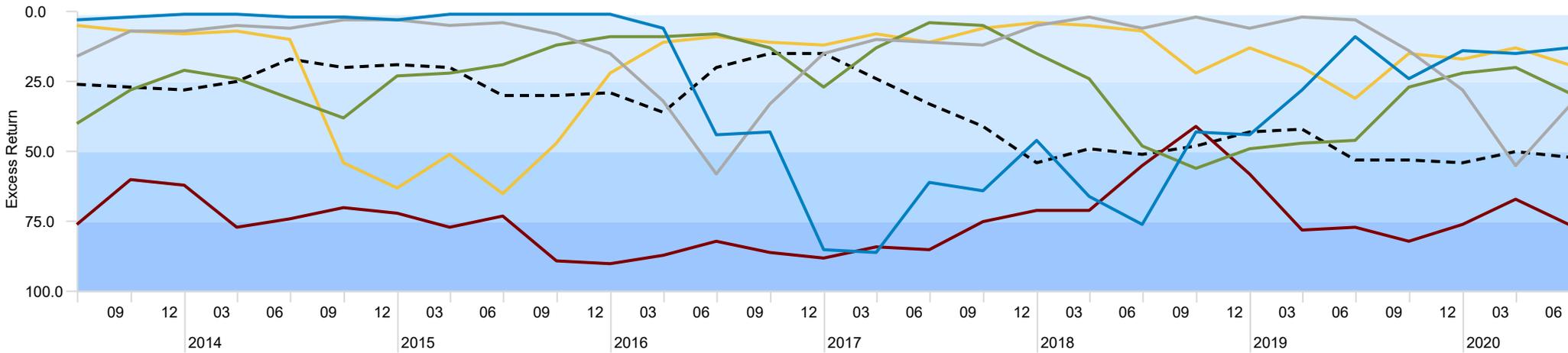


Rolling Excess Return Rankings

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Value TR USD

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



— Brandywine Dynamic Large Cap Value
— Vanguard Equity-Income Adm

— Dodge & Cox Stock
— Vantagepoint Equity Income R5

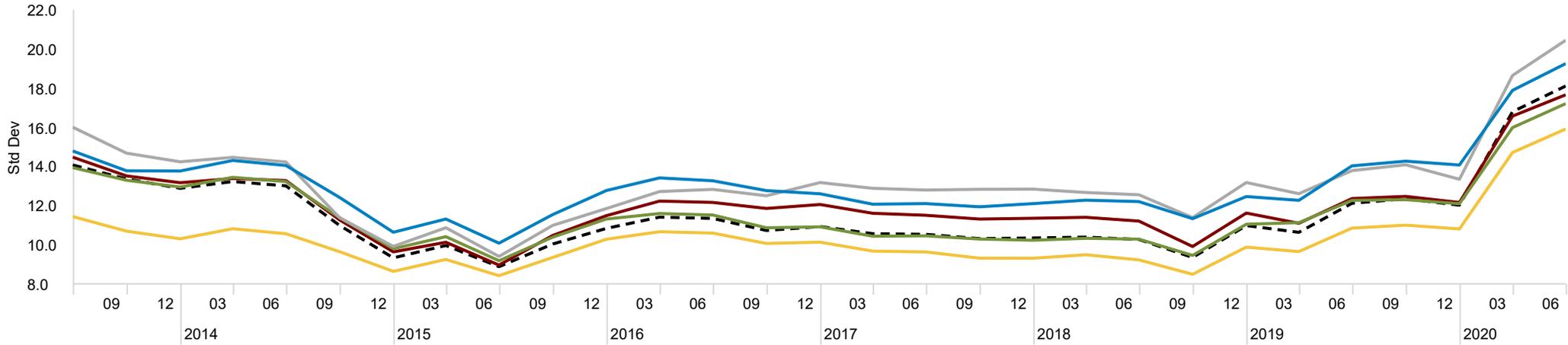
— MFS Value R6
- - Russell 1000 Value TR USD



Rolling Standard Deviation

Time Period: 7/1/2010 to 6/30/2020

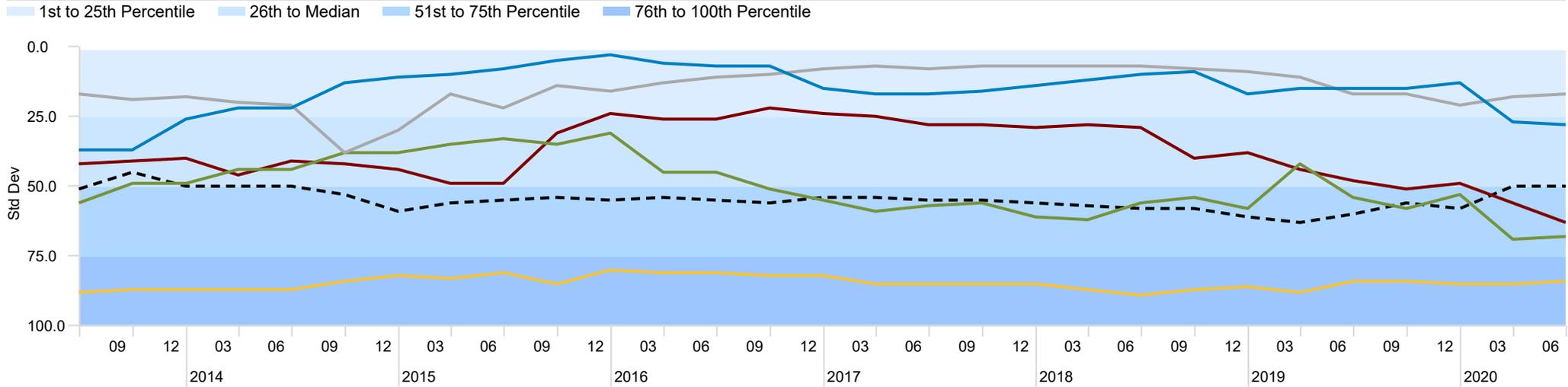
Rolling Window: 3 Years 3 Months shift



Rolling Standard Deviation Rankings

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift



— Brandywine Dynamic Large Cap Value
— Vanguard Equity-Income Adm

— Dodge & Cox Stock
— Vantagepoint Equity Income R5

— MFS Value R6
- - Russell 1000 Value TR USD



Correlation Matrix

Time Period: 7/1/2010 to 6/30/2020

	1	2	3	4	5	6
1 Brandywine Dynamic Large Cap Value	1.00					
2 Dodge & Cox Stock	0.96	1.00				
3 MFS Value R6	0.96	0.97	1.00			
4 Vanguard Equity-Income Adm	0.95	0.94	0.98	1.00		
5 Vantagepoint Equity Income R5	0.97	0.98	0.98	0.97	1.00	
6 Russell 1000 Value TR USD	0.97	0.97	0.99	0.98	0.99	1.00

Correlation Matrix (Excess Returns vs. Russell 1000 Value TR USD)

Time Period: 7/1/2010 to 6/30/2020

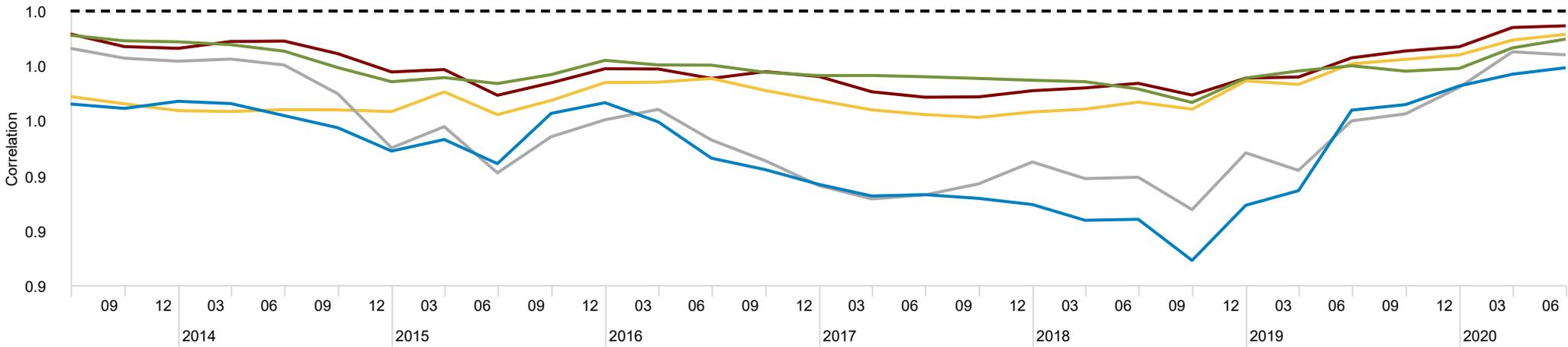
Calculation Benchmark: Russell 1000 Value TR USD

		1	2	3	4	5	6
1 Brandywine Dynamic Large Cap Value	Russell 1000 Value TR USD	1.00					
2 Dodge & Cox Stock	Russell 1000 Value TR USD	0.35	1.00				
3 MFS Value R6	Russell 1000 Value TR USD	0.23	0.02	1.00			
4 Vanguard Equity-Income Adm	Russell 1000 Value TR USD	-0.10	-0.46	0.36	1.00		
5 Vantagepoint Equity Income R5	Russell 1000 Value TR USD	0.33	0.38	0.16	-0.02	1.00	
6 Russell 1000 Value TR USD	Russell 1000 Value TR USD						1.00

Rolling Correlation

Time Period: 7/1/2010 to 6/30/2020

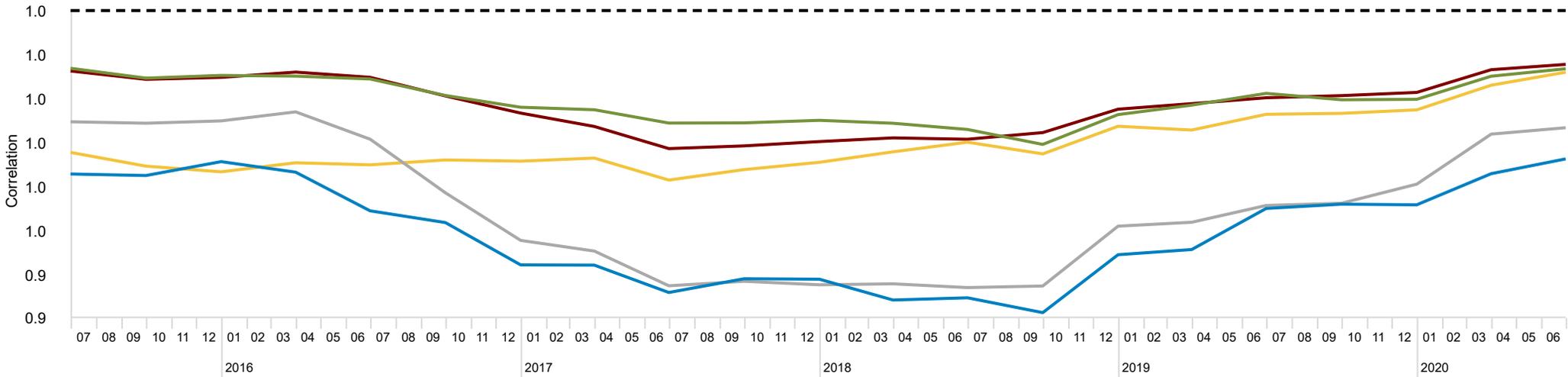
Rolling Window: 3 Years 3 Months shift



Rolling Correlation

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 5 Years 3 Months shift



— Brandywine Dynamic Large Cap Value
— Vanguard Equity-Income Adm

— Dodge & Cox Stock
— Vantagepoint Equity Income R5

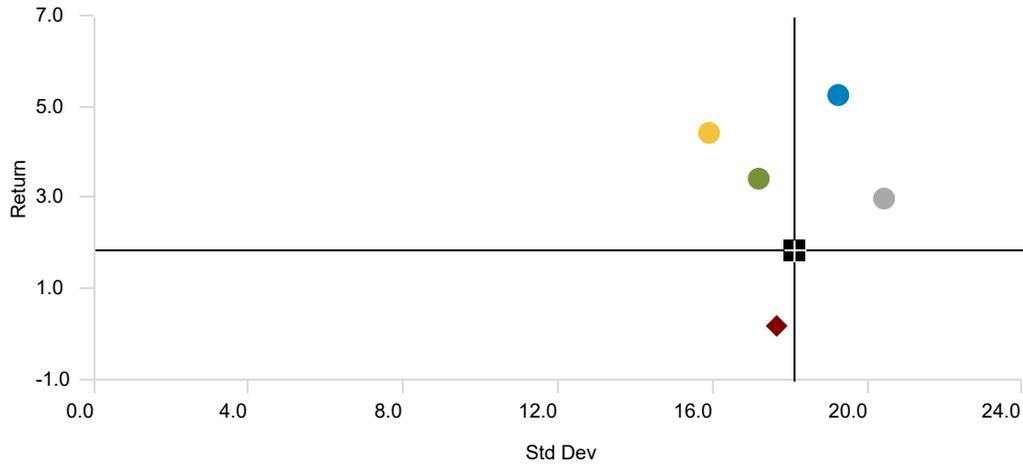
— MFS Value R6
- - Russell 1000 Value TR USD



Risk-Reward: 3-Year

Time Period: 7/1/2017 to 6/30/2020

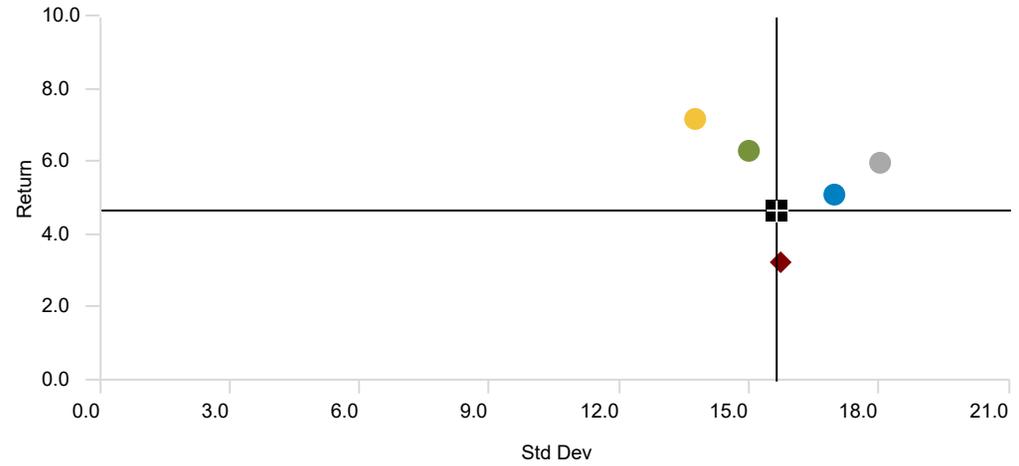
Calculation Benchmark: Russell 1000 Value TR USD



Risk-Reward: 5-Year

Time Period: 7/1/2015 to 6/30/2020

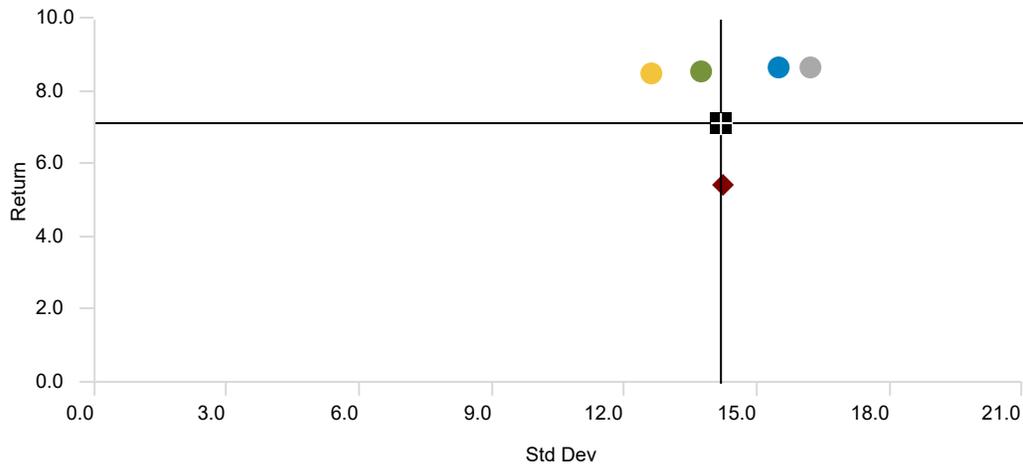
Calculation Benchmark: Russell 1000 Value TR USD



Risk-Reward: 7-Year

Time Period: 7/1/2013 to 6/30/2020

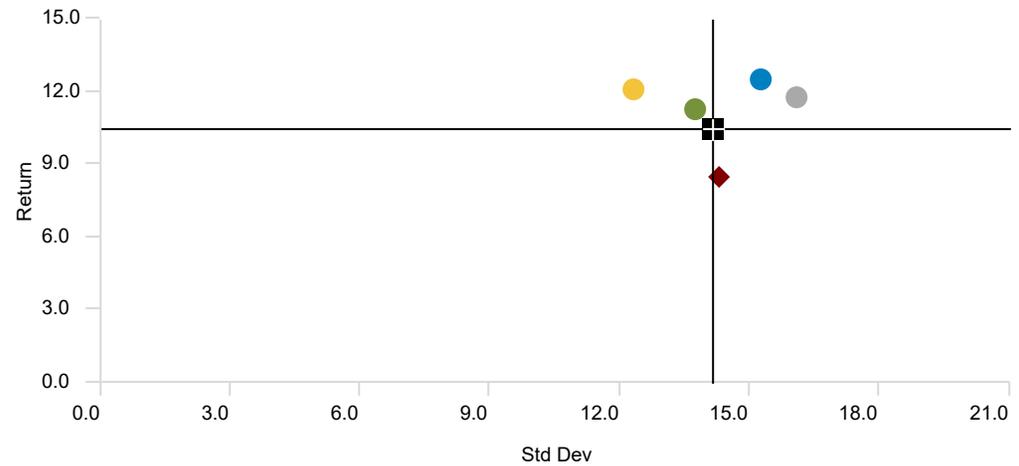
Calculation Benchmark: Russell 1000 Value TR USD



Risk-Reward: 10-Year

Time Period: 7/1/2010 to 6/30/2020

Calculation Benchmark: Russell 1000 Value TR USD



● Brandywine Dynamic Large Cap Value

● Dodge & Cox Stock

● MFS Value R6

● Vanguard Equity-Income Adm

◆ Vantagepoint Equity Income R5

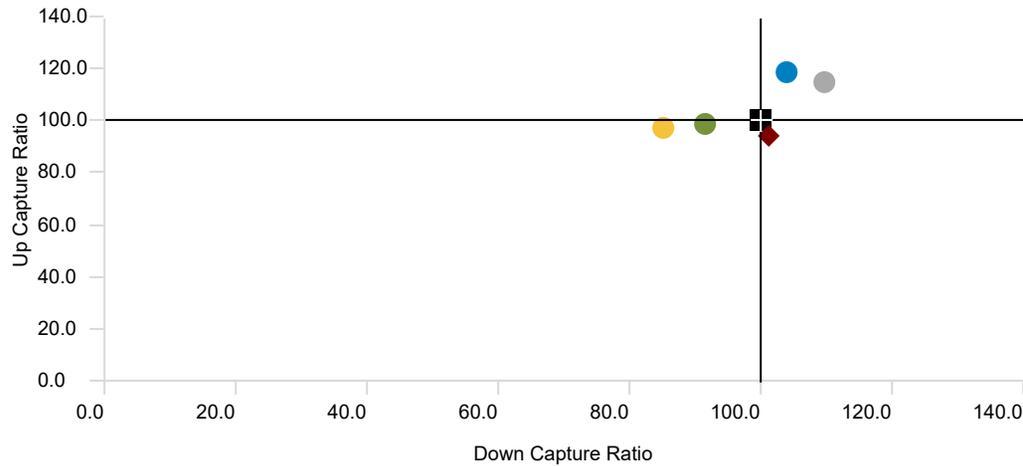
■ Russell 1000 Value TR USD



Up and Down Market Capture: 3-Year

Time Period: 7/1/2017 to 6/30/2020

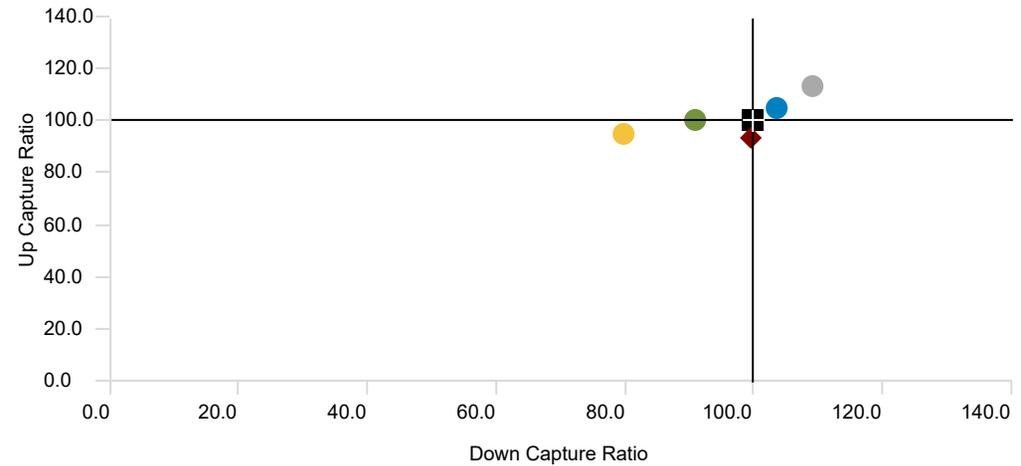
Calculation Benchmark: Russell 1000 Value TR USD



Up and Down Market Capture: 5-Year

Time Period: 7/1/2015 to 6/30/2020

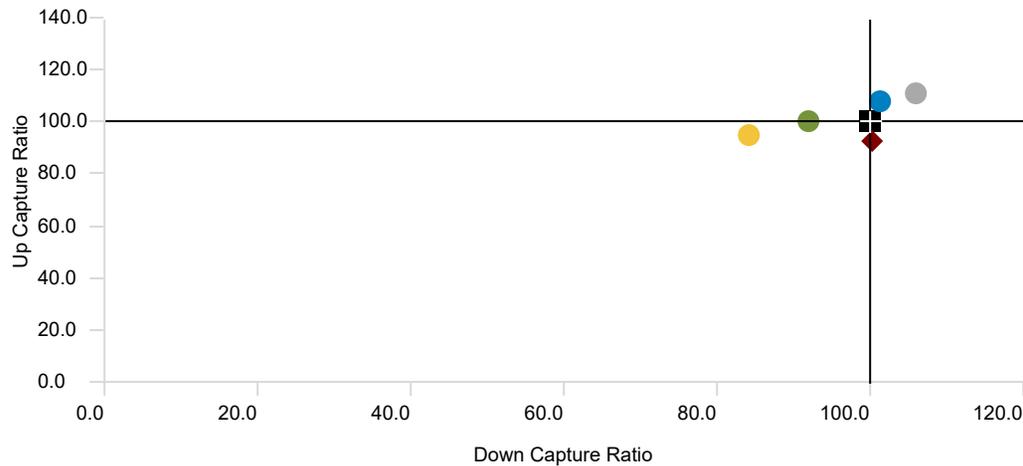
Calculation Benchmark: Russell 1000 Value TR USD



Up and Down Market Capture: 7-Year

Time Period: 7/1/2013 to 6/30/2020

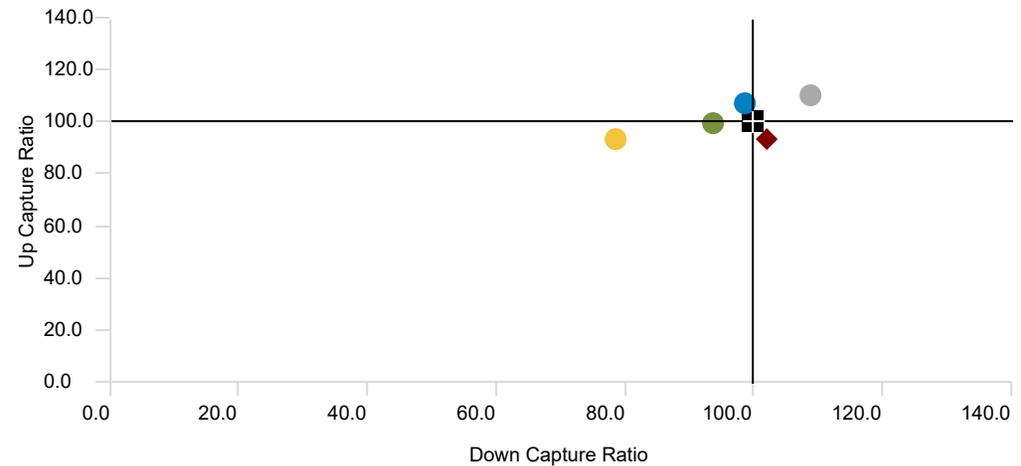
Calculation Benchmark: Russell 1000 Value TR USD



Up and Down Market Capture: 10-Year

Time Period: 7/1/2010 to 6/30/2020

Calculation Benchmark: Russell 1000 Value TR USD



● Brandywine Dynamic Large Cap Value

● Dodge & Cox Stock

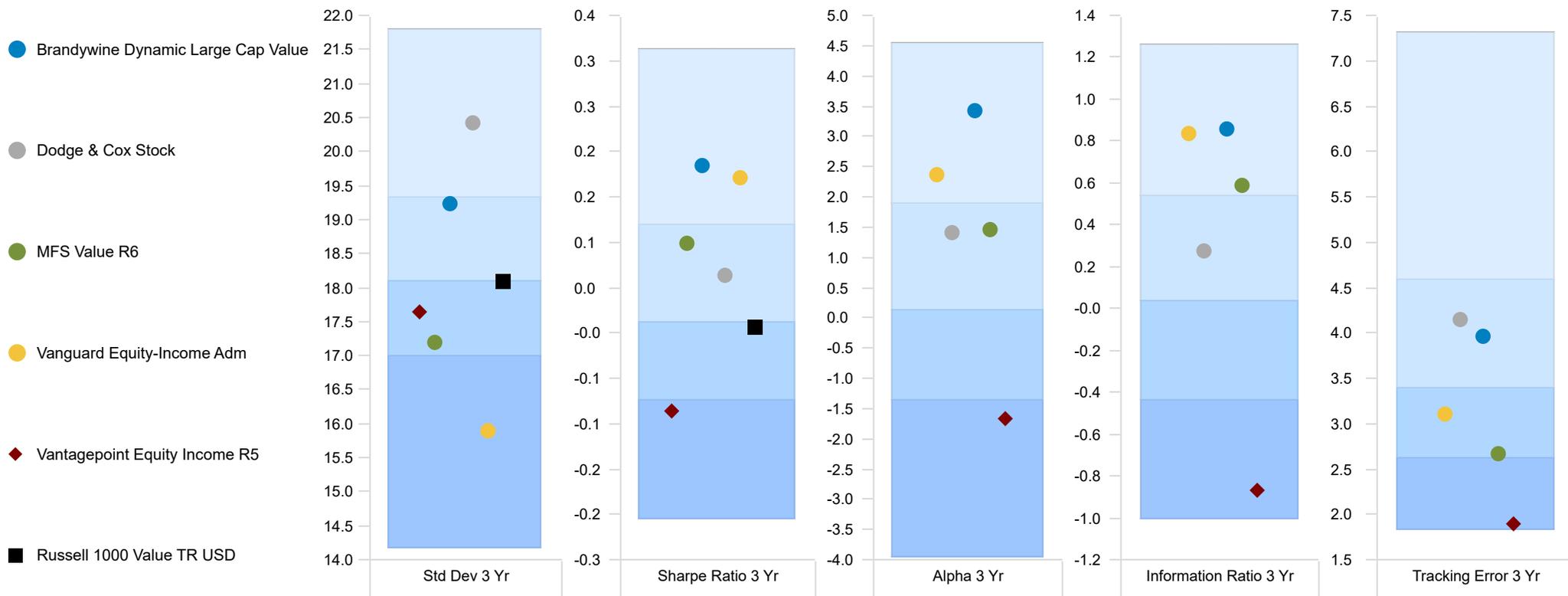
● MFS Value R6

● Vanguard Equity-Income Adm

◆ Vantagepoint Equity Income R5

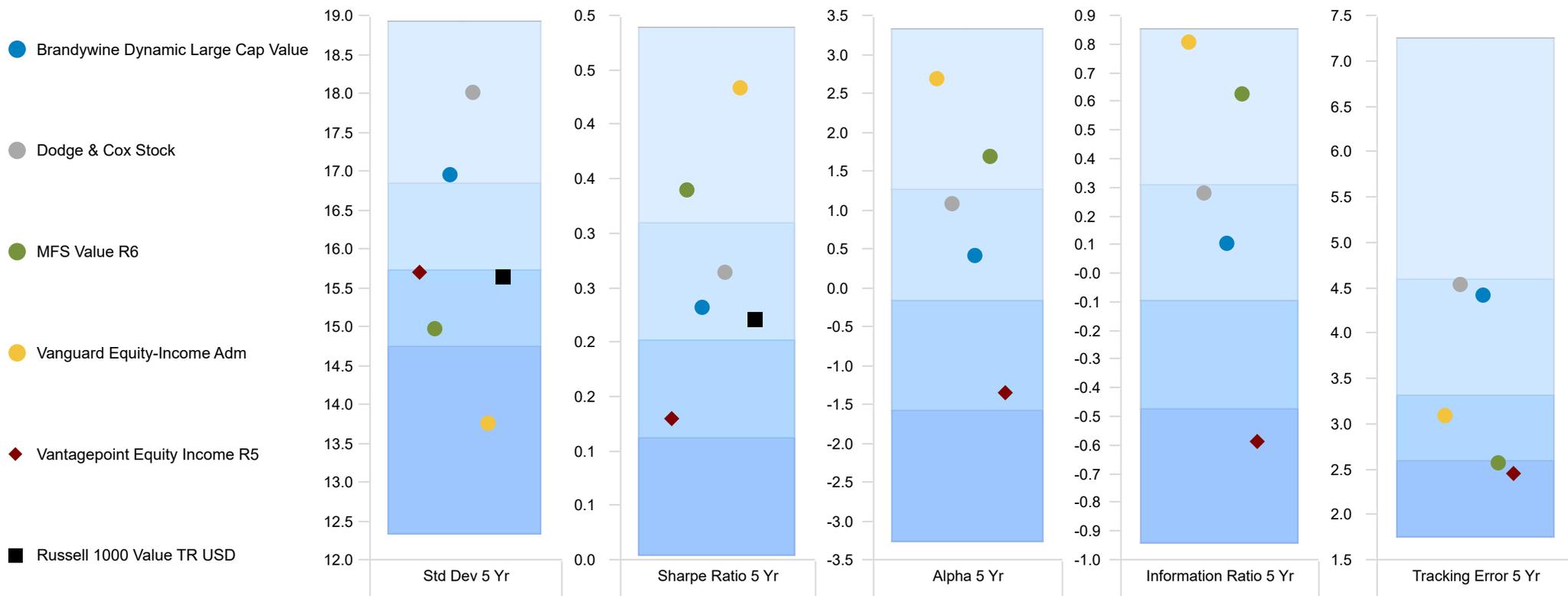
■ Russell 1000 Value TR USD





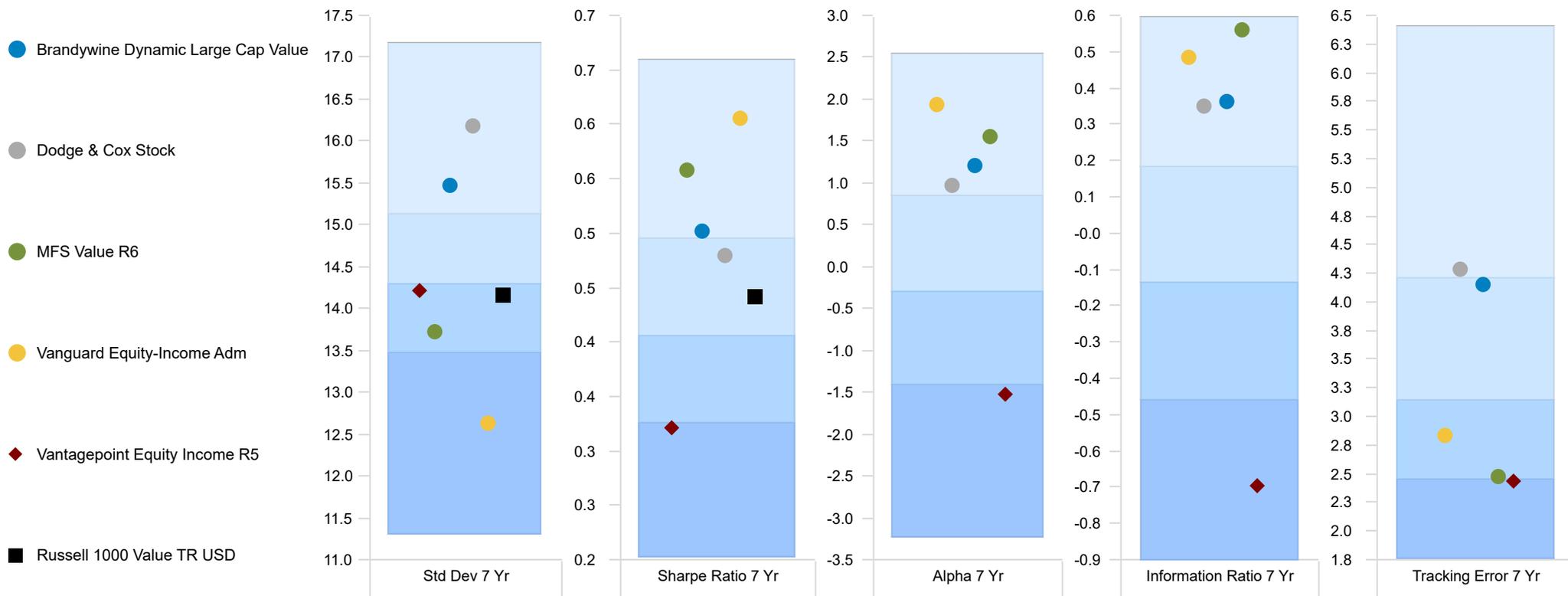
Time Period: 7/1/2017 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	19.24	28	0.18	16	3.43	12	0.86	14	3.97	37
Dodge & Cox Stock	20.43	17	0.06	36	1.41	31	0.28	38	4.16	34
MFS Value R6	17.20	68	0.10	29	1.47	30	0.59	23	2.68	73
Vanguard Equity-Income Adm	15.90	84	0.17	17	2.38	21	0.84	15	3.11	57
Vantagepoint Equity Income R5	17.65	63	-0.09	78	-1.66	79	-0.86	93	1.91	93
Russell 1000 Value TR USD	18.09	50	0.01	52	0.00	53	0.00		0.00	100



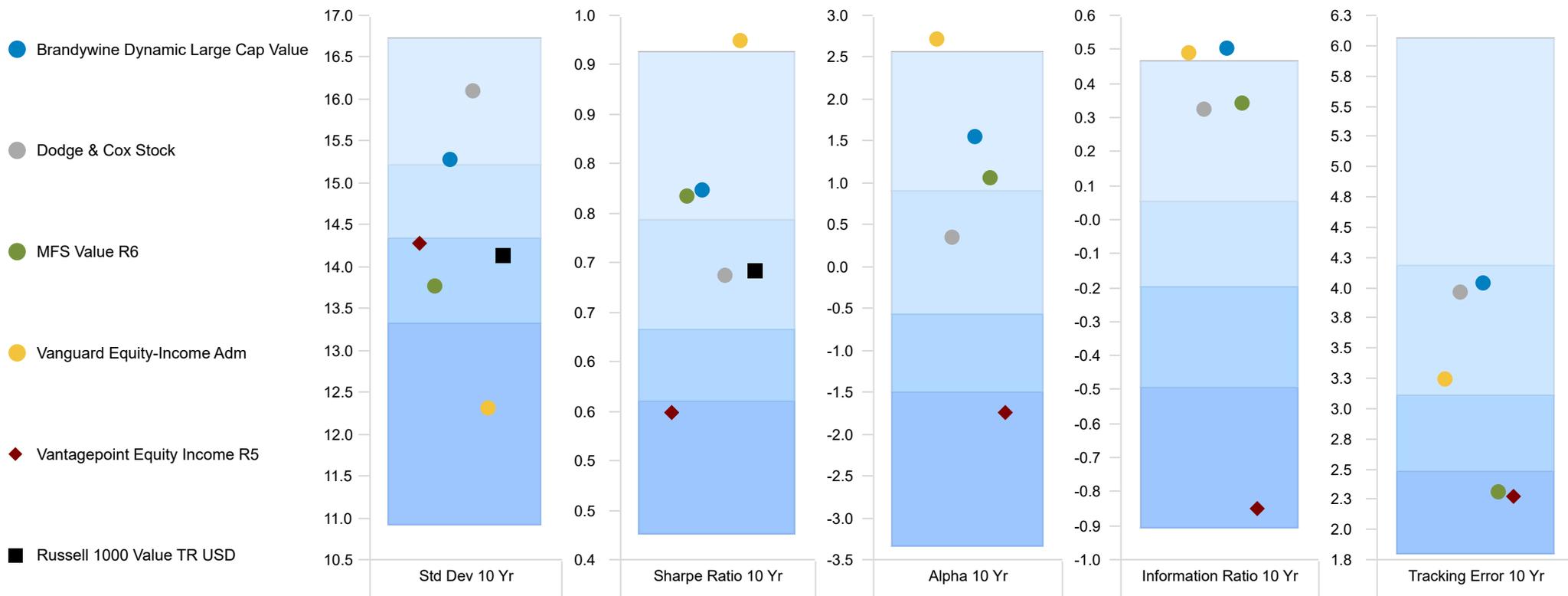
Time Period: 7/1/2015 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	16.95	22	0.23	41	0.43	38	0.10	37	4.43	29
Dodge & Cox Stock	18.02	12	0.26	32	1.08	28	0.28	27	4.55	26
MFS Value R6	14.97	71	0.34	19	1.69	20	0.63	13	2.58	75
Vanguard Equity-Income Adm	13.76	85	0.43	9	2.70	10	0.81	6	3.10	57
Vantagepoint Equity Income R5	15.71	52	0.13	70	-1.34	71	-0.58	81	2.46	79
Russell 1000 Value TR USD	15.65	53	0.22	44	0.00	46	0.00		0.00	100



Time Period: 7/1/2013 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	15.48	20	0.50	24	1.22	20	0.36	14	4.16	27
Dodge & Cox Stock	16.19	11	0.48	29	0.97	24	0.35	14	4.30	23
MFS Value R6	13.73	68	0.56	16	1.56	15	0.56	6	2.48	73
Vanguard Equity-Income Adm	12.63	85	0.61	9	1.94	10	0.49	8	2.84	62
Vantagepoint Equity Income R5	14.22	52	0.32	77	-1.52	78	-0.69	89	2.44	76
Russell 1000 Value TR USD	14.17	53	0.44	40	0.00	43	0.00		0.00	100

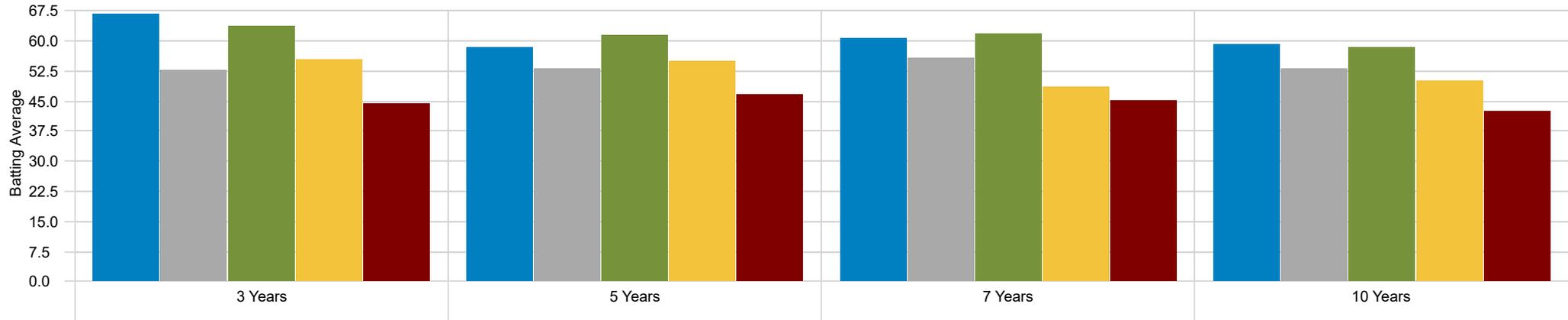


Time Period: 7/1/2010 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Brandywine Dynamic Large Cap Value	15.29	23	0.77	19	1.57	15	0.51	4	4.05	29
Dodge & Cox Stock	16.11	11	0.69	34	0.35	33	0.33	10	3.97	30
MFS Value R6	13.78	65	0.77	21	1.07	22	0.34	9	2.32	81
Vanguard Equity-Income Adm	12.32	89	0.93	4	2.73	5	0.49	5	3.26	49
Vantagepoint Equity Income R5	14.29	51	0.55	78	-1.74	80	-0.85	94	2.28	83
Russell 1000 Value TR USD	14.15	57	0.69	34	0.00	38			0.00	100

Batting Average

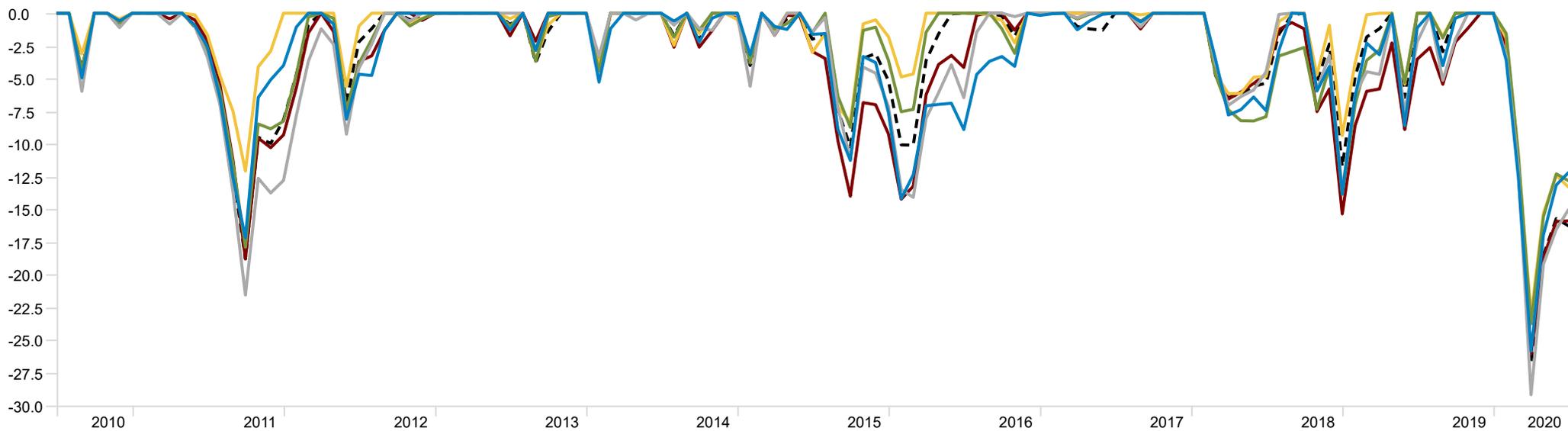
Source Data: Monthly Return Calculation Benchmark: Russell 1000 Value TR USD



Drawdown

Time Period: 7/1/2010 to 6/30/2020

Source Data: Monthly Return



— Brandywine Dynamic Large Cap Value

— Dodge & Cox Stock

— MFS Value R6

— Vanguard Equity-Income Adm

◆ Vantagepoint Equity Income R5

- - - Russell 1000 Value TR USD



MPT Statistics: 3-Year

Time Period: 7/1/2017 to 6/30/2020 Calculation Benchmark: Russell 1000 Value TR USD

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Return	5.25	2.99	3.40	4.44	0.18	1.82
Excess Return	3.43	1.17	1.58	2.62	-1.64	0.00
Std Dev	19.24	20.43	17.20	15.90	17.65	18.09
Beta	1.04	1.11	0.94	0.87	0.97	1.00
Tracking Error	3.97	4.16	2.68	3.11	1.91	0.00
Sharpe Ratio	0.18	0.06	0.10	0.17	-0.09	0.01
Alpha	3.43	1.41	1.47	2.38	-1.66	0.00
Information Ratio	0.86	0.28	0.59	0.84	-0.86	
Batting Average	66.67	52.78	63.89	55.56	44.44	100.00
Up Capture Ratio	118.29	114.44	98.61	96.79	93.99	100.00
Down Capture Ratio	104.02	109.78	91.60	85.17	101.09	100.00

MPT Statistics: 5-Year

Time Period: 7/1/2015 to 6/30/2020 Calculation Benchmark: Russell 1000 Value TR USD

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Return	5.10	5.93	6.27	7.15	3.21	4.64
Excess Return	0.46	1.29	1.63	2.51	-1.43	0.00
Std Dev	16.95	18.02	14.97	13.76	15.71	15.65
Beta	1.05	1.12	0.94	0.87	0.99	1.00
Tracking Error	4.43	4.55	2.58	3.10	2.46	0.00
Sharpe Ratio	0.23	0.26	0.34	0.43	0.13	0.22
Alpha	0.43	1.08	1.69	2.70	-1.34	0.00
Information Ratio	0.10	0.28	0.63	0.81	-0.58	
Batting Average	58.33	53.33	61.67	55.00	46.67	100.00
Up Capture Ratio	105.00	113.24	99.84	94.75	93.04	100.00
Down Capture Ratio	103.56	109.06	90.82	79.74	99.46	100.00

MPT Statistics: 7-Year

Time Period: 7/1/2013 to 6/30/2020 Calculation Benchmark: Russell 1000 Value TR USD

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Return	8.63	8.62	8.51	8.50	5.42	7.11
Excess Return	1.51	1.51	1.40	1.38	-1.69	0.00
Std Dev	15.48	16.19	13.73	12.63	14.22	14.17
Beta	1.05	1.11	0.95	0.88	0.99	1.00
Tracking Error	4.16	4.30	2.48	2.84	2.44	0.00
Sharpe Ratio	0.50	0.48	0.56	0.61	0.32	0.44
Alpha	1.22	0.97	1.56	1.94	-1.52	0.00
Information Ratio	0.36	0.35	0.56	0.49	-0.69	
Batting Average	60.71	55.95	61.90	48.81	45.24	100.00
Up Capture Ratio	107.50	110.68	100.32	94.82	92.70	100.00
Down Capture Ratio	101.28	105.80	91.81	84.03	100.21	100.00

MPT Statistics: 10-Year

Time Period: 7/1/2010 to 6/30/2020 Calculation Benchmark: Russell 1000 Value TR USD

	Brandywine Dynamic Large Cap Value	Dodge & Cox Stock	MFS Value R6	Vanguard Equity-Income Adm	Vantagepoint Equity Income R5	Russell 1000 Value TR USD
Return	12.46	11.71	11.21	12.02	8.47	10.41
Excess Return	2.05	1.30	0.80	1.61	-1.94	0.00
Std Dev	15.29	16.11	13.78	12.32	14.29	14.15
Beta	1.04	1.11	0.96	0.85	1.00	1.00
Tracking Error	4.05	3.97	2.32	3.26	2.28	0.00
Sharpe Ratio	0.77	0.69	0.77	0.93	0.55	0.69
Alpha	1.57	0.35	1.07	2.73	-1.74	0.00
Information Ratio	0.51	0.33	0.34	0.49	-0.85	
Batting Average	59.17	53.33	58.33	50.00	42.50	100.00
Up Capture Ratio	107.09	110.38	99.27	93.40	93.60	100.00
Down Capture Ratio	98.66	108.91	93.66	78.64	101.95	100.00

Investment Option Narratives

Firm Overview

Founded in 1986, Brandywine Global Investment Management (BGIM) is an SEC-registered investment manager headquartered in Philadelphia, PA. Shortly after its founding, BGIM was acquired by Legg Mason, Inc. and became a wholly-owned, but independent subsidiary. Since the acquisition, the firm has maintained complete control over investments, hiring and compensation. Legg Mason was acquired by Franklin Templeton (NYSE: BEN) in July 2020. BGIM remains autonomous as a wholly-owned subsidiary of Franklin Templeton. The majority of the BGIM's assets under management are managed within fixed income and all strategies, whether equity or fixed income, are managed in a value style. The firm also maintains office locations in San Francisco, Singapore and an operating unit in London.

Team Overview

Mike Fleisher, Steve Tonkovich and Henry Otto oversee Brandywine Dynamic Large Cap Value. Fleisher, as the lead PM, is responsible for managing and monitoring the portfolios on a day-to-day basis as well as coordinating the activities of other team members. He joined BGIM in 1997 and is the architect of Dynamic Large Cap Value. Otto and Tonkovich joined BGIM in 1998 and 1999, respectively and co-lead the firm's Diversified Value equity strategies in addition to supporting this strategy. The trio is joined by two additional portfolio managers, one associate portfolio manager, and two quantitative equity analysts.

Strategy Overview

BGIM believes they have identified enduring anomalies that arise from investor behavioral biases, which lead to pricing opportunities within the market. Their quantitative research confirms the historical long-term viability of these anomalies and helps them understand how each factor will perform over the short term in different environments, and provides information on interaction between factors. The process starts by identifying stocks with low valuations (based on P/E or P/B). The team performs security selection through quantitative multi-factor models that rely on factors from three core areas: Value, Sentiment and Quality.

The strategy implements a quantitative Dynamic Timing tool to evaluate valuation spreads within the U.S. equity market to identify which environment BGIM expects going forward. The Dynamic Timing tool seeks to identify broad, long-term trends in the market and therefore, shifts between the models occur on an infrequent basis, every two-to-seven years on average. BGIM ranks its value universe (constructed from the top 1,000 U.S. companies by market cap) using the environment appropriate multi-factor scoring model. The model portfolios consist of the highest-ranking companies held on a market capitalization-weighted basis and comprise between 75 and 150 stocks. Portfolios will be more diversified in deep value environments when compared to broad value periods. Both sector and industry weights will be maintained at +/- 15% relative to the representative sector/industry weight within the index (at purchase). Individual positions are capped at a maximum of 5%. Portfolio cash is a residual of the investment process, but the goal is to remain fully invested at all times, defined as approximately 1-2% frictional cash. The strategy will equitize cash via ETF investments in order to transition new accounts and reduce the cash impact of large cash flows.

Expectations

Brandywine Dynamic Large Cap Value will maintain a quality bias relative to the Russell 1000 Value Index regardless of whether the portfolio is invested in the deep value or broad value model. Notably, we expect it to remain overweight companies with higher returns on equity. In markets where quality lags, such as 2016, performance will typically struggle. From a sector standpoint, Dynamic Large Cap Value does not invest in Real Estate, and has typically underweight Utilities, which contributes to a modest yield underweight. It is also historically maintained an overweight to Consumer Discretionary.

Despite its broad diversification, the portfolio will possess some concentration among its largest positions with 30% or more of the portfolio invested in the top 10 positions. This, in combination with sector weights which may vary meaningfully occasionally, contributes to above average tracking error, which we expect to remain in the 4-6% range. Over a full market cycle, we believe the portfolio has the potential to outperform the benchmark by 2-4% on annualized basis gross of fees.

Points to Consider

Clients considering Dynamic Large Cap Value should be prepared to be patient during periods of underperformance when multiple factor tilts are out of favor. For example, in 2016, the strategy lagged by 6.4% gross of fees due largely to quality being out of favor, but also the portfolio's avoidance of companies with lower price-to-book ratios, which are emphasized in the strategy's deep value model, but not its broad value model. Prior to this time, the portfolio had never experienced such significant underperformance. Despite the potential for these outlier periods, we remain confident in the strategy, which not only rebounded strongly in 2017, but also possesses one of the higher batting averages in the category.

Recommendation Summary

We recommend Brandywine Dynamic Large Cap Value as a core or complementary offering in the large cap value category. Mike Fleisher, chief architect of the strategy, has served as lead PM since its 2007 inception and has been a member of Brandywine's experienced and stable quantitative equity team since 1997. The strategy's dynamic triggering tool, which responds to current market conditions by shifting the portfolio between its deep value and broad value model, is its true differentiator. In the later stages of a bull market, when stocks separate themselves and valuation spreads begin to widen, the portfolio will be invested in its broad value model. During spread narrowing environments, the portfolio's deep value model is utilized. Regardless of the model, the strategy will possess a quality tilt throughout. The portfolio is broadly diversified, yet typically maintains an above average active share. We believe clients willing to tolerate Dynamic Large Cap Value's higher tracking error may benefit from higher excess returns over a full market cycle.

Firm Overview

Established in 1930, Dodge & Cox (D&C) is one of the oldest investment management firms in the country. In its early years, the firm managed assets exclusively for individuals and families but began to work with institutional clients in the 1960s.

D&C is an independent investment firm owned entirely by its active employees and operates out of a single investment office in San Francisco. D&C's independence allows it to make business decisions that they believe to be in the long-term best interest of their clients. D&C manages more than \$250 billion in client assets within three primary broad asset classes: US Equity, International Equity and US Fixed Income.

Team Overview

The 8-member Investment Policy Committee (IPC) makes all decisions on the Dodge & Cox Stock strategy. The IPC is comprised of senior portfolio managers and analysts and is led by Chairman and CIO Charles Pohl. Other members of the IPC include Director of Research Bryan Cameron, Associate CIO David Hoeft, Associate Director of Research Steven Voorhis, as well as Senior Analysts Phillip Barret, Kathleen McCarthy, Karol Marcin and Benjamin Garosi. The average D&C tenure of the IPC members is more than 20 years. The IPC attempts to reach consensus on the merits of a particular recommendation. Each member has the opportunity to provide his or her input equally. The firm's global equity team comprises more than 30 portfolio managers and industry analysts.

Strategy Overview

Dodge & Cox's philosophy is built on traditional valuation investment principles that have been employed since the founding of the firm. The firm believes if the team conducts intense, bottom-up company research and builds a diversified portfolio of stocks trading at a substantial discount to their long-term profit opportunities, investors will gain a solid premium over a three- to five-year period.

The process begins with the industry analysts' idea generation, which can come from a variety of sources including, but not limited to: industry conferences, news, industry publications, valuation screens, annual reports and company management teams. For stocks of interest, research analysts will build cash flow, balance sheet and income statement models forecasted out three-to-five years. To assist with model forecasting, analysts visit each company and meets with the management teams. In addition, he/she talks with competitors, customers and suppliers to develop a 360-degree assessment of the company. The investment process is collegial/ collaborative so analysts and portfolio managers are engaged in communication throughout. Prior to presenting a stock to the IPC, analysts vet stock ideas within one of four super sector committees (Technology, Media & Telecom, Health Care/Consumer, Finance/REITs and Industrials/Materials/Energy). The IPC has final decision-making authority on buys and sells and on final portfolio construction. Sales typically occur when stock prices reflect a more optimistic outlook than D&C's expectations or due to deteriorating long-term fundamentals.

The fund typically holds 60-90 stocks, with cash below 5% in most market conditions. Average annual portfolio turnover is low, typically 15-20%. The strategy is broadly diversified relative to the S&P 500 Index sectors, although typically maintains a pro-cyclical tilt and is underweight the yield-oriented sectors (Utilities, REITs).

Expectations

The strategy has maintained a pro-cyclical bias with a beta of approximately 1.1 over the past decade. As such, the approach tends to underperform during strong market sell-offs, such as 2008, as well as yield-oriented market environments, such as 2011. Conversely, D&C Stock typically outperforms during strong market recoveries such as 2009 or 2012, or when value-oriented stocks are leading the market, such as 2016.

The fund's non U.S. exposure ranges from the mid-single digits to 20%. As such, weak non-U.S. equity markets may provide a headwind to performance. The firm does not have a specific target for tracking error, which has fallen in the 4% range over the past the decade, near the top quartile of the peer group.

Points to Consider

Strategy assets, including the D&C Stock fund, separate accounts, and the equity portion of the firm's balanced portfolios, totaled approximately \$100 billion at the end of 2019. In 2004, the strategy closed due to heavy inflows, prior to AUM peaking at approximately \$125 billion in 2007. At that time, the firm was finding more opportunities in the mid cap areas of the market and dealing with significant inflows. While the strategy has experienced net outflows over the past several years and reopened in 2019. The IPC is finding more opportunities in mega caps and the firm's ability to take advantage of mid cap opportunities appears to be limited going forward.

The firm developed a reputation for being a deeper value shop in the late in 1990s, when the IPC stuck to its value-orientation through the technology bubble. However, the approach is well diversified across value themes. The IPC organizes its portfolio holdings into four main categories (deep value or turnaround, cyclical or asset plays, compounders and above average growers), with the first two categories recently representing less than 25% of the portfolio. The firm's exposure to compounders and above average growers may result in the strategy appearing core at times, however IPC has remained true to the strategy's valuation orientation such that overall valuation measures are below those of the Russell 1000 Value Index.

Recommendation Summary

We believe D&C Stock possesses several key differentiators and recommend the strategy as a core large cap value offering for both participant-directed accounts and plan sponsor-directed accounts. First, management has adhered to same long-term, value oriented process since the fund's inception in 1965. Second, we like the firm's structure and focus. D&C is 100% employee-owned and the firm manages three equity strategies (Stock, International and Global) that follow the same investment philosophy. Third, the IPC's experience and tenure is a testament to the firm's collegial culture. Most of D&C's employees spend their entire careers at the firm and employee turnover is low (sub 5%) relative to peers. While we expect D&C Stock to generate solid excess returns over the long-term, we acknowledge the strategy's higher beta profile and recommend the strategy only for clients that can be patient during periods of risk-aversion, when the approach typically lags.

Firm Overview

MFS's investment management history dates back to 1924. MFS began managing tax-exempt capital in 1970. Headquartered in Boston, MFS has been a majority-owned subsidiary of Sun Life of Canada since 1982. The firm maintains considerable autonomy in managing its day-to-day business. Up to 22% of MFS' common stock is available for ownership by senior management, investment professionals and other key employees. MFS has nine offices around the world. Total firm assets under management (AUM) are over \$500 billion across a plethora of equity, fixed income and balanced/blended strategies. The client mix is about 50/50 institutional/retail.

Team Overview

Steve Gorham, Nevin Chitkara and Katherine Cannan have managed MFS Value since 2002, 2006 and 2019, respectively. They are jointly responsible for portfolio decisions. Gorham joined MFS in 1989 and previously covered the electrical equipment, food, beverage & tobacco, business services, transportation, and telecommunications services industries as a research analyst. Chitkara joined MFS as a research analyst in 1997 and previously covered U.S. media, cellular telephone, and paper & packaging industries, as well as Northern European stocks and Pan-European media and utility companies. Cannan possesses over 10 years of research experience and joined MFS in 2013. She has covered multiple industries during her tenure with MFS, including energy, technology and telecommunications.

MFS' global equity research platform consists of more than 60 fundamental equity analysts organized into eight global sector teams and located around the world. More than 25 analysts are dedicated to U.S. equity research. Each analyst is a specialist, covering approximately two different industries on average in a particular region. The platform also comprises more than 40 fixed income and quantitative research analysts.

Strategy Overview

The MFS Value team believes that stock prices often overreact to short-term events, thus providing opportunities for long-term investors. Their ideal holding is a high-quality company with above-average rates of free cash flow growth that is trading below intrinsic value. The portfolio managers employ a bottom-up, fundamental research process that seeks to invest in undervalued companies that possess sustainable, durable franchises, generate significant free cash flow, have strong balance sheets and management teams that are good stewards of capital.

The investment universe for MFS Value comprises those stocks in the Russell 1000 Index in addition to their global multi-national peers. Of that universe, approximately 250-350 companies meet the team's quality metrics, which mostly comprises U.S.-based companies with market capitalizations greater than \$5 billion. The portfolio managers work closely with MFS's global industry analysts throughout the research process, including accompanying them on company visits, working through their financial models and valuation framework. Research analysts generate a large majority of ideas that make their way into the fund. The portfolio managers consider current valuations relative to a company's history, its peers and overall market in constructing a portfolio of 80-100 stocks. A change to relative valuations or a breakdown in a company's quality dimensions are the primary reasons stocks are sold. Annual turnover ranges from 10-30%. Sector allocations are driven by the firm's bottom-up process with a 25% cap at the industry level. The fund has tended to be overweight consumer staples and industrials stocks, and underweight energy and utility companies, relative to the Russell 1000 Value Index.

Expectations

MFS Value's quality bias contributes to its outperformance during periods of risk-aversion, as measured by high yield spreads widening. The strategy performed well through the 2008 downturn, as well as during the market sell-off from the third quarter of 2014 through the first quarter of 2016.

The strategy typically lags during lower quality rallies, led by companies with low profitability or those with highly levered balance sheets, such as the market rebound in 2009, or the second half of 2016. Additionally, MFS Value tends to be underweight mid and small cap stocks relative to the benchmark, which hurt relative performance in 2010.

Points to Consider

The MFS Value team managed more than \$80 billion in large cap value assets at the end of 2019 including the equity sleeve of the firm's Total Return strategy. While the mutual fund remains open to new investors, MFS soft-closed this strategy to new separate accounts in the third quarter of 2013. MFS has not pointed to an AUM level where the mutual fund will close, however, a material acceleration of inflows from current levels would raise questions regarding capacity.

Steve Gorham, who has been a PM on MFS Value since 2002, will be stepping off of the strategy at the end of 2020. Katherine Cannan, previously a research analyst on the strategy, was added as a PM effective December 31, 2019, giving her a full year to get up to speed with Gorham still involved. Chitkara will remain on the strategy, and will move to being completely focused on MFS Value. He will be transitioning off of two MFS balanced portfolios at the end of 2020. The announcement exemplifies the firm's proactive approach to succession planning and we remain confident in the strategy.

Recommendation Summary

We recommend MFS Value as a core large cap value option for AndCo clients. The strategy's portfolio managers have worked together on the strategy for more than decade. They are supported by robust, integrated global research platform that fosters a culture of collaboration. The 0.47% expense ratio for the R6 share is competitive relative other institutionally priced large cap value options. The strategy is ideal for clients seeking a high-quality, diversified large cap value strategy with modest tracking error and high performance consistency over rolling three-year periods. Over the long-term, the approach has outperformed the Russell 1000 Value Index while exhibiting below average volatility. Given the strategy will tend to lag during low-quality rallies, clients may benefit pairing the strategy with an approach that exhibits greater cyclicality and up-market capture.

Firm Overview

Founded in 1975 and headquartered in Malvern, PA, The Vanguard Group (Vanguard) is structured as a “mutual” mutual fund company, owned by the Vanguard funds and its investors. Vanguard’s fund family comprises more than 170 member funds with more than \$3.8 trillion in assets across a broad array of investment categories including passive equities, active equities, bond funds, balanced funds, money market and stable value strategies. The firm’s Portfolio Review Department (PRD), comprises more than 70 investment professionals who oversee the firm’s more than \$500 billion in externally managed funds.

Team Overview

Vanguard Equity Income follows a multimanager approach with approximately 35% of the fund managed by the firm’s Quantitative Equity Group (QEG), and 65% overseen by Wellington Management. Vanguard’s QEG comprises more than 20 investment professionals dedicated to modeling, fund management and analysis. QEG oversees more than \$30 billion in active equities. James Stetler and Binbin Guo have advised the fund since 2003 and 2010, respectively. Stetler joined Vanguard in 1982, while Guo joined in 2007. Portfolio decisions are driven by the team’s quantitative model.

Wellington Management, headquartered in Boston, oversees more than \$1 trillion in assets. The firm’s equity-income team, based in Radnor, PA comprises eight portfolio managers and analysts, who are supported by close to 50 centralized global industry analysts. Mike Reckmeyer joined Wellington in 1994 and has managed this fund since 2007. He is the sole decision maker for Wellington’s portion of the portfolio.

Strategy Overview

Vanguard Equity Income seeks to provide investors over the long term with a source of dividend income and stock market exposure with below average volatility. The philosophy is based on the belief that dividend income is a more stable source of total return than capital appreciation. The fund’s multi-manager structure combines Vanguard’s quantitative approach with Wellington’s fundamental, bottom-up investment process.

Vanguard QEG follows a risk-controlled investment process that emphasizes valuation, quality, growth, sentiment, and management decisions. It is managed on a sector neutral basis relative to the FTSE High Dividend Yield Index with a growth tilt. The Vanguard sleeve holds typically holds 100-130 stocks with turnover in the 40%-50% range.

Wellington follows a bottom-up, contrarian approach that emphasizes high-quality companies in out-of-favor industries. Areas of opportunity include misunderstood negative events, consolidating industry structures, low but improving returns on capital or new management teams. Wellington will typically hold 60-75 stocks, with 20-30% annual turnover and sector weights that remain within 10% of the benchmark. The Wellington portfolio targets a dividend yield that is consistently higher than the S&P 500 Index.

Expectations

Vanguard Equity Income’s emphasis on higher quality companies with above average yields has resulted in a lower volatility portfolio relative the Russell 1000 Value Index. The strategy has generated most of its alpha in risk-off market environments, such as 2008, which favored dividend-paying stocks. The fund’s beta has ranged from 0.8-0.9 over the past decade.

The strategy generally lags in strong up-markets that favor growth-oriented companies, such as 2013. Additionally, Vanguard Equity Income tends to overweight mega-cap companies, which detracts from relative performance during markets led by smaller-cap stocks.

The fund’s tracking error relative to the Russell 1000 Value Index is typically 2-4%. It is generally overweight consumer staples companies and underweight financial services stocks. Wellington may own up to 20% in non U.S. stocks, which has historically resulted in the fund holding 5-10% in foreign equities.

Points to Consider

Long-time back-up portfolio manager Karen Grimes retired at the end of 2018. Her back-up PM responsibilities were assumed by Adam Illfelder, a member of team since 2008, who also assumed lead portfolio manager responsibilities from Grimes on Wellington’s Value Equity strategy. The team also added research analyst Ravi Gill in early 2019.

Recommendation Summary

We recommend Vanguard Equity Income as a conservative large cap value option. We like the fund’s multi-manager approach, which combines two distinct and complementary investment processes. Wellington’s fundamental, high-quality investment approach has provided strong down market protection and pairs nicely with Vanguard’s quantitative, lower tracking error approach, which has generated more favorable upside participation. Both strategies have generated strong track records on a stand-alone basis. The fund’s expense ratio is among the lowest in its category. The strategy is ideal for clients looking to add a low volatility, income-oriented option to their portfolios. Given the strategy may struggle in rising rate market environments, clients may want to pair Vanguard Equity Income with an approach that exhibits greater cyclicity and up-market capture.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta.

Batting Average – A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest quarterly (3 month) return of the investment since its inception.

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.

Down Period Percent - Number of months below 0 divided by the total number of months.

Downmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

Downside Std Dev - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

Information Ratio - This calculates the value-added contribution of the manager and is derived by dividing the excess 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.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

Longest Up-Streak - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

Max Drawdown - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawdown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

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.

Skewness - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution

is symmetric with skewness 0.

Sortino Ratio - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

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.

Tracking Error - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

Treynor Ratio - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

Up period Percent - Number of months above 0 divided by the total number of months.

Upmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

Value-Growth Score - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.

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Performance data is provided for historical and informational purposes only. Where applicable, results shown represent past performance and do not represent expected future performance or experience. Past performance does not guarantee future results. Returns are typically stated net of fees, which may include: investment advisory fees, taxes and other expenses. There may be instances where certain returns are shown gross of fees (i.e., before the aforementioned fees are deducted) and would be noted as such. Generally, there are two instances where returns may be shown as gross figures. In the case of separate accounts, typically returns are demonstrated as gross of fees due to the fact that the fee structure would generally vary widely depending on the client’s size and circumstances. Additionally, there are instances where a strategy vehicle is relatively new and does not have a sufficiently long track record to represent a viable comparison relative to other strategies. Accordingly, the returns for the separate account version of such a strategy could be used as demonstrative of the performance for a similar vehicle; separate account returns are generally shown as gross of fees. It is important to note that any such separate accounts being used as a “proxy” are strictly for illustrative purposes. An investor should not expect the same results from the actual strategy(ies) under consideration. When client-specific performance is shown, AndCo uses time-weighted calculations, which are founded on standards recommended by the CFA Institute. In these cases, the performance-related data shown are based on information that is received from custodians. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement.

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THE RISK DISCLOSURES HEREIN DO NOT PURPORT TO COVER ALL RISKS, PLEASE REFER TO THE RESPECTIVE PROSPECTUSES FOR COMPLETE INFORMATION.

As presented in this report, although investing in equities can be beneficial, it is also important to consider the associated risks. Investing in such funds may not be suitable for all investors. Equity markets can be volatile and can decline significantly in response to, or investor perceptions of, issuer, market, economic, industry, political, regulatory, geopolitical, and other conditions. These conditions can affect a single issuer or type of security, issuers within a broad market sector, industry or geographic region, or the equity markets in general. The primary risk factors to consider include, but are not limited to: stock market risk, manager risk, investment style risk, sector-focus risk, issuer risk and liquidity risk. The securities markets are volatile and the market prices of the funds’ securities may decline generally. Securities fluctuate in price based on changes in a company’s financial condition and overall market and economic conditions. If the market prices of the securities owned by the fund fall, the value of your investment in the fund will decline. Depending on the specific strategy, there many additional considerations such as the risks associated with equity investing.

SOURCING

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U.S. Large Cap Growth Manager Review
Period Ending June 30, 2020

Town of Palm Beach Retirement System Defined Contribution Plans



Purpose for this Manager Evaluation Report

This search book is to review Large Cap Growth investment options to potentially replace the Fidelity Contrafund (FCNTX).

Investment Options for this Manager Evaluation Report

Firm Name	Strategy Name	Vehicle	Management Fee	Investment Minimum
Fred Alger Management	Alger Capital Appreciation Instl Y (ACAYX)	MF	0.75%	\$ 500,000
MFS Investment Management	MFS Growth R6 (MFEKX)	MF	0.57%	No Minimum
New York Life Investment Management	MainStay Winslow Large Cap Growth R6 (MLRSX)	MF	0.64%	No Minimum
T. Rowe Price Associates	T. Rowe Price Blue Chip Growth I (TBCIX)	MF	0.56%	\$ 1,000,000

Definition and Characteristics

US Large Cap Growth is typically defined as US-based companies with a market capitalization over \$5 billion that have higher price-to-book, price-to-earnings, and forecasted growth rates. The primary benchmark for strategies in this space is the Russell 1000 Growth Index. The index contains those stocks with higher than average price-to-book and price-to-earnings ratios and higher 3-yr forecasted growth rates within the Russell 1000 on Russell's annual reconstitution day, typically calculated at the end of May. The Technology sector dominates the index, accounting for approximately 30% of the weight by market cap. The Consumer Discretionary, Healthcare, Consumer Staples and Industrials sectors also all have meaningful weights. The index contains approximately 600 individual names, but the largest companies by market cap dominate the index. The weighted average market cap of the index typically exceeds \$125 Billion, while the median market cap is closer to \$10 Billion. The five largest names account for over 15% of the index.

Role within a Portfolio

The primary role of a US Large Cap Growth strategy is to provide diversified exposure to the US stock market with a style tilt toward those names with higher future growth prospects. Active managers in the space typically evaluate a stock's growth rate relative to its valuation. As a group, growth stocks have lower dividend yields than value stocks. The group can often demonstrate higher volatility when broader economic expectations deteriorate. Within the portfolio, a Large Cap Growth strategy is usually paired with a Large Cap Value strategy to provide additional diversification across different economic environments.

Benchmark and Peer Group

This US Large Cap Growth search report will use the following benchmark and peer group:

Index – Russell 1000 Growth: Consists of the stocks in the Russell 1000 Index with higher than average forecasted growth rates and higher price-to-book and price-to-earnings ratios.

Morningstar Category - Large Growth: Large-growth portfolios invest primarily in big US companies that are projected to grow faster than other large-cap stocks. Stocks in the top 70% of the capitalization of the US equity market are defined as large cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields). Most of these portfolios focus on companies in rapidly expanding industries.

Investment Option Comparison

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I
Firm Information				
Year Founded	1/1/1964	1/1/1924	1/1/1992	1/1/1937
US Headquarters Location	New York, NY	Boston, MA	Minneapolis, MN	Baltimore, MD
Number of Major Global Offices	3	9	1	6
Year Began Managing Ext. Funds	1/1/1976	1/1/1924	1/1/1992	1/1/1937
Firm AUM (\$ M)	33,000	507,000	24,000	1,220,000
Ownership Type	Independent	Subsidiary	Subsidiary	Publicly Traded
Largest Owner (Name)	A. Alger, H. Alger, N. Alger	Sun Life Financial	TIAA	N/A
Employee Ownership (%)	20	20	0	17
Qualify as Emerging Manager?	No	No	No	No
Strategy Information				
Inception Date	1/1/1976	8/1/1995	7/1/1992	6/30/1993
Open/Closed	Open	Open	Open	Open
Primary Benchmark	Russell 1000 Growth	Russell 1000 Growth	Russell 1000 Growth	Russell 1000 Growth
Secondary Benchmark	Russell 3000 Growth , S&P 500	None	None	S&P 500
Peer Universe	US Large Cap Growth	US Large Cap Growth	US Large Cap Growth	US Large Cap Growth
Outperformance Estimate (%)	1-2	1-2	2-3	1-2
Tracking Error Estimate (%)	3-5	2-4	4-6	3-5
Strategy AUM (\$ M)	12,000	42,000	22,500	133,000
Strategy AUM as % Firm Assets	36	6	94	11
Estimated Capacity (\$ M)	50,000	70,000	80,000	Not Provided
Investment Approach - Primary	Bottom-up	Bottom-up	Bottom-up	Bottom-up
Investment Approach - Secondary	Fundamental	Fundamental	Fundamental	Fundamental

The source of data and figures provided is generally the respective managers. Certain data represents AndCo's view and could differ from the manager's interpretation. The most current AUM of each strategy may therefore differ from what is currently stated.

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I
Team Information				
Decision Making Structure	PM-Led	Team	Team	PM-Led
Number of Decision Makers	2	2	3	1
Names of Decision Makers	P. Kelly, A. Crawford	E. Fischman, P. Gordon	J. Kelly, P. Burton, S. Simon	L. Puglia
Date Began Managing Strategy	2004, 2015	2004, 2017	1999, 2010, 2013	1997
Date Began with Firm	1999, 2004	2000, 2004	1999, 2010, 2013	1990
Number of Products Managed by Team	3	1	1	3
Number of Investment Analysts	32	71	5	175
Investment Analyst Team Structure	Sector/Industry Specialists	Sector/Industry Specialists	Sector/Industry Specialists	Sector/Industry Specialists

Portfolio Construction Information

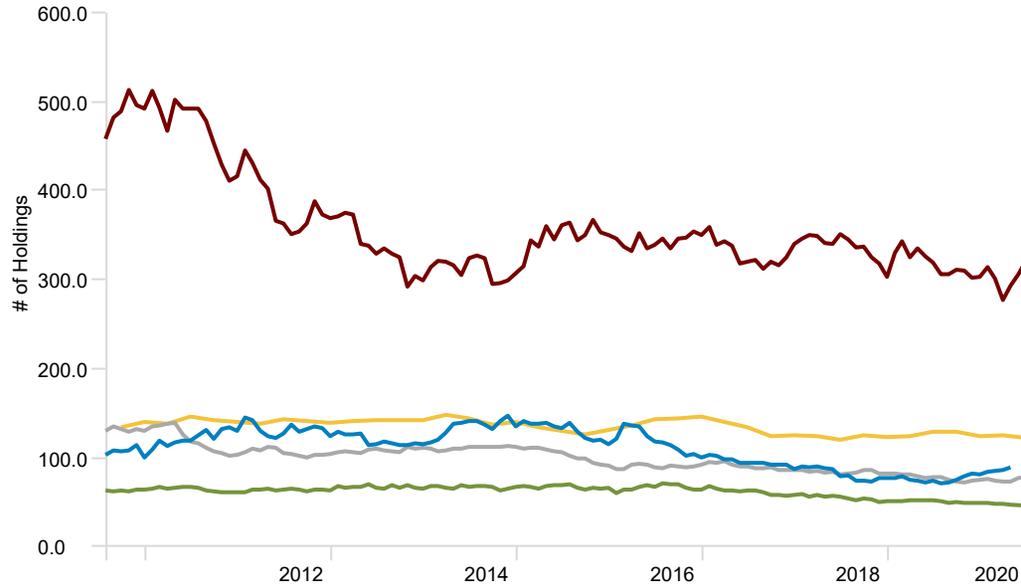
Broad Style Category	Growth	Growth	Growth	Growth
Style Bias	Aggressive Growth	Core Growth	Growth	Core Growth
Sector Constraint Type	Absolute	None	Benchmark Relative	Benchmark Relative
Sector Constraints (%)	40 (Sector), 20 (Industry)	None (Typically +/-5%)	+/-10	0.5-3.0x
Typical Sector/s Overweight	Consumer Disc.	None	Technology	Consumer Disc., Comm. Services
Typical Sector/s Underweight	Consumer Staples	None	Industrials	Technology
Typical Number of Holdings	70-120	70-110	45-65	100-140
Average Full Position Size (%)	1	1.25	3	+/-4
Maximum Position Size (%)	10	5 or 1.5x	5	5
Annual Typical Asset Turnover (%)	80-120	30-50	50-100	20-50
Annual Typical Name Turnover (%)	80-120	20-30	50-100	20-50
Maximum Cash Allocation (%)	10	5	10	None
Maximum Foreign Exposure (%)	20	None	20	20

The source of data and figures provided is generally the respective managers. Certain data represents AndCo's view and could differ from the manager's interpretation. The most current AUM of each strategy may therefore differ from what is currently stated.

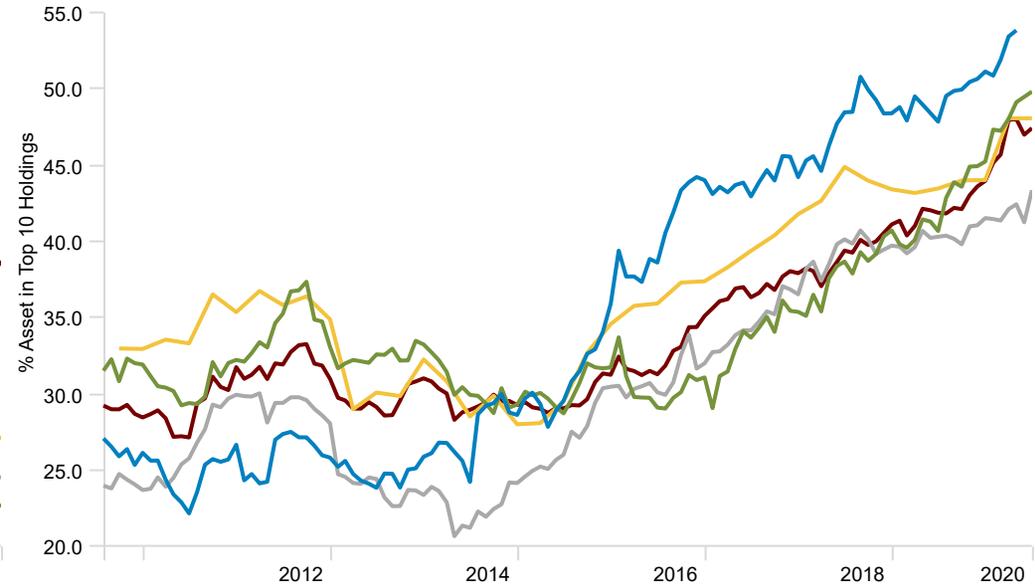


	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
COMPOSITION						
# of Holdings	89	78	46	122	321	435
% Asset in Top 10 Holdings	53.83	43.35	49.82	48.07	47.42	43.98
Asset Alloc Cash %	0.57	1.96	0.00	0.01	1.73	0.00
Asset Alloc Equity %	99.24	98.04	99.35	99.99	97.48	100.00
Asset Alloc Bond %	0.00	0.00	0.00	0.00	0.02	0.00
Asset Alloc Other %	0.19	0.00	0.65	0.00	0.78	0.00
CHARACTERISTICS						
Average Market Cap (mil)	220,097.48	185,067.23	242,120.70	212,878.01	216,548.49	204,567.27
P/E Ratio (TTM)	29.90	37.29	38.97	33.78	32.87	32.30
P/B Ratio (TTM)	6.07	7.44	9.78	6.02	5.67	10.24
LT Earn Growth	13.40	13.81	14.60	15.41	13.87	12.74
Dividend Yield	0.87	0.52	0.61	0.45	0.64	1.00
ROE % (TTM)	27.75	28.06	29.46	23.61	24.41	33.70
GICS SECTORS %						
Energy %	0.00	0.00	0.00	0.02	0.44	0.08
Materials %	1.94	2.23	2.39	0.42	2.37	0.82
Industrials %	4.08	6.76	1.91	3.08	2.30	4.62
Consumer Discretionary %	20.16	12.13	16.39	20.58	13.61	15.43
Consumer Staples %	1.05	2.06	2.12	0.11	2.85	4.83
Healthcare %	13.91	13.28	14.97	14.60	15.47	15.01
Financials %	4.42	3.47	3.03	3.92	7.38	2.10
Information Technology %	40.67	42.52	45.04	37.75	35.99	43.90
Communication Services %	12.41	15.46	11.20	19.41	18.71	11.14
Utilities %	0.00	0.00	0.00	0.06	0.15	0.02
Real Estate %	1.36	2.10	2.96	0.05	0.73	2.06
MARKET CAPITALIZATION						
Market Cap Giant %	58.21	55.91	69.93	55.62	68.38	61.44
Market Cap Large %	31.73	36.32	20.99	35.37	20.46	25.12
Market Cap Mid %	4.03	4.54	5.71	3.13	5.71	10.90
Market Cap Small %	0.00	0.00	0.00	0.00	0.38	0.31
Market Cap Micro %	0.00	0.00	0.00	0.00	0.00	0.00

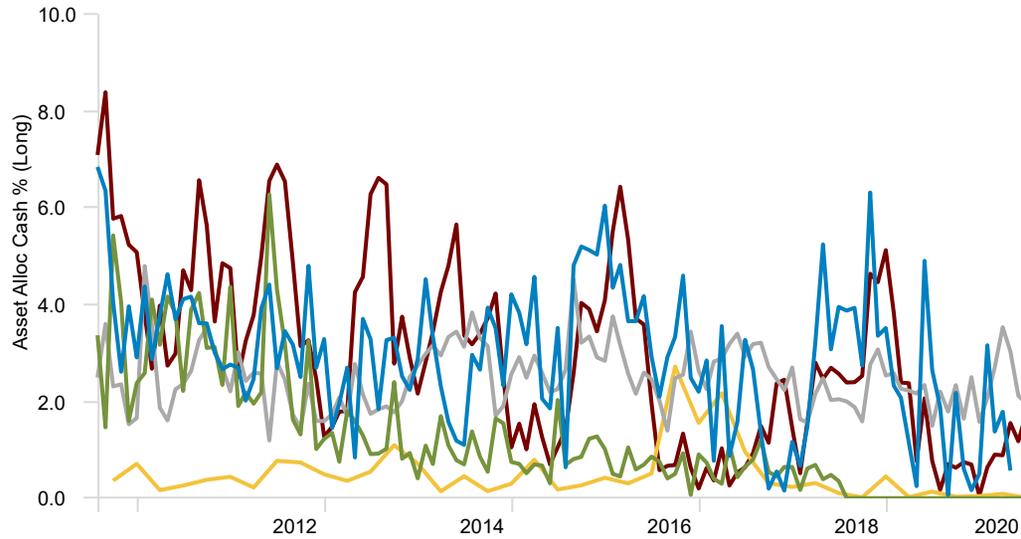
Historical Number of Holdings



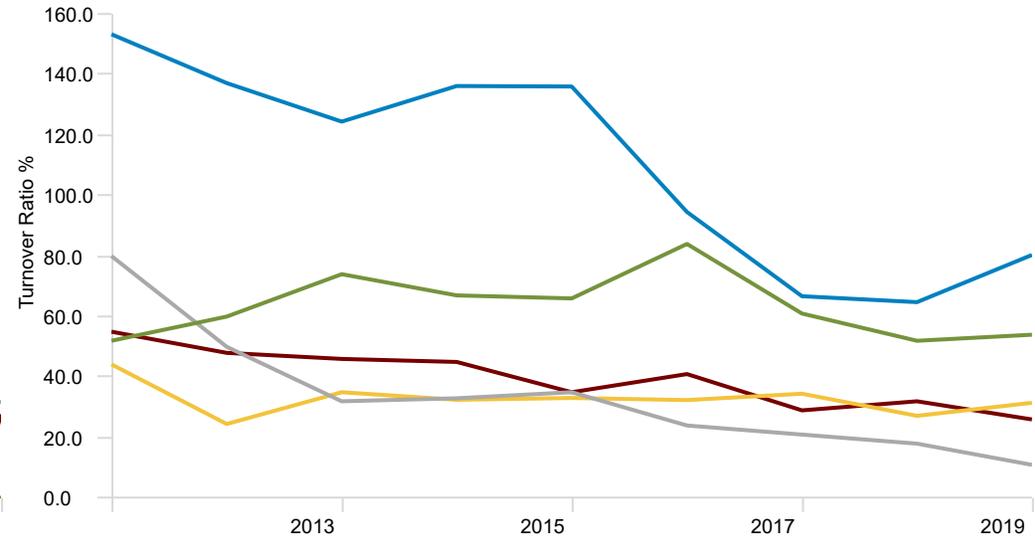
Historical Percentage of Assets in Top 10 Holdings



Historical Cash Allocation



Historical Portfolio Turnover



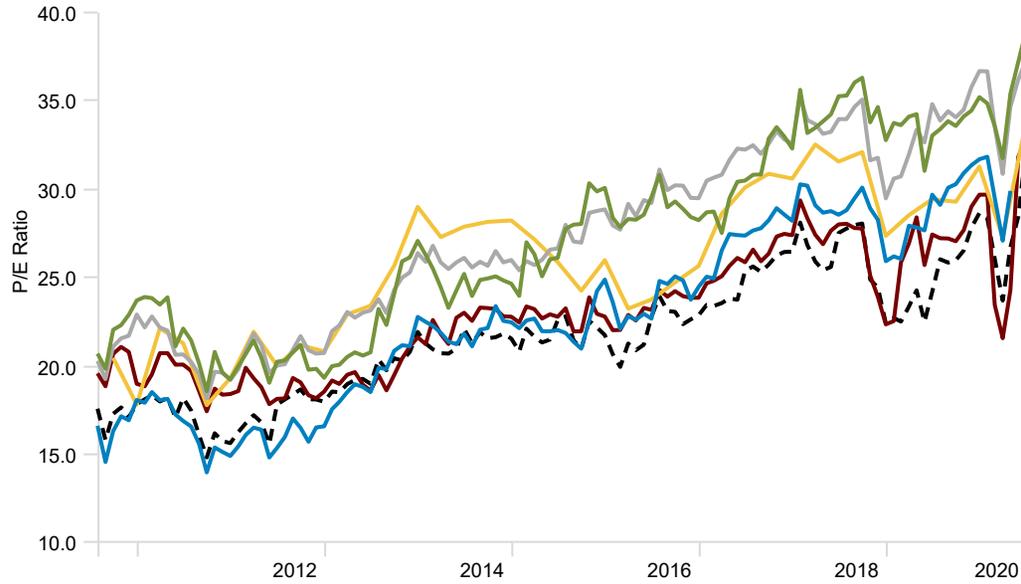
— Alger Capital Appreciation Instl Y
— T. Rowe Price Blue Chip Growth I

— MFS Growth I
◆ Fidelity@ Contrafund®

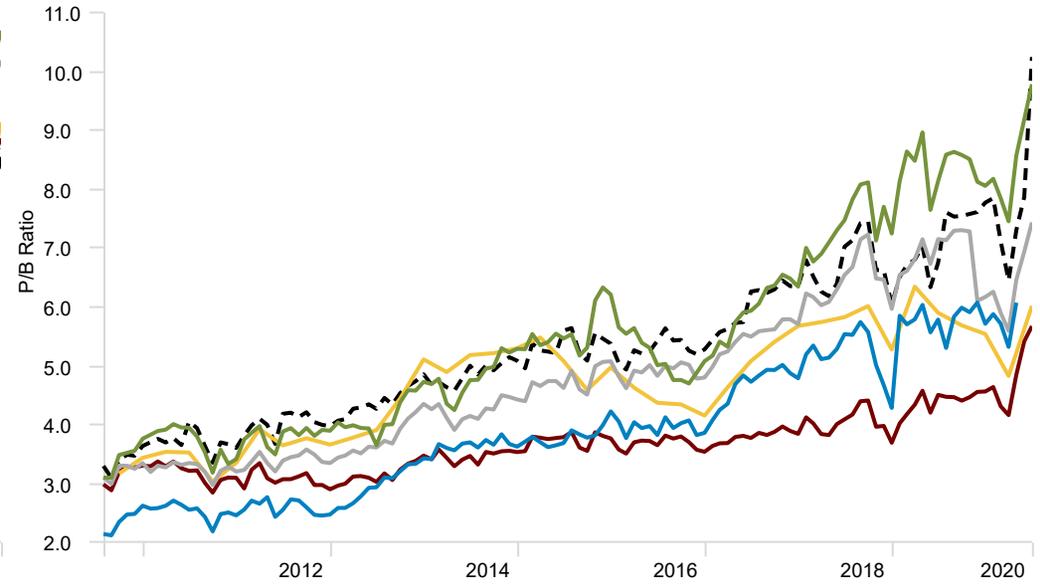
— MainStay Winslow Large Cap Growth R6



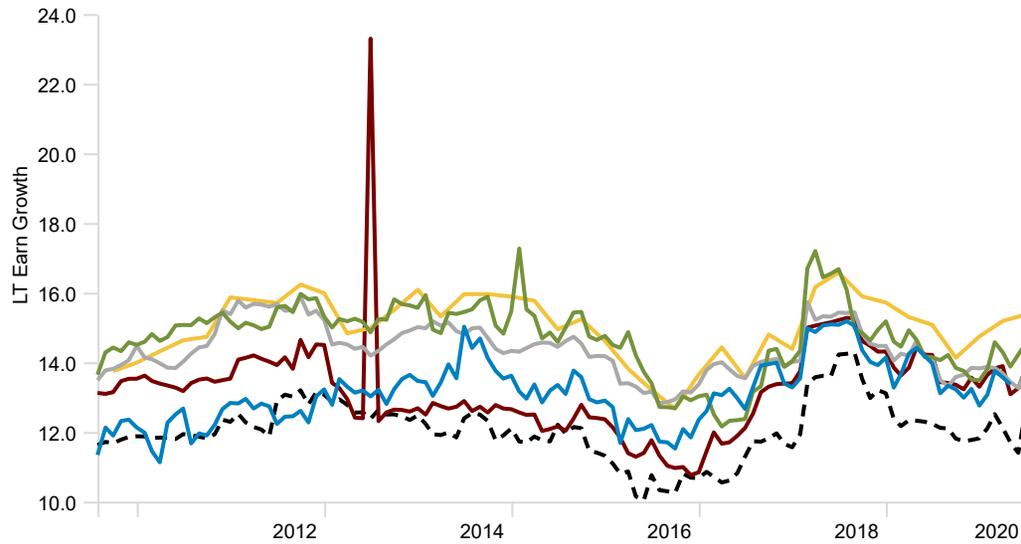
Historical P/E Ratio



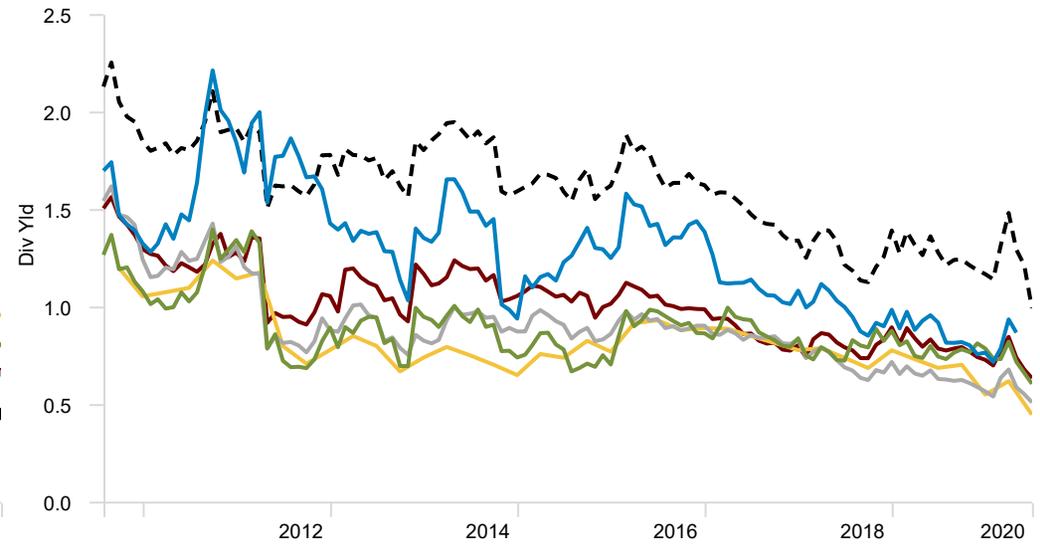
Historical P/B Ratio



Historical Earnings Growth



Historical Dividend Yield



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— T. Rowe Price Blue Chip Growth I

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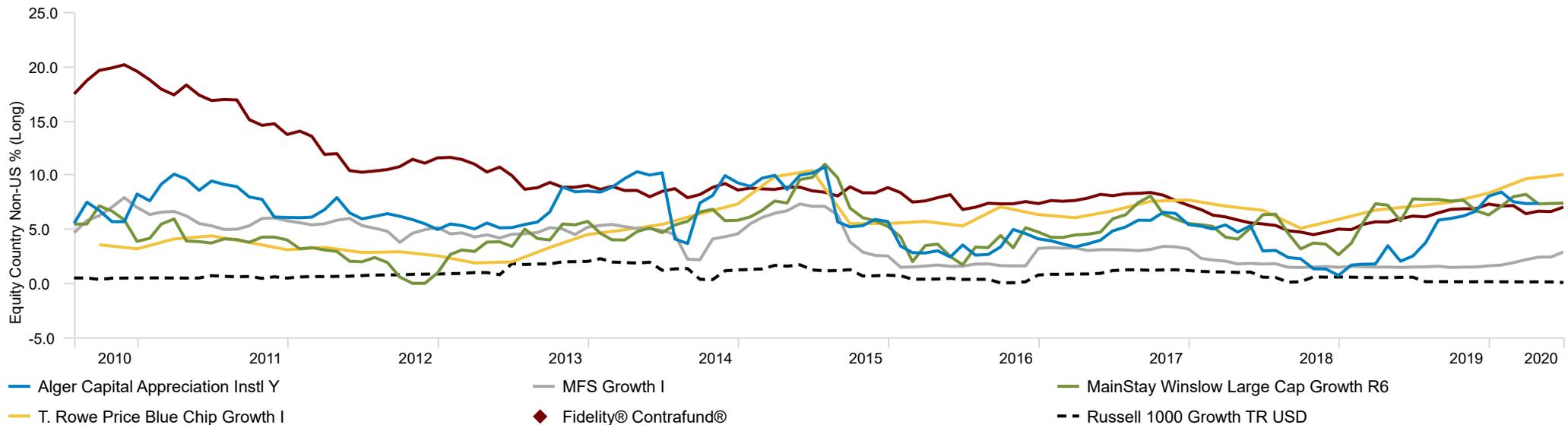
— MainStay Winslow Large Cap Growth R6
- - - Russell 1000 Growth TR USD



Current Portfolio Region Allocation

	Alger Capital Appreciation Instl Y	MainStay Winslow Large Cap Growth R6	MFS Growth I	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Equity Country United States %	92.48	91.75	97.73	90.33	93.46	99.86
Equity Region North America %	92.48	91.75	98.81	90.56	95.34	99.86
Equity Region Latin America %	0.00	0.00	0.00	0.00	0.06	0.00
Equity Region United Kingdom %	0.28	2.99	0.54	1.24	1.06	0.01
Equity Region Europe dev %	1.08	1.79	0.00	0.23	1.67	0.00
Equity Region Europe emrg %	0.00	0.00	0.00	0.00	0.00	0.00
Equity Region Japan %	0.00	0.00	0.00	0.00	0.22	0.00
Equity Region Australasia %	0.00	0.00	0.00	0.00	0.15	0.00
Equity Region Asia dev %	0.00	0.00	0.00	0.00	0.08	0.00
Equity Region Asia emrg %	6.16	3.02	0.66	7.98	1.42	0.14
Equity Region Africa/Middle East %	0.00	0.46	0.00	0.00	0.00	0.00
Equity Region Developed %	93.84	96.98	99.34	92.02	98.52	99.86
Equity Region Emerging %	6.16	3.02	0.66	7.98	1.48	0.14

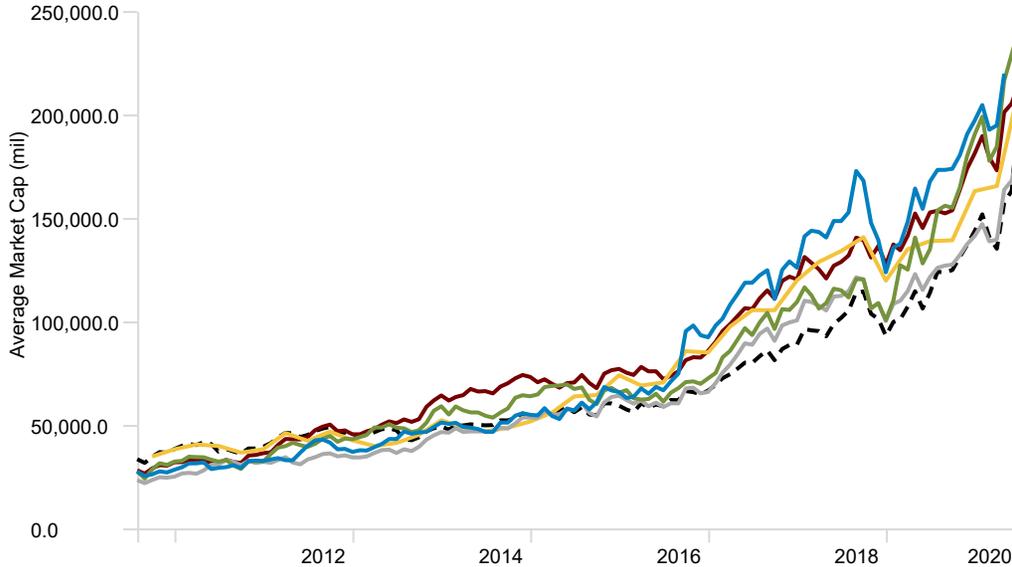
Historical Non-US Portfolio Exposure



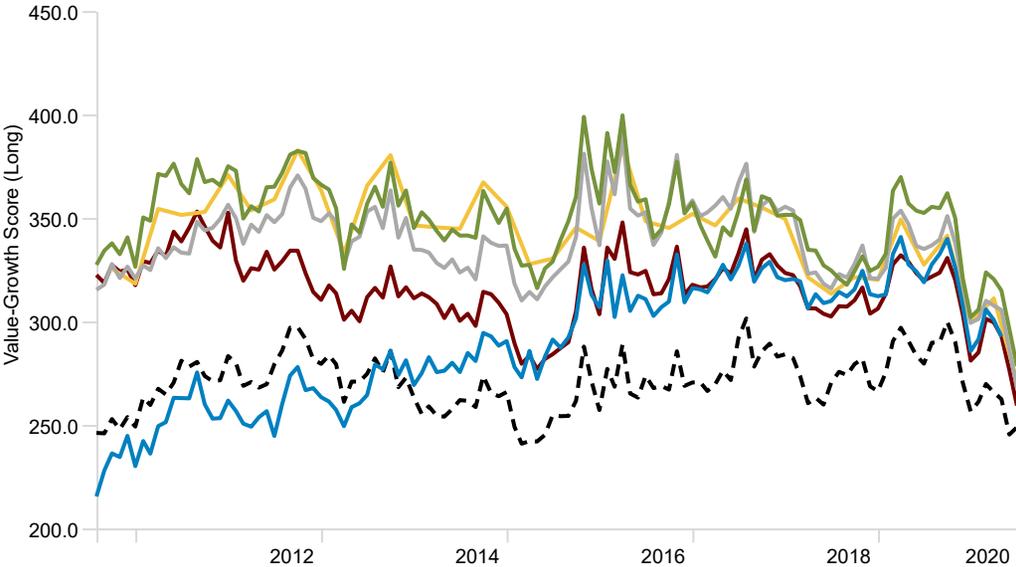
Style Allocation

	Alger Capital Appreciation Instl Y	MainStay Winslow Large Cap Growth R6	MFS Growth I	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Equity Style Large Value %	4.84	0.00	2.05	2.07	5.07	9.64
Equity Style Large Core %	26.63	20.76	21.46	25.28	25.11	30.04
Equity Style Large Growth %	62.73	73.93	67.12	68.68	61.13	47.13
Equity Style Mid Value %	0.07	0.00	0.49	0.22	0.19	1.11
Equity Style Mid Core %	0.46	0.00	0.36	0.94	1.23	3.69
Equity Style Mid Growth %	1.83	3.67	4.26	2.05	4.02	7.44
Equity Style Small Value %	0.00	0.00	0.00	0.00	0.05	0.14
Equity Style Small Core %	0.00	0.00	0.00	0.00	0.19	0.24
Equity Style Small Growth %	0.00	0.00	0.00	0.00	0.13	0.21

Historical Average Market Capitalization



Historical Value - Growth Score

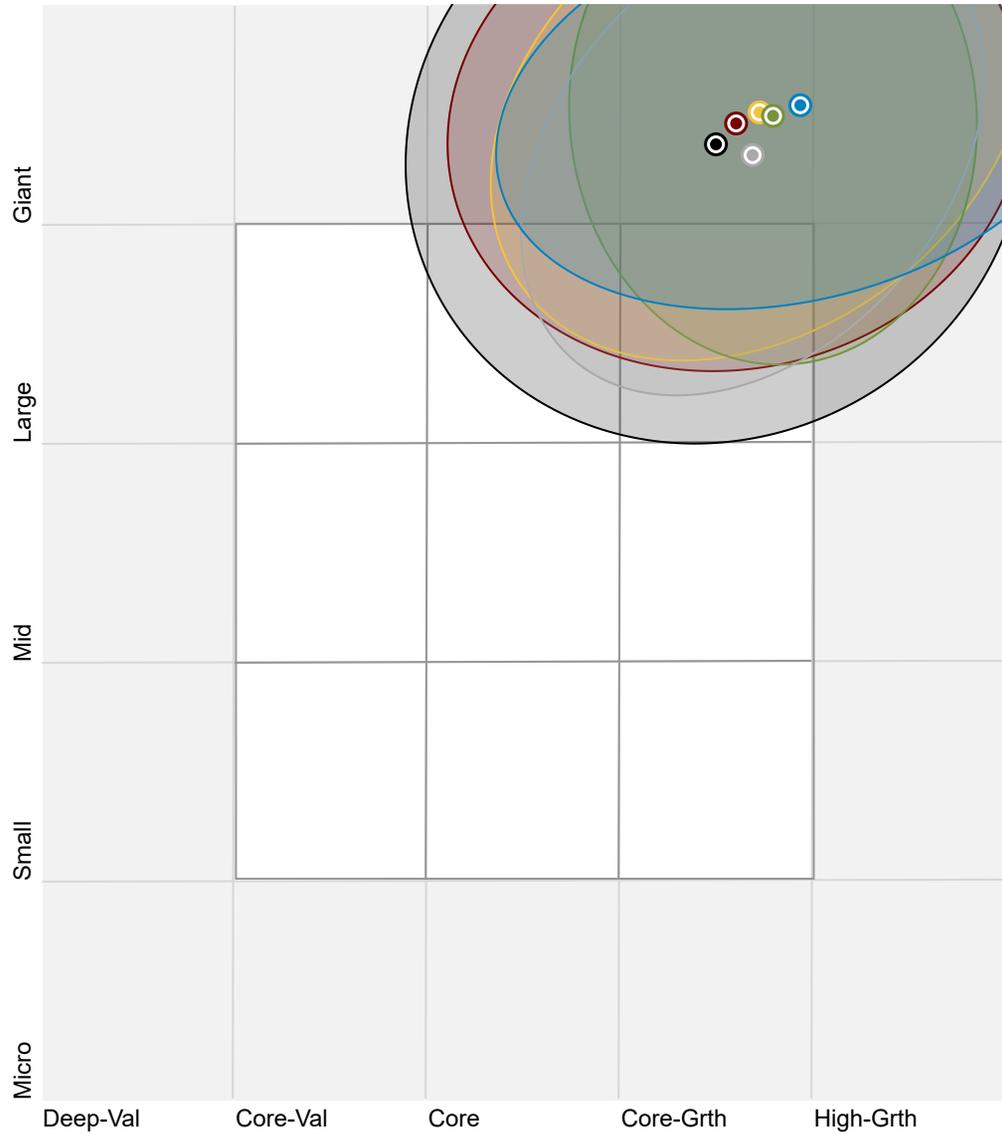


— Alger Capital Appreciation Instl Y — MFS Growth I
— T. Rowe Price Blue Chip Growth I ◆ Fidelity® Contrafund®

— MainStay Winslow Large Cap Growth R6
- - Russell 1000 Growth TR USD

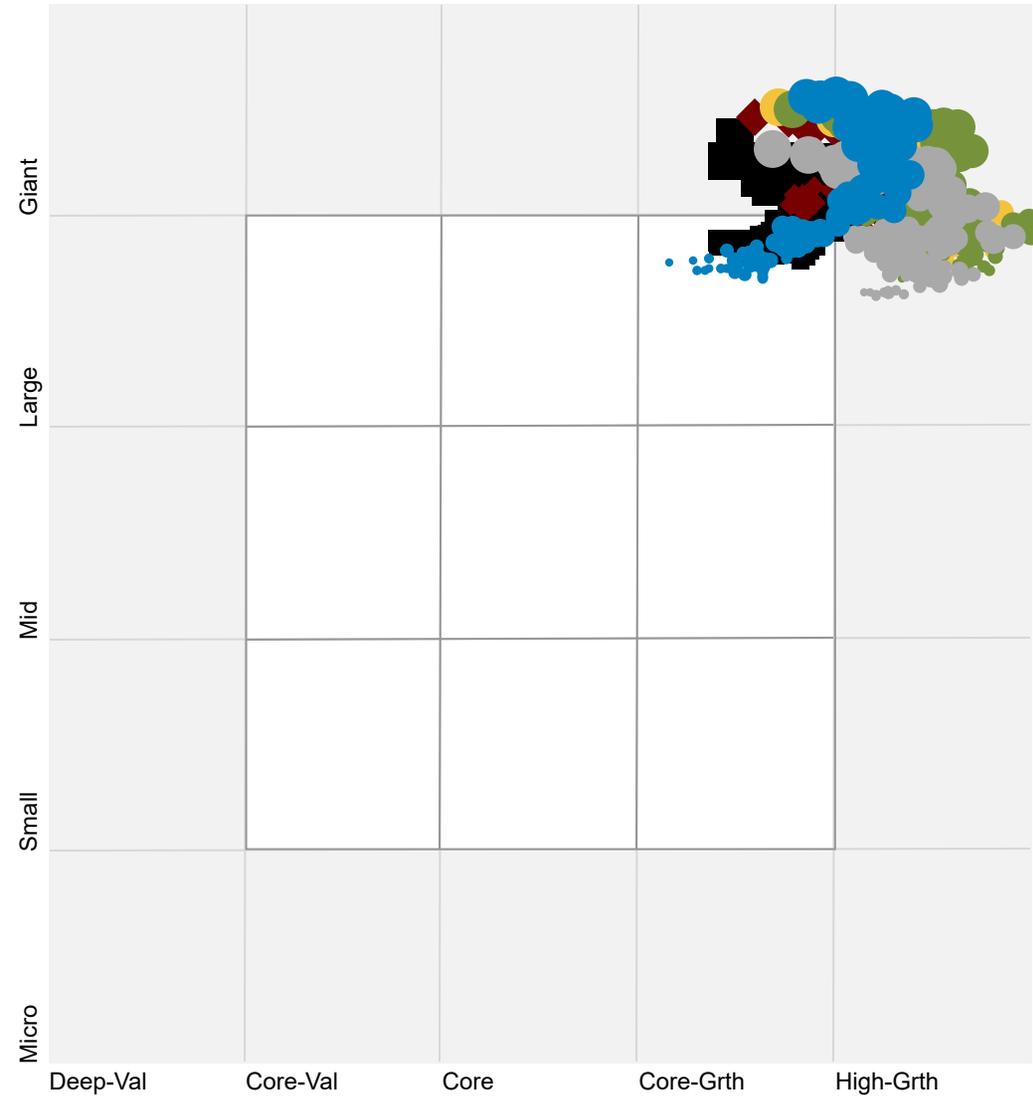


Current Portfolio Holdings-Style Map



Historical Holdings-Based Style Trail

Time Period: 7/31/2010 to 6/30/2020



● Alger Capital Appreciation Instl Y

● MFS Growth I

● MainStay Winslow Large Cap Growth R6

● T. Rowe Price Blue Chip Growth I

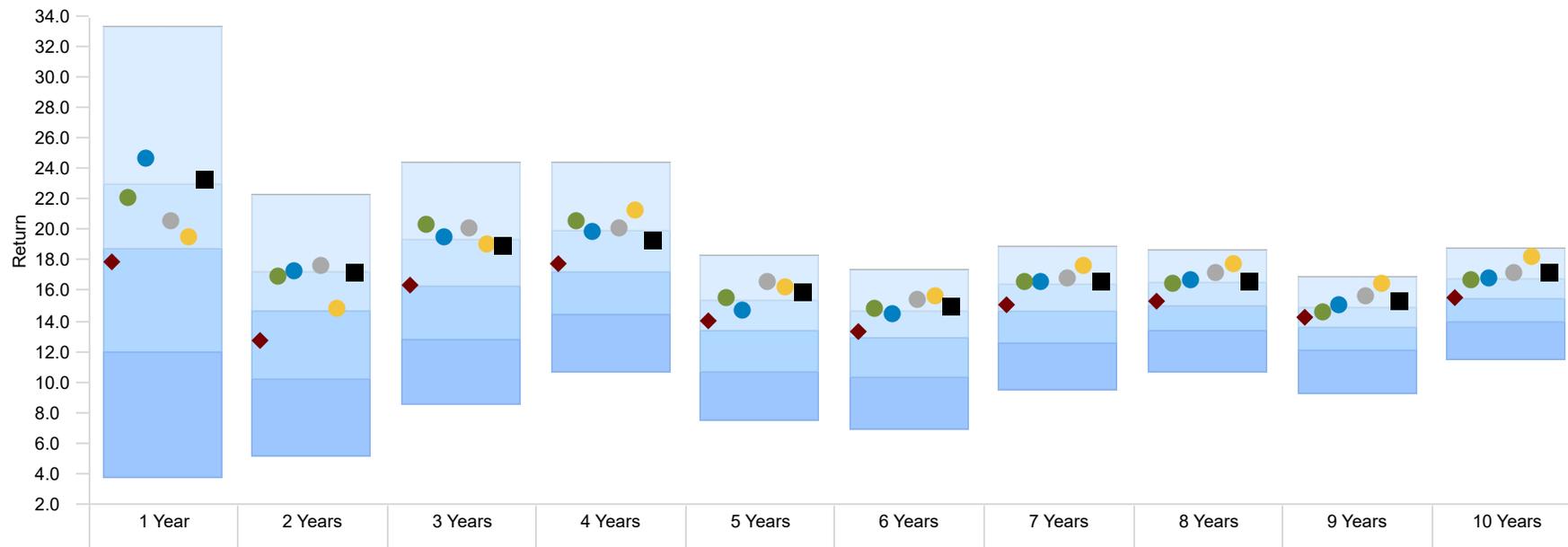
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■ Russell 1000 Growth TR USD



Quantitative Review

Peer Group (5-95%): Funds - U.S. - Large Growth



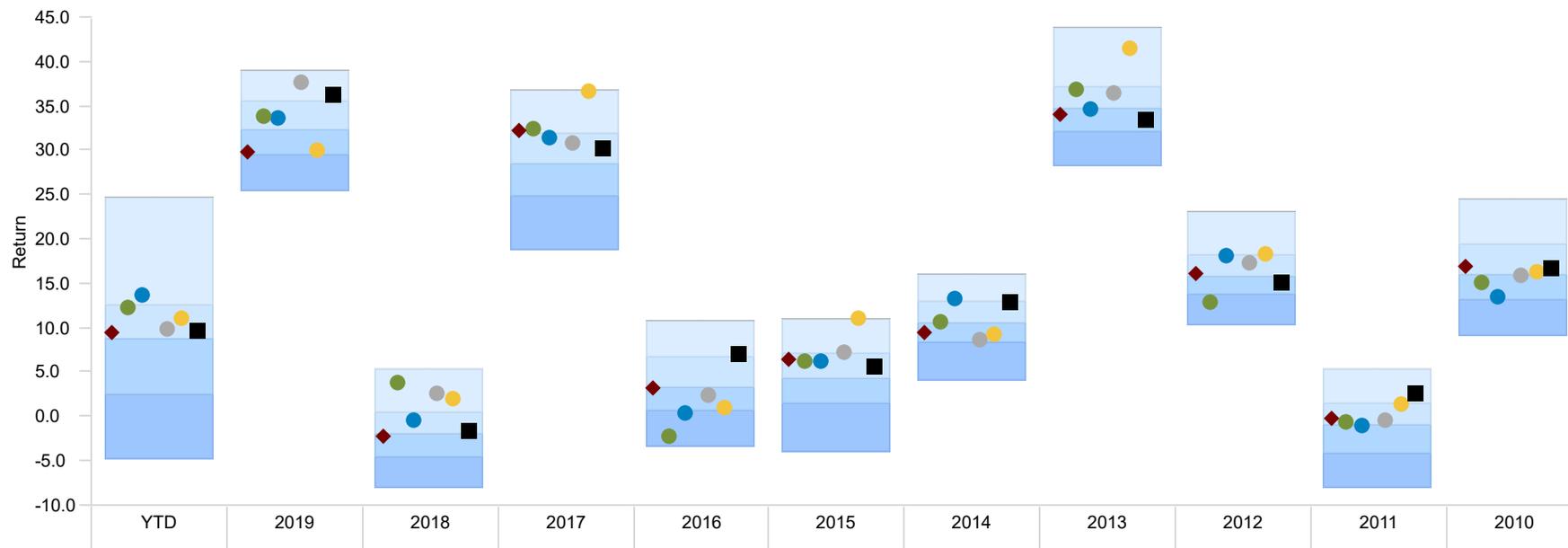
	1 Year	Rank	2 Years	Rank	3 Years	Rank	4 Years	Rank	5 Years	Rank	6 Years	Rank	7 Years	Rank	8 Years	Rank	9 Years	Rank	10 Years	Rank
Alger Capital Appreciation Instl Y	24.78	18	17.36	23	19.52	23	19.91	25	14.79	31	14.55	26	16.67	21	16.73	20	15.09	23	16.90	22
MFS Growth I	20.69	35	17.73	20	20.21	18	20.11	24	16.61	13	15.45	17	16.92	18	17.26	14	15.72	16	17.28	18
MainStay Winslow Large Cap Growth R6	22.12	29	16.94	27	20.43	17	20.60	19	15.59	23	14.94	21	16.62	21	16.52	24	14.60	30	16.74	25
T. Rowe Price Blue Chip Growth I	19.52	41	14.91	44	19.12	26	21.28	14	16.33	14	15.76	14	17.70	12	17.77	10	16.53	8	18.30	7
Fidelity® Contrafund®	17.91	48	12.81	58	16.42	47	17.83	43	14.05	39	13.41	40	15.09	43	15.30	45	14.24	36	15.57	47
Russell 1000 Growth TR USD	23.28	22	17.27	23	18.99	28	19.35	31	15.89	20	14.98	21	16.62	22	16.67	21	15.41	19	17.23	19

- Alger Capital Appreciation Instl Y
- MFS Growth I
- MainStay Winslow Large Cap Growth R6
- T. Rowe Price Blue Chip Growth I
- ◆ Fidelity® Contrafund®
- Russell 1000 Growth TR USD

Returns are Net of Fees. Performance data shown prior to fund's inception date represents extended performance of an older share class of the same strategy.



Peer Group (5-95%): Funds - U.S. - Large Growth



	YTD	Rank	2019	Rank	2018	Rank	2017	Rank	2016	Rank	2015	Rank	2014	Rank	2013	Rank	2012	Rank	2011	Rank	2010	Rank
Alger Capital Appreciation Instl Y	13.80	17	33.67	36	-0.44	33	31.43	26	0.46	79	6.23	32	13.30	25	34.81	49	18.11	22	-1.03	52	13.48	72
MFS Growth I	9.98	37	37.69	10	2.59	11	30.86	30	2.46	61	7.38	20	8.77	71	36.61	29	17.34	33	-0.32	42	15.96	53
MainStay Winslow Large Cap Growth R6	12.30	24	33.87	35	3.82	8	32.51	20	-2.17	91	6.25	32	10.75	51	36.89	28	12.90	80	-0.48	44	15.20	59
T. Rowe Price Blue Chip Growth I	11.07	30	30.13	69	2.14	13	36.71	5	1.13	72	11.15	4	9.28	66	41.57	8	18.41	19	1.50	25	16.42	47
Fidelity® Contrafund®	9.56	41	29.98	71	-2.13	50	32.21	22	3.36	54	6.46	29	9.56	62	34.15	55	16.26	43	-0.14	41	16.93	42
Russell 1000 Growth TR USD	9.81	38	36.39	17	-1.51	43	30.21	34	7.08	24	5.67	38	13.05	28	33.48	61	15.26	54	2.64	17	16.71	44

- Alger Capital Appreciation Instl Y
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- Russell 1000 Growth TR USD

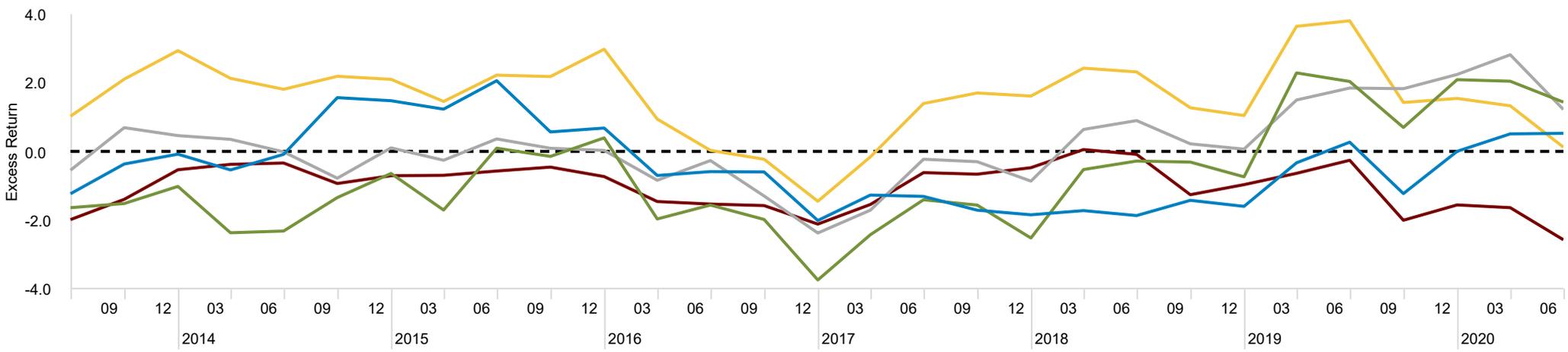
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Rolling Excess Returns

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Growth TR USD

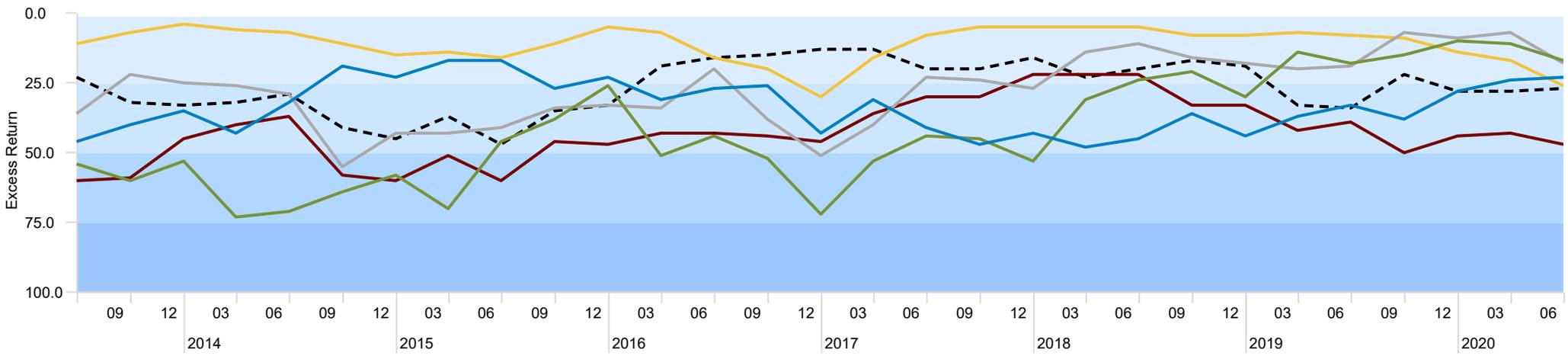


Rolling Excess Return Rankings

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 Growth TR USD

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



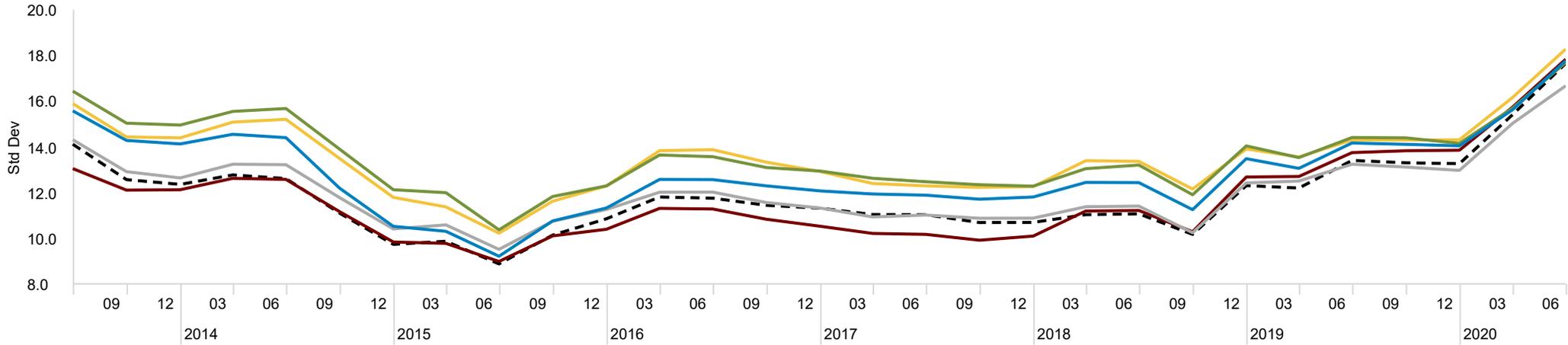
— Alger Capital Appreciation Instl Y
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 — MainStay Winslow Large Cap Growth R6
— T. Rowe Price Blue Chip Growth I
 — Fidelity® Contrafund®
 - - - Russell 1000 Growth TR USD



Rolling Standard Deviation

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift

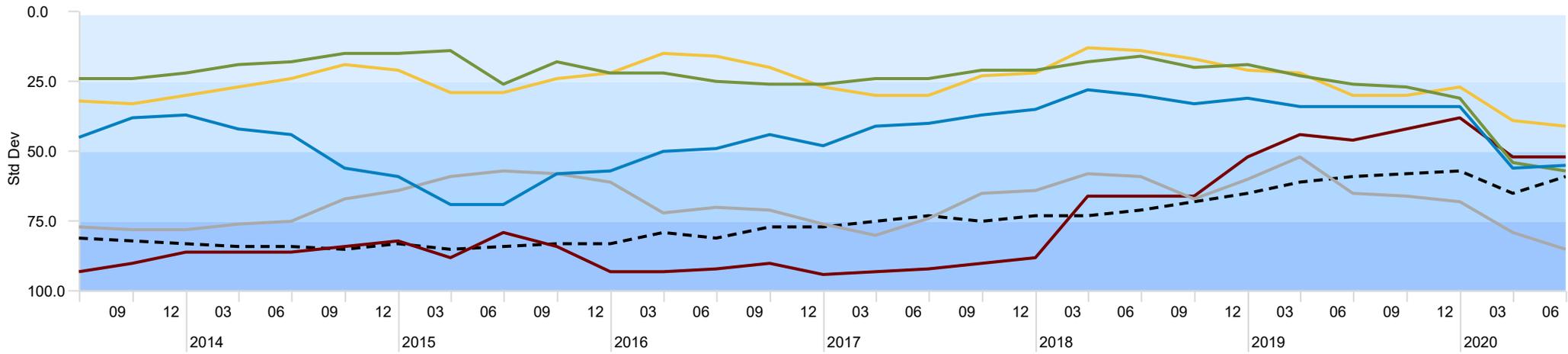


Rolling Standard Deviation Rankings

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 3 Years 3 Months shift

1st to 25th Percentile 26th to Median 51st to 75th Percentile 76th to 100th Percentile



Alger Capital Appreciation Instl Y
T. Rowe Price Blue Chip Growth I

MFS Growth I
Fidelity® Contrafund®

MainStay Winslow Large Cap Growth R6
Russell 1000 Growth TR USD



Correlation Matrix

Time Period: 7/1/2010 to 6/30/2020

	1	2	3	4	5	6
1 Alger Capital Appreciation Instl Y	1.00					
2 MFS Growth I	0.98	1.00				
3 MainStay Winslow Large Cap Growth R6	0.98	0.98	1.00			
4 T. Rowe Price Blue Chip Growth I	0.98	0.98	0.98	1.00		
5 Fidelity® Contrafund®	0.98	0.98	0.98	0.98	1.00	
6 Russell 1000 Growth TR USD	0.98	0.98	0.97	0.97	0.98	1.00

Excess Return Correlation Matrix

Time Period: 7/1/2010 to 6/30/2020

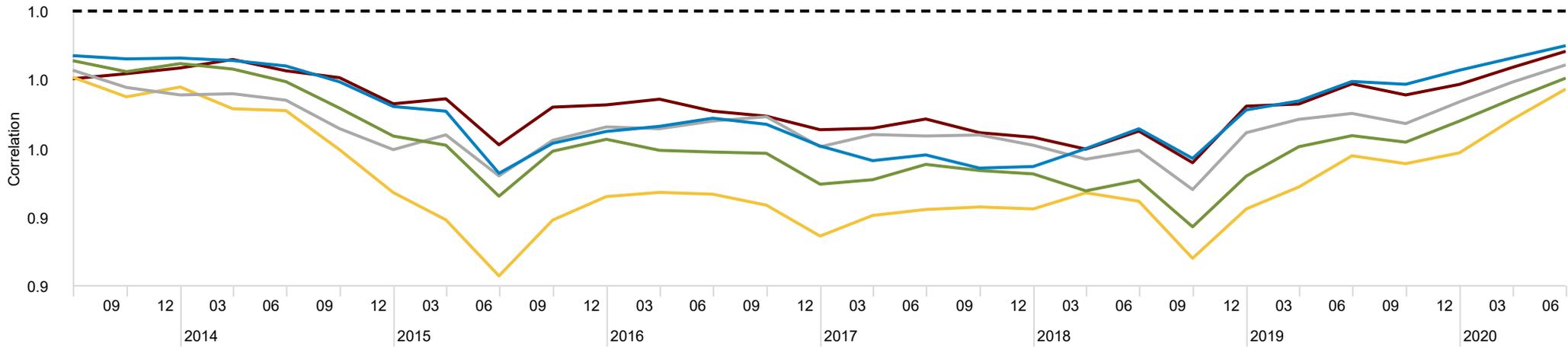
Calculation Benchmark: Russell 1000 Growth TR USD

		1	2	3	4	5	6
1 Alger Capital Appreciation Instl Y	Russell 1000 Growth TR USD	1.00					
2 MFS Growth I	Russell 1000 Growth TR USD	0.46	1.00				
3 MainStay Winslow Large Cap Growth R6	Russell 1000 Growth TR USD	0.62	0.63	1.00			
4 T. Rowe Price Blue Chip Growth I	Russell 1000 Growth TR USD	0.56	0.57	0.72	1.00		
5 Fidelity® Contrafund®	Russell 1000 Growth TR USD	0.48	0.57	0.44	0.56	1.00	
6 Russell 1000 Growth TR USD	Russell 1000 Growth TR USD						1.00

Rolling Correlation

Time Period: 7/1/2010 to 6/30/2020

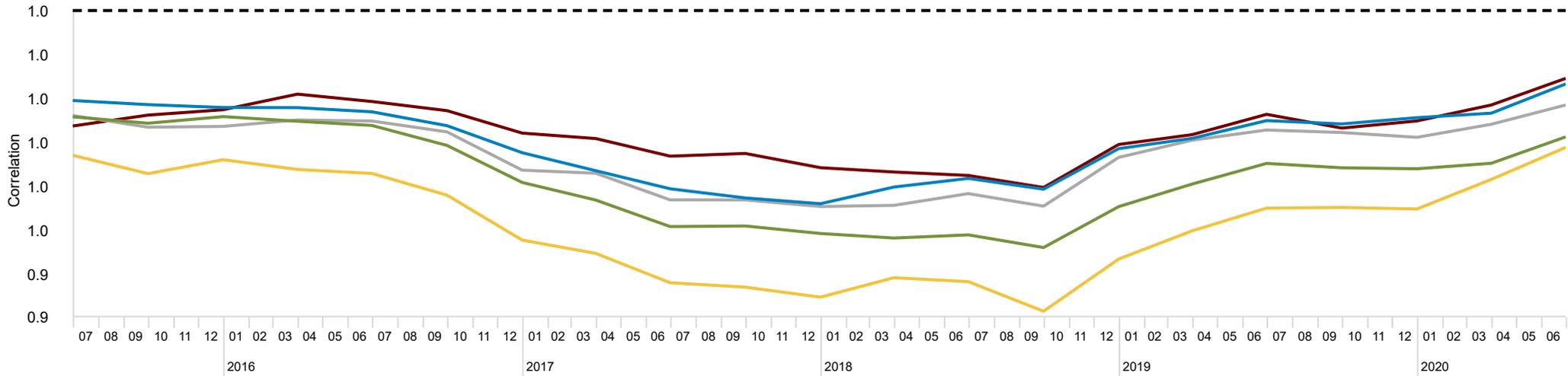
Rolling Window: 3 Years 3 Months shift



Rolling Correlation

Time Period: 7/1/2010 to 6/30/2020

Rolling Window: 5 Years 3 Months shift



— Alger Capital Appreciation Instl Y
— T. Rowe Price Blue Chip Growth I

— MFS Growth I
— Fidelity® Contrafund®

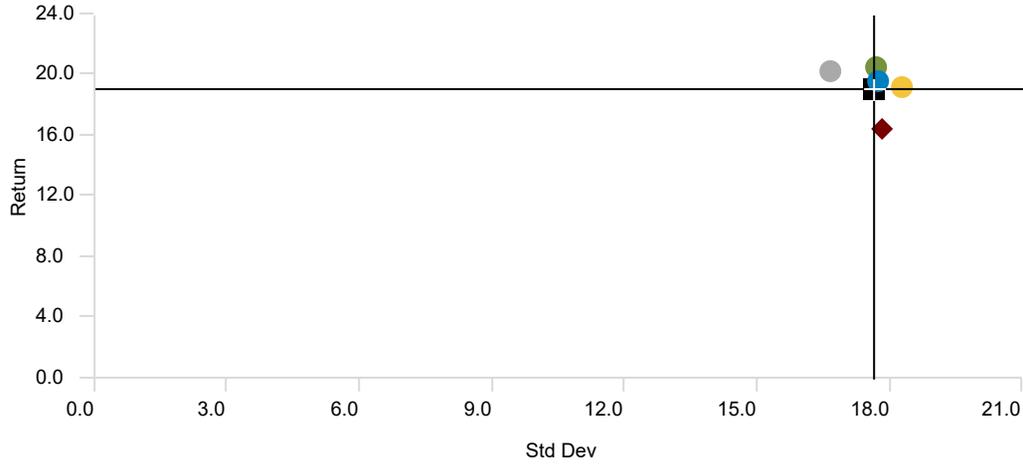
— MainStay Winslow Large Cap Growth R6
- - Russell 1000 Growth TR USD



Risk-Reward: 3-Year

Time Period: 7/1/2017 to 6/30/2020

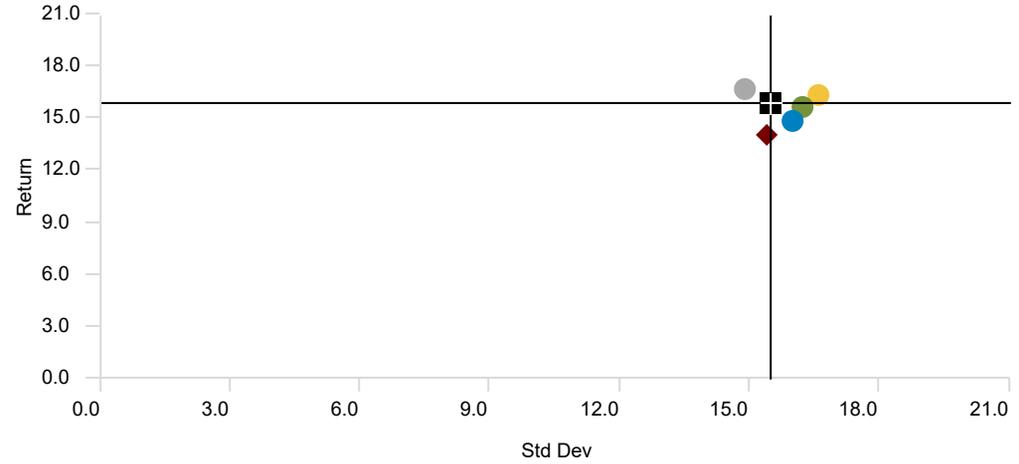
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 5-Year

Time Period: 7/1/2015 to 6/30/2020

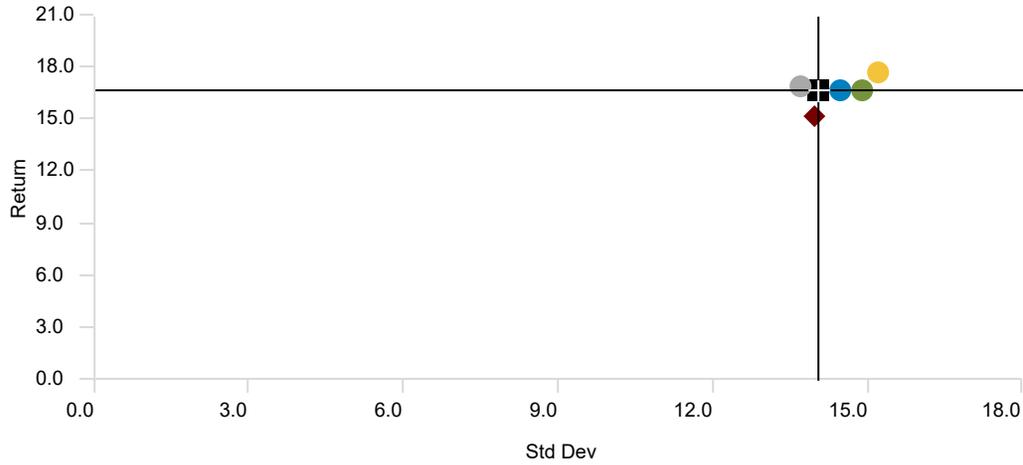
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 7-Year

Time Period: 7/1/2013 to 6/30/2020

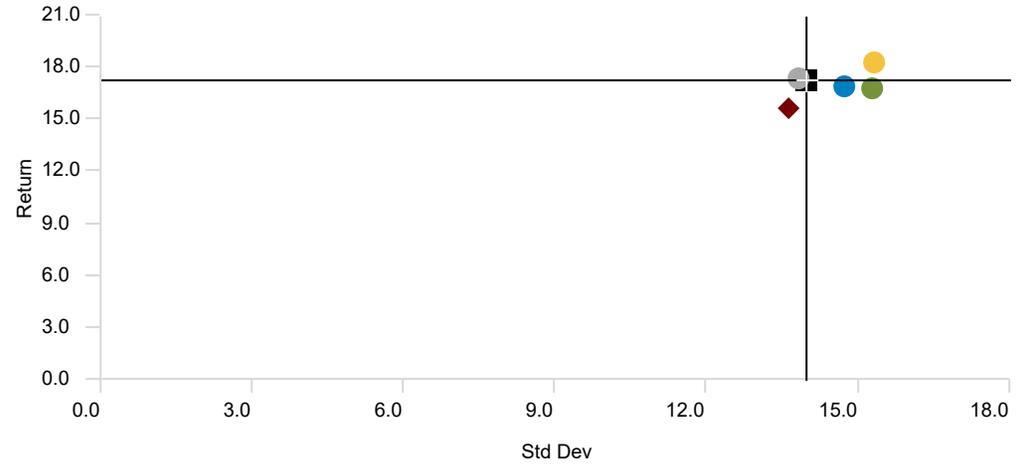
Calculation Benchmark: Russell 1000 Growth TR USD



Risk-Reward: 10-Year

Time Period: 7/1/2010 to 6/30/2020

Calculation Benchmark: Russell 1000 Growth TR USD



● Alger Capital Appreciation Instl Y

● MFS Growth I

● MainStay Winslow Large Cap Growth R6

● T. Rowe Price Blue Chip Growth I

◆ Fidelity® Contrafund®

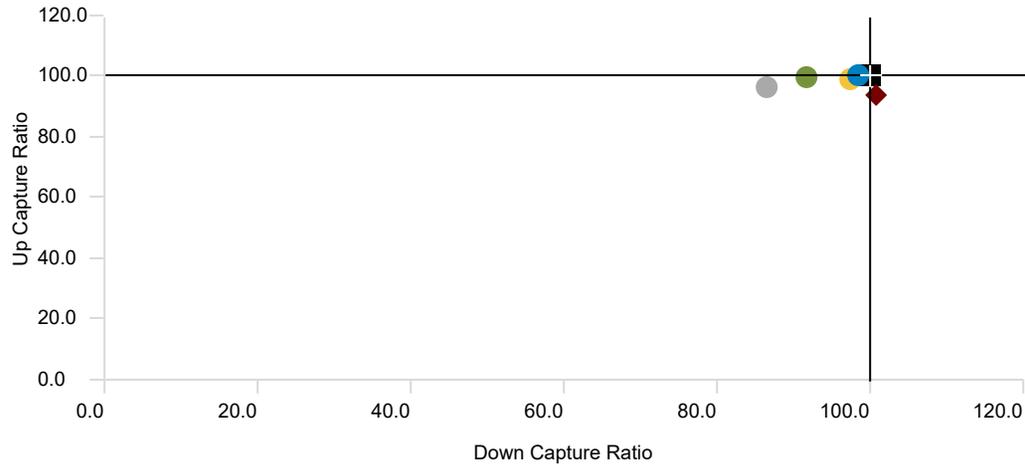
■ Russell 1000 Growth TR USD



Up and Down Market Capture: 3-Year

Time Period: 7/1/2017 to 6/30/2020

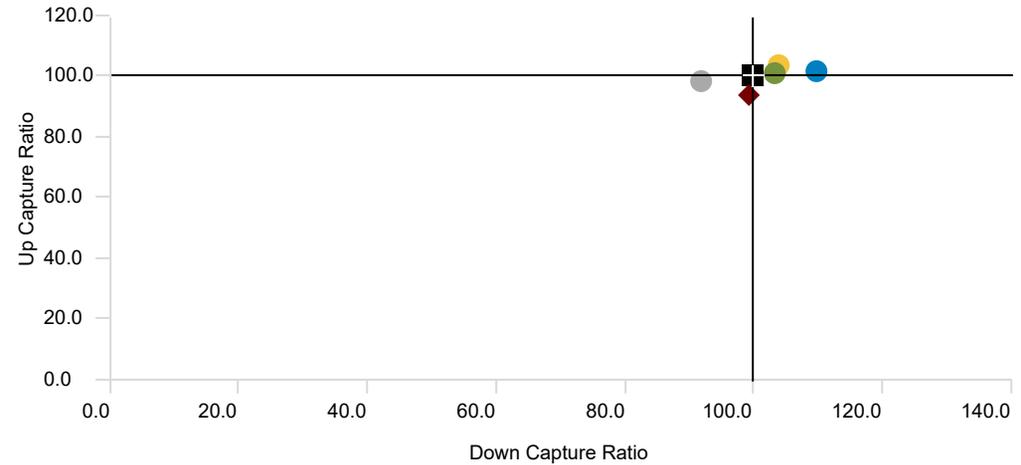
Calculation Benchmark: Russell 1000 Growth TR USD



Up and Down Market Capture: 5-Year

Time Period: 7/1/2015 to 6/30/2020

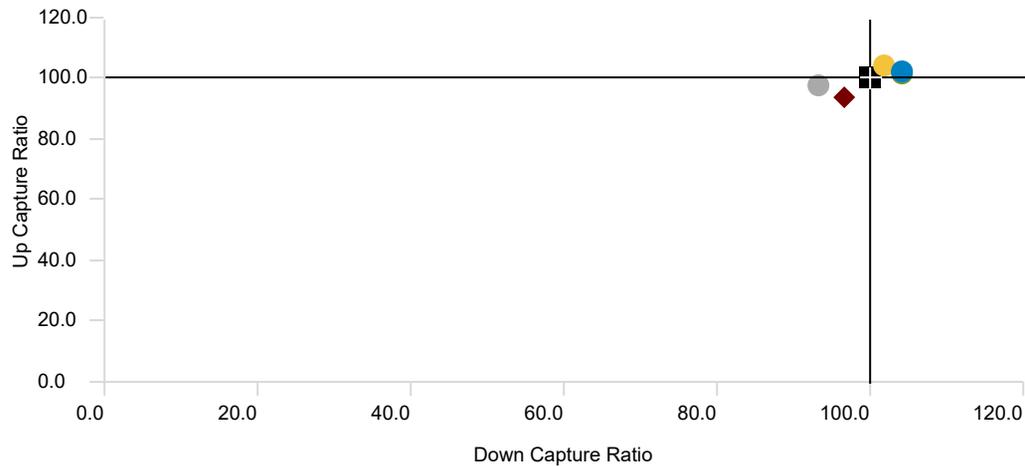
Calculation Benchmark: Russell 1000 Growth TR USD



Up and Down Market Capture: 7-Year

Time Period: 7/1/2013 to 6/30/2020

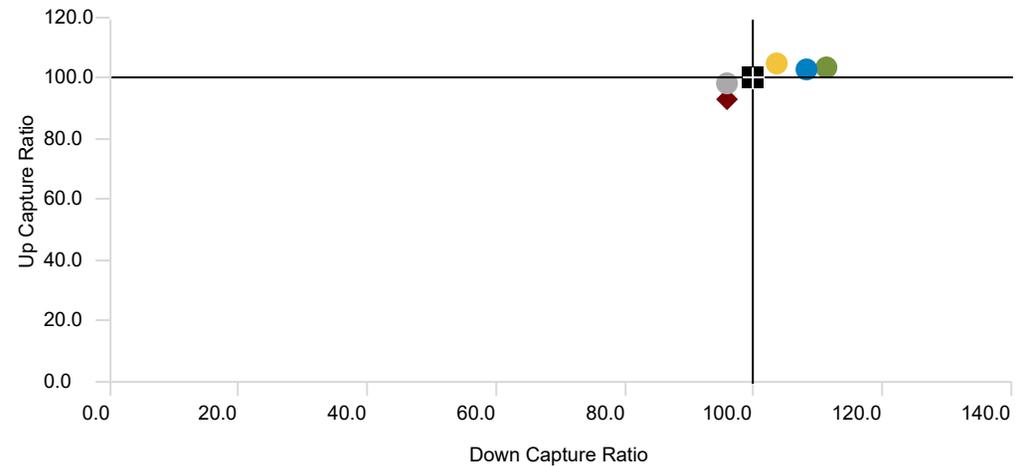
Calculation Benchmark: Russell 1000 Growth TR USD



Up and Down Market Capture: 10-Year

Time Period: 7/1/2010 to 6/30/2020

Calculation Benchmark: Russell 1000 Growth TR USD



● Alger Capital Appreciation Instl Y

● MFS Growth I

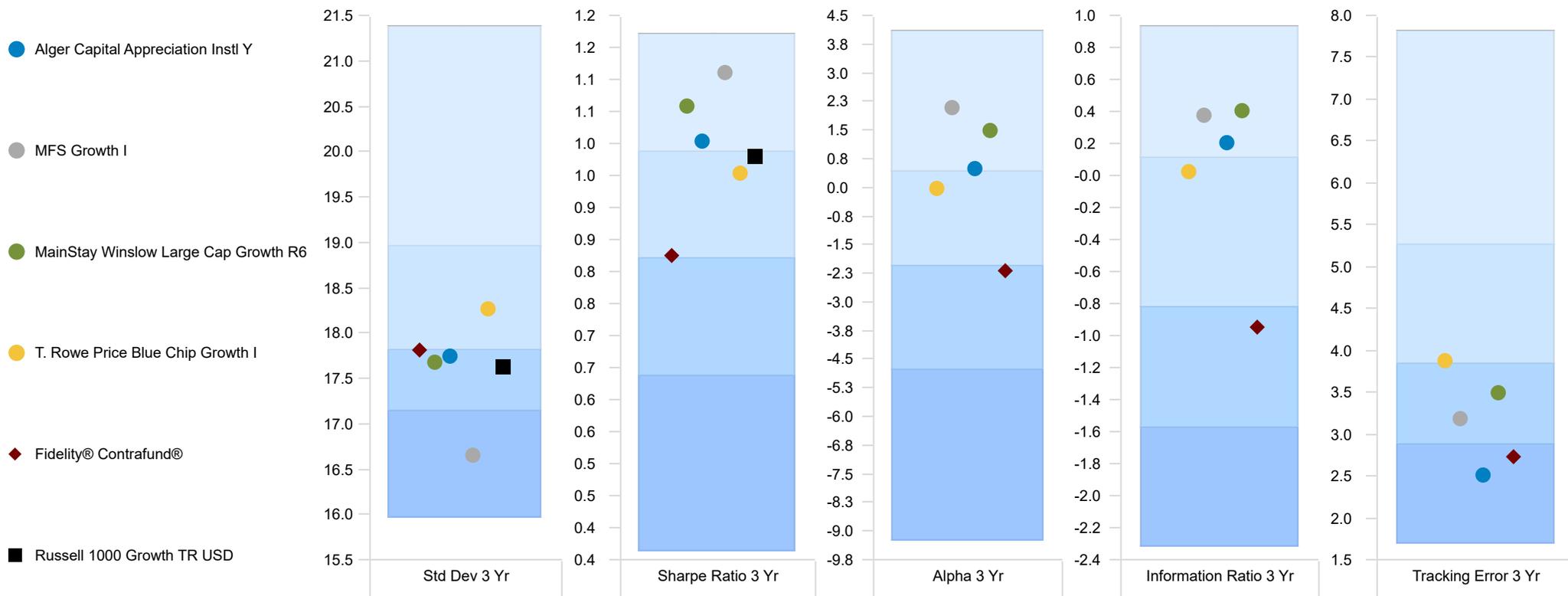
● MainStay Winslow Large Cap Growth R6

● T. Rowe Price Blue Chip Growth I

◆ Fidelity® Contrafund®

■ Russell 1000 Growth TR USD

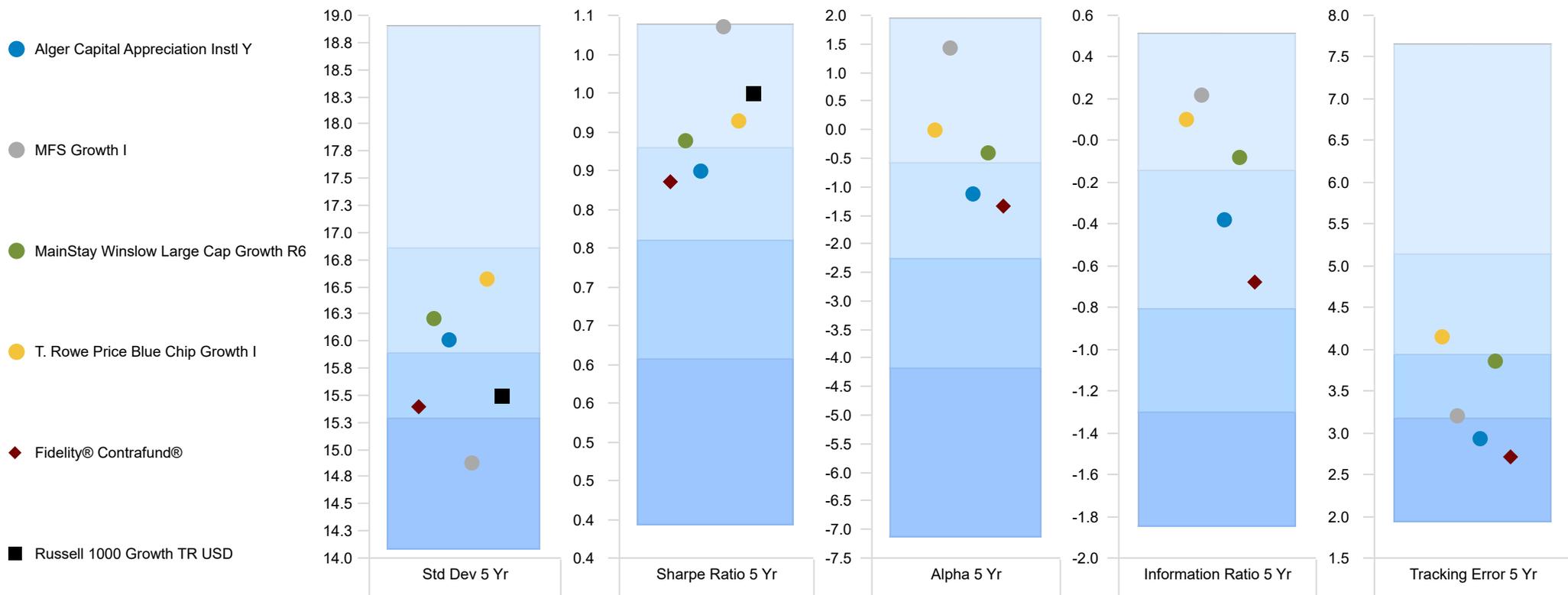




Time Period: 7/1/2017 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Alger Capital Appreciation Instl Y	17.76	55	1.00	21	0.52	24	0.21	21	2.52	87
MFS Growth I	16.66	85	1.11	9	2.10	11	0.38	16	3.20	73
MainStay Winslow Large Cap Growth R6	17.68	57	1.06	13	1.52	15	0.41	15	3.50	66
T. Rowe Price Blue Chip Growth I	18.27	41	0.95	29	-0.01	28	0.03	26	3.89	53
Fidelity® Contrafund®	17.83	52	0.83	48	-2.17	50	-0.94	53	2.73	82
Russell 1000 Growth TR USD	17.64	59	0.98	25	0.00	28			0.00	100

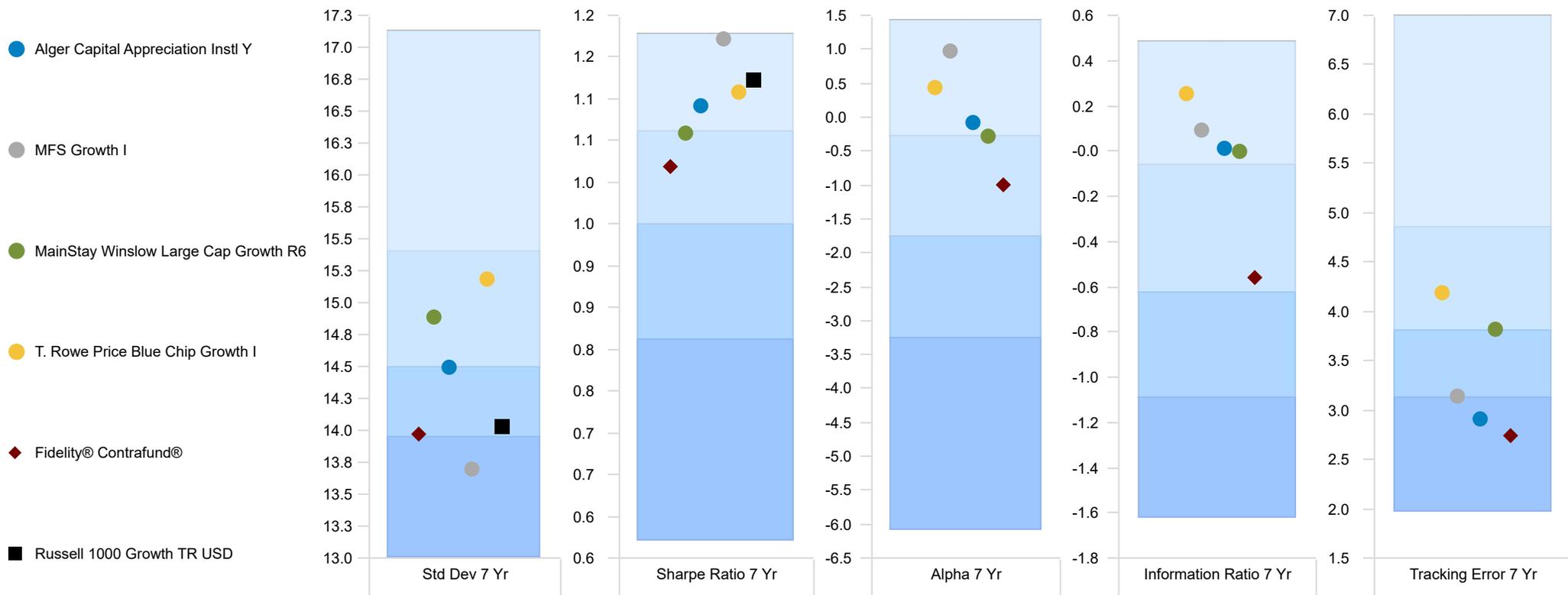




Time Period: 7/1/2015 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Alger Capital Appreciation Instl Y	16.01	47	0.85	31	-1.12	33	-0.38	32	2.93	83
MFS Growth I	14.89	85	1.04	5	1.43	7	0.22	10	3.21	75
MainStay Winslow Large Cap Growth R6	16.21	42	0.89	24	-0.39	23	-0.08	22	3.87	56
T. Rowe Price Blue Chip Growth I	16.58	33	0.91	19	0.00	18	0.11	14	4.16	47
Fidelity® Contrafund®	15.41	70	0.84	34	-1.32	35	-0.68	44	2.72	87
Russell 1000 Growth TR USD	15.49	67	0.95	13	0.00	18	0.00		0.00	100

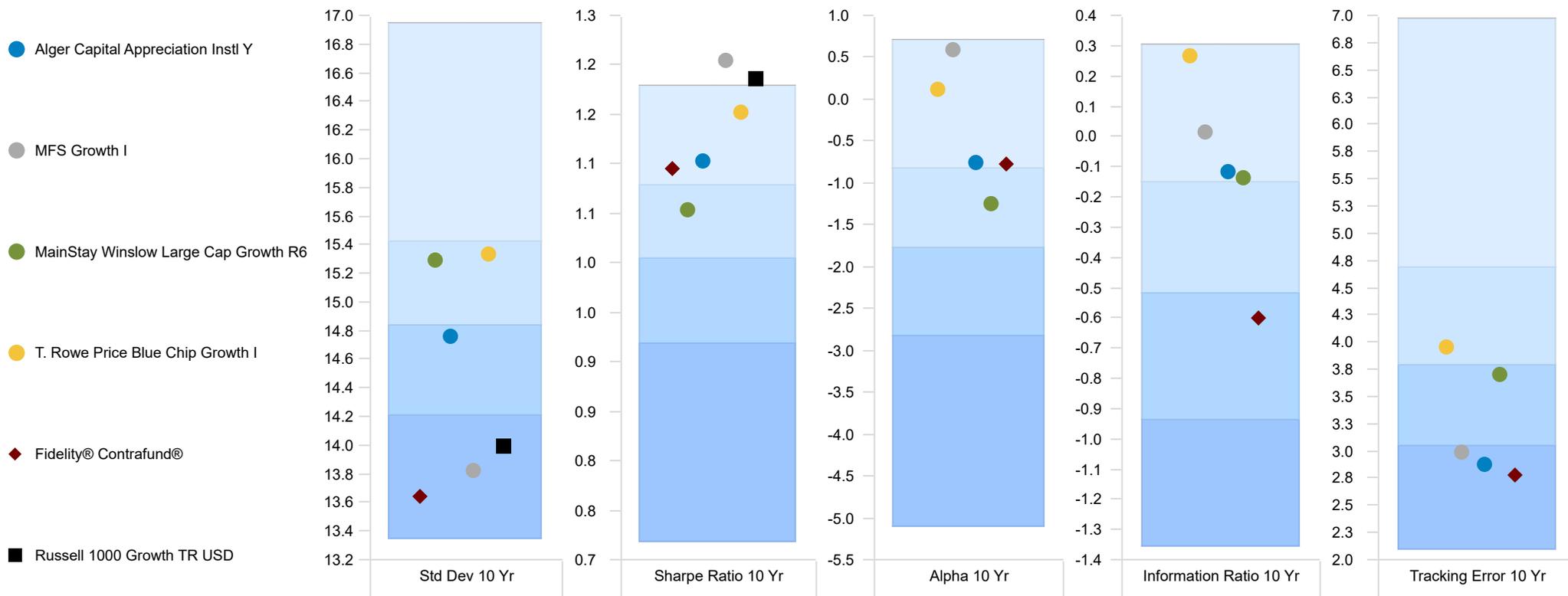




Time Period: 7/1/2013 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Alger Capital Appreciation Instl Y	14.50	53	1.09	20	-0.08	22	0.02	21	2.92	81
MFS Growth I	13.70	82	1.17	6	0.98	8	0.10	17	3.15	74
MainStay Winslow Large Cap Growth R6	14.89	41	1.06	26	-0.28	25	0.00	21	3.82	55
T. Rowe Price Blue Chip Growth I	15.20	32	1.11	15	0.45	13	0.26	12	4.19	42
Fidelity® Contrafund®	13.97	74	1.02	33	-0.98	36	-0.56	45	2.75	85
Russell 1000 Growth TR USD	14.03	71	1.12	11	0.00	20			0.00	100





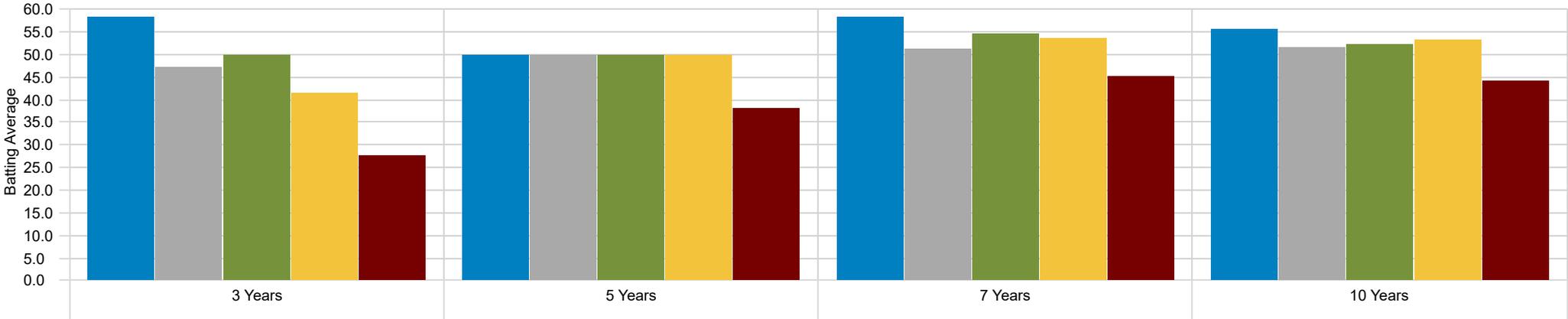
Time Period: 7/1/2010 to 6/30/2020

	Std Dev	Rank	Sharpe Ratio	Rank	Alpha	Rank	Information Ratio	Rank	Tracking Error	Rank
Alger Capital Appreciation Instl Y	14.76	53	1.10	20	-0.74	24	-0.12	23	2.88	81
MFS Growth I	13.82	84	1.21	4	0.60	6	0.02	18	3.00	79
MainStay Winslow Large Cap Growth R6	15.30	33	1.05	33	-1.24	37	-0.13	23	3.71	58
T. Rowe Price Blue Chip Growth I	15.34	31	1.15	10	0.12	9	0.27	6	3.96	49
Fidelity® Contrafund®	13.65	88	1.10	22	-0.77	25	-0.60	53	2.78	86
Russell 1000 Growth TR USD	14.00	81	1.19	5	0.00	11			0.00	100



Batting Average

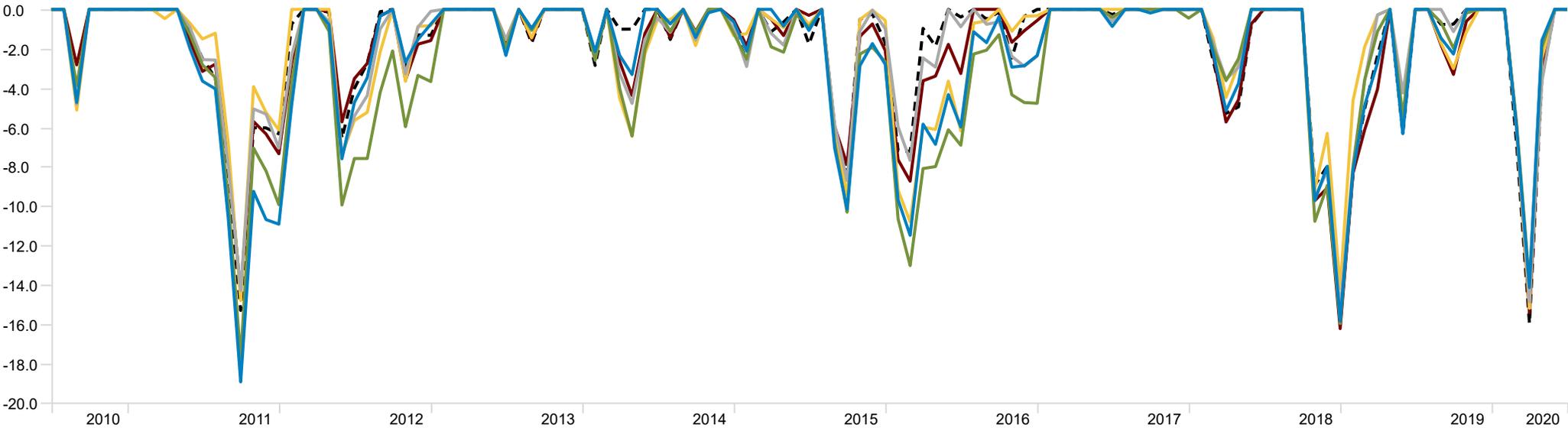
Source Data: Monthly Return Calculation Benchmark: Russell 1000 Growth TR USD



Drawdown

Time Period: 7/1/2010 to 6/30/2020

Source Data: Monthly Return



- Alger Capital Appreciation Instl Y
- MFS Growth I
- MainStay Winslow Large Cap Growth R6
- T. Rowe Price Blue Chip Growth I
- ◆ Fidelity® Contrafund®
- - - Russell 1000 Growth TR USD



MPT Statistics: 3-Year

Time Period: 7/1/2017 to 6/30/2020 Calculation Benchmark: Russell 1000 Growth TR USD

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Return	19.52	20.21	20.43	19.12	16.42	18.99
Excess Return	0.53	1.22	1.43	0.12	-2.58	0.00
Std Dev	17.76	16.66	17.68	18.27	17.83	17.64
Beta	1.00	0.93	0.98	1.01	1.00	1.00
Tracking Error	2.52	3.20	3.50	3.89	2.73	0.00
Sharpe Ratio	1.00	1.11	1.06	0.95	0.83	0.98
Alpha	0.52	2.10	1.52	-0.01	-2.17	0.00
Information Ratio	0.21	0.38	0.41	0.03	-0.94	
Batting Average	58.33	47.22	50.00	41.67	27.78	100.00
Up Capture Ratio	100.55	96.31	99.45	99.03	93.67	100.00
Down Capture Ratio	98.44	86.51	91.70	97.47	100.60	100.00

MPT Statistics: 5-Year

Time Period: 7/1/2015 to 6/30/2020 Calculation Benchmark: Russell 1000 Growth TR USD

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Return	14.79	16.61	15.59	16.33	14.05	15.89
Excess Return	-1.10	0.72	-0.30	0.44	-1.84	0.00
Std Dev	16.01	14.89	16.21	16.58	15.41	15.49
Beta	1.02	0.94	1.02	1.04	0.98	1.00
Tracking Error	2.93	3.21	3.87	4.16	2.72	0.00
Sharpe Ratio	0.85	1.04	0.89	0.91	0.84	0.95
Alpha	-1.12	1.43	-0.39	0.00	-1.32	0.00
Information Ratio	-0.38	0.22	-0.08	0.11	-0.68	
Batting Average	50.00	50.00	50.00	50.00	38.33	100.00
Up Capture Ratio	101.43	98.22	100.75	103.36	93.98	100.00
Down Capture Ratio	109.64	92.02	103.35	103.98	99.35	100.00

MPT Statistics: 7-Year

Time Period: 7/1/2013 to 6/30/2020 Calculation Benchmark: Russell 1000 Growth TR USD

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Return	16.67	16.92	16.62	17.70	15.09	16.62
Excess Return	0.05	0.30	0.00	1.09	-1.53	0.00
Std Dev	14.50	13.70	14.89	15.20	13.97	14.03
Beta	1.01	0.95	1.03	1.04	0.98	1.00
Tracking Error	2.92	3.15	3.82	4.19	2.75	0.00
Sharpe Ratio	1.09	1.17	1.06	1.11	1.02	1.12
Alpha	-0.08	0.98	-0.28	0.45	-0.98	0.00
Information Ratio	0.02	0.10	0.00	0.26	-0.56	
Batting Average	58.33	51.19	54.76	53.57	45.24	100.00
Up Capture Ratio	102.00	97.91	101.83	104.20	93.56	100.00
Down Capture Ratio	104.07	93.21	104.07	101.64	96.59	100.00

MPT Statistics: 10-Year

Time Period: 7/1/2010 to 6/30/2020 Calculation Benchmark: Russell 1000 Growth TR USD

	Alger Capital Appreciation Instl Y	MFS Growth I	MainStay Winslow Large Cap Growth R6	T. Rowe Price Blue Chip Growth I	Fidelity® Contrafund®	Russell 1000 Growth TR USD
Return	16.90	17.28	16.74	18.30	15.57	17.23
Excess Return	-0.33	0.05	-0.49	1.07	-1.66	0.00
Std Dev	14.76	13.82	15.30	15.34	13.65	14.00
Beta	1.03	0.96	1.06	1.06	0.96	1.00
Tracking Error	2.88	3.00	3.71	3.96	2.78	0.00
Sharpe Ratio	1.10	1.21	1.05	1.15	1.10	1.19
Alpha	-0.74	0.60	-1.24	0.12	-0.77	0.00
Information Ratio	-0.12	0.02	-0.13	0.27	-0.60	
Batting Average	55.83	51.67	52.50	53.33	44.17	100.00
Up Capture Ratio	102.63	98.35	103.41	104.95	92.89	100.00
Down Capture Ratio	108.40	95.87	111.33	103.66	95.78	100.00

Investment Option Narratives

Firm Overview

Fred Alger Management (Alger) was founded in 1964 in New York, New York. Alger is 100% owned by the founder's three daughters and they retain 100% of firm voting rights. Through a long-term phantom equity plan, key employees hold grants which represent over 20% of Alger's book value. The firm oversees more than \$30B across about a dozen equity strategies, both domestic and international, and employs over 50 investment professionals. The day-to-day management of the firm is led by the following principals: CEO/CIO Dan Chung, PM Ankur Crawford, PM Patrick Kelly, COO Hal Liebes, and CDO James Tambone.

Team Overview

PM Patrick Kelly leads the Capital Appreciation strategy and is supported by Co-PM Ankur Crawford and a team of over 20 sector analysts. These sector analysts support all of the firm's strategies and work across the market capitalization spectrum.

Kelly joined Alger in 1999 and has been involved with the Capital Appreciation strategy since 2004. He also oversees Alger Capital Appreciation Focus, Alger Spectra, and Alger Dynamic Opportunities strategies. Crawford joined Alger in 2004 through the firm's in-house analyst training program. She was promoted to Associate Analyst and then eventually Senior Analyst. She became a named PM on Capital Appreciation and Spectra in 2015.

Strategy Overview

Alger believes the best way to uncover and evaluate attractive growth companies is through a team approach of intensive, original, fundamental research. They look for companies undergoing "Positive Dynamic Change" (PDC) through either high unit volume growth or positive life cycle change. The initial universe consists of all stocks in the Russell 3000 Growth Index. The minimum market capitalization for purchase is \$750 million and the team also follows approximately 25% of foreign company stocks that trade as ADRs. The sector analysts search for new ideas from multiple sources including, but not limited to: meetings with company management, industry seminars, and discussions with customers, suppliers and competitors of companies they already follow. If the initial evaluation identifies one of the two areas of PDC, deeper fundamental analysis will continue. Analysts construct their own detailed financial models going out five years that include valuation and scenario-based analysis, in addition to stock price targets. Analysts present new stock ideas to the PMs for initial purchase. The portfolio is well diversified across 70-120 stocks. Sector exposure is limited to 40% of the portfolio and industry exposure is limited to 20%. Individual stock positions tend to be scaled back once they hit 5%. The one exception is if a stock in the index has a weighting greater than 4%. In that case, the position can be up to 150% of the index weight, with a hard limit of 10%. ADRs are limited to 10% of the portfolio.

Sell decisions are made by the PM, typically at the recommendation of an analyst. Stocks are sold when: 1) the stock price has reached the target price, 2) a more attractive opportunity arises, and/or 3) a company fails to meet its price targets. Total annual portfolio turnover averages 80-120% generally.

Expectations

The team believes that by investing in high quality, large capitalization companies, they would expect the strategy to outperform the index during: 1) periods of moderate and/or slowing economic growth, 2) low and/or falling interest rate environments; and 3) periods of high innovation or change.

During periods of sharp contractions (2008) or narrow market advances, we would expect relative performance to struggle. In addition, during periods of rapid P/E expansion, where earnings significantly lag price growth, Alger is likely to underperform. The strategy is also likely to have difficulty outperforming when the market is rewarding lower quality, speculative stocks.

Points to Consider

The analyst team has experienced what we would consider to be higher-than-average turnover in the past few years, averaging two analyst departures per year since 2012. 2019 was particularly tumultuous, with five analysts departing. While some of the departures have been initiated by Alger, it continues to be an issue to watch.

Alger has an affiliated broker-dealer that serves only clients of the firm. We recommend all separate account clients specify in the agreements that Alger is only able to execute trades through independent brokerage firms. We consider this a potential conflict of interest.

Recommendation Summary

The core investment decision makers for the Capital Appreciation strategy have been with Alger for over a decade. Besides the ability of receiving phantom equity in the firm, the key professionals have significant capital invested in Alger funds (including Capital Appreciation) and therefore are well-aligned with clients.

The Research Group recommends Alger Capital Appreciation for both defined benefit and defined contribution clients looking for a higher-beta, diversified, active large cap growth strategy that has the flexibility to dip down into middle and smaller capitalization companies on an opportunistic basis. The higher-beta characteristic of the portfolio tends to result in strong outperformance on the upside with generally less protection versus the index on the downside. Given the stock-level diversification, we believe the strategy is appropriate to utilize on a standalone basis, as long as the client is comfortable with the higher-beta, higher tracking error profile. The strategy would also work well complemented by a more concentrated GARP strategy as an overall domestic growth allocation.

Firm Overview

MFS's investment management history dates back to 1924. MFS began managing tax-exempt capital in 1970. Headquartered in Boston, MFS has been a majority-owned subsidiary of Sun Life of Canada since 1982. The firm maintains considerable autonomy in managing its day-to-day business. Up to 22% of MFS' common stock is available for ownership by senior management, investment professionals and other key employees. MFS has nine offices around the world. Total firm assets under management (AUM) are over \$500 billion across a plethora of equity, fixed income and balanced/blended strategies. The client mix is about 50/50 institutional/retail.

Team Overview

PMs Eric Fischman and Paul Gordon lead the Growth Equity strategy. Institutional PMs Nicolas Paul and Rob Almeida manage the cash for the strategy, and oversee portfolios with any client-level restrictions. Fischman was the sole PM for 11 years and Gordon was promoted to co-PM in summer of 2017 after being MFS analyst since 2004. The two have similar styles and processes and only really differ occasionally on valuation analysis. The PMs are supported by MFS' global sector team. The team is made up of over 100 research analysts, with about 23 of those focused on US equities. The PMs work closely with the global sector teams on bottom-up company analysis, but ultimately have final decision-making authority for all buys and sells.

Strategy Overview

The team's investment philosophy is based on the belief that: 1) fundamentals drive earnings and cash flow, 2) earnings and cash flow growth drive share price performance over the long term, and 3) investors often underestimate the rate and duration of growth.

Idea generation comes mainly from the analysts, but the PMs also actively participate in the research process. The goal is to find high quality companies with sustainable earnings growth of 10-15%. MFS defines quality as leading brands, low leverage, high free cash flow and strong management teams. Sector analysts are responsible for conducting bottom-up fundamental due diligence, developing and maintaining their own in-depth financial models, and ranking companies either "buy", "hold", or "sell". Analysts and PMs exchange ideas both formally and informally. In addition, analysts distinguish their best ideas through the firm's research portfolios that are live strategies with outside assets. Those portfolios are expected to receive the analysts' top ideas. Ultimately, for the Growth Equity portfolio, the PMs have final discretion on buys and sells. The portfolio is well diversified across 80-110 stocks. The strategy is characterized as large cap, but will dip down into more mid cap names as well. Industry exposure is limited to 25% of the portfolio. Individual stock positions are limited to 5% at time of purchase. The strategy allows investments in non-US domiciled companies and does not have a stated maximum. Historically, the portfolio has averaged below 10%.

Stocks are reviewed for sale when: 1) the target price is reached, 2) there is a change in the investment thesis, and/or 3) better alternatives exist. Average annual portfolio turnover has historically been about 70%.

Expectations

The strategy is expected to perform well on a relative basis during periods where the market rewards high quality growth companies with strong or improving fundamentals. The strategy tends to be underweight mega cap companies due to the lower rates of sustainable growth so we would expect it to underperform when those stocks drive market returns. In addition, during periods where risk appetite is high and the market favors low quality/higher beta companies, we would expect the strategy to struggle on a relative basis.

Points to Consider

MFS does not typically give specific dollar amounts for product capacity because it is a moving target due to the changing market and asset levels in overlapping strategies. However, the firm communicates that it takes capacity constraints very seriously and has a track record of closing strategies when necessary (and typically early).

The minimum separate account size is \$50 million. However, MFS also offers CIT and mutual fund vehicles that are attractively priced.

Co-PM Matthew Sabel transitioned off of the strategy September 1, 2018 to focus on the Technology strategy he manages at the firm.

Recommendation Summary

MFS touts a highly collaborative and integrated investment management culture, which lends itself well to building experienced, long-standing investment teams that have consistently added value via bottom-up research. The Growth Equity strategy is characterized by a diverse portfolio of high quality, attractively-valued growth stocks with moderate tracking error and consistent value add over its history.

The Research Group recommends MFS Growth Equity for all client types looking for a diversified, active large cap growth strategy with the flexibility to dip down into middle capitalization companies on an opportunistic basis. Given the stock-level diversification and less volatile relative performance pattern, we believe the strategy is appropriate to utilize on a standalone basis. While the strategy is actively managed, tracking error tends to be on the low end of the active management spectrum. The strategy would also work well complemented by a more concentrated, index agnostic strategy in a client's overall domestic growth allocation.

Firm Overview

Winslow Capital Management was founded in June 1992 by Clark Winslow and is headquartered in Minneapolis, Minnesota. The firm's assets of just over \$20B are primarily managed in its domestic large cap growth strategy. In late 2008 Winslow reached an agreement to become a wholly owned subsidiary of Nuveen Investments. Prior to the agreement, the firm was 100% employee owned. In the fall of 2014, Nuveen was acquired by TIAA-CREF. The remaining partners, Clark Winslow and Justin Kelly, entered into long-term employment contracts with non-compete provisions through 2021. The current principals serve as the Executive Committee of the firm and have full authority and discretion over the investment process and its implementation.

Team Overview

CIO Justin Kelly leads the 10-member investment team. Analysts are divided by sector and utilize a fundamental, bottom-up process. The average industry experience of the analyst team is over 20 years. Stephanie Simon and Patrick Burton serve as Co-PMs. They assist Kelly with portfolio positioning across sectors, however, Kelly has final decision-making authority.

Strategy Overview

Winslow believes that investing in companies with above-average growth provides the best opportunity for achieving superior portfolio returns over the long-term. While above-average is a necessity, valuation relative to the company's estimated earnings or cash flow growth rate is also important. The team invests in companies they believe can deliver future earnings growth of at least 12% with a high or rising return on invested capital. The portfolio contains three types of earnings growth: long-term sustainable earnings growth, cyclical growth in the right part of the cycle, and newer industries with rapid growth. Over time each of these averages one-third of the portfolio.

The first step in the process is a front-end screen of all companies in the Russell 1000 Index for revenue/earnings growth, return on invested capital, earnings consistency, earnings revisions, low financial leverage, and high free cash flow rates relative to net income. A deeper fundamental analysis is performed on a subset of this list, with each analyst conducting a detailed review of income statements, cash flow and balance sheet projections, as well as his/her own estimation of the companies' future earnings. The next step is to determine which companies can beat Wall Street estimates and to determine which stocks are most attractively valued. Winslow's valuation approach is Price-to-Earnings driven relative to: 1) the Russell 1000 Growth Index, 2) sector peers, 3) the company's sustainable future growth rate, and 4) the company's ROIC.

The maximum individual stock position is the higher of 5% or index + 1%. A holding is reviewed completely if it declines 20% from cost or 20% from a recent high. Perceived weakening fundamentals precipitates a sell. They also control portfolio risk by being diversified in four factors: by a range of P/Es, market caps, growth rates, and economic sectors. The maximum cash allocation is 10%. Final portfolios contain 45-65 stocks. Annual portfolio turnover tends to average around 50-100%.

Expectations

The strategy is most likely to outperform in markets where security prices are driven by real earnings growth and sensible valuations. Given Winslow's focus on controlling risk, the strategy will find highly speculative environments where valuation is disregarded, similar to the "Technology Bubble" of the late 1990's, particularly challenging. In addition, macro-driven markets where correlations between security prices are driven by investor reactions to broad economic developments versus underlying fundamentals of individual companies can be challenging.

The beta of the composite has been somewhat volatile over its history, however has averaged slightly above 1 for longer-term periods.

Points to Consider

The phantom equity portion of team members' bonuses is based solely on the level of strategy assets. Given the vast majority of assets are in one strategy, we question the firm's incentive/motivation to close off capacity.

Winslow does a significant amount of trimming and adding around positions based on valuation so that total portfolio turnover is likely to be higher when compared to name turnover.

Recommendation Summary

The Research Group recommends Winslow Large Cap Growth for both defined benefit and defined contribution clients searching for a diversified, high quality, all weather domestic growth strategy. Clients should expect periods of significant underperformance (although rare over its history) given the stock-level concentration and fairly wide relative sector guidelines. We like the singular focus of the firm and appreciate that the team has been managing money together utilizing the same process for close to two decades.

Firm Overview

Founded in 1937, T. Rowe Price (TRP) is headquartered in Baltimore, MD and has offices in Hong Kong, London, Singapore, and Tokyo. The firm employs over 6,000 people and is well-known in the defined contribution space as a disciplined, risk-conscious active equity fund manager. TRP is a publicly-traded entity, however employees own nearly 20% of the equity. Today, the firm manages over \$1 trillion in assets across both equity and fixed income for both institutional and retail clients.

Team Overview

The strategy has been managed by PM Larry Puglia since its inception. Puglia has over 27 years of investment experience, 26 of which are with TRP. He collaborates with PMs Joseph Fath, Taymour Tamaddon, and David Rowlett who have responsibilities for the other two large growth strategies managed at the firm. All four PMs make up the U.S. Large-Cap Growth Equity (LCGE) investment team. No one member has sole decision-making authority over any of the three portfolios.

The LCGE team is supported by an equity research team of over 150 analysts and industry specialists. Approximately 40 of those investment professionals are covering stocks for the Large-Cap Core Growth Fund.

Strategy Overview

TRP believes that investing in high-quality, large-cap companies with sustainable competitive advantages can produce attractive returns with moderate risk. They look for companies that operate in growth sectors of the economy and that possess attractive business models, operational and financial flexibility, and seasoned management teams with a history of thoughtful capital allocation. They believe these characteristics can lead to sustainable high earnings and free cash flow growth, which drives shareholder value. Bottom-up, fundamental research is key to identifying these successful long-term investments. In addition, they seek to avoid overpaying for growth and build diversified portfolios to help manage risk.

The PMs and in-house team of equity research analysts perform the majority of the research. The PMs and analysts evaluate each company's growth prospects, balance sheet, and valuation. Meeting with company management is the core strength of their research. They also interview customers, suppliers, competitors, and industry experts. These activities allow analysts to develop relationships with and insights into hundreds of companies within a wide variety of industries. In addition, analysts work closely with PM teams to benefit from their experience and gain an understanding of the qualitative factors that most influence stock selection. TRP considers it a "push/pull" relationship between PMs and analysts.

The final portfolio ranges from 100 to 140 holdings with the largest weightings typically in the largest market cap companies (mega caps) and the top ten holdings representing approximately 40% of assets. Individual position sizes range from 0.25% to 5%. Sector weights typically range from 0.5X to 3.0X versus the Russell 1000 Growth Index. The strategy's annual portfolio turnover typically ranges from 20% to 50%.

Expectations

We would expect the strategy to outperform strongly in periods where company growth fundamentals drive stock performance. Given the strategy's overweight to large and mega cap stocks versus the index, we would anticipate outperformance in periods where large caps outperforms small caps.

We would expect the strategy to struggle on a relative basis in periods where correlations move towards one and volatility is high (2008, 2011). These two periods, in particular, were difficult for the strategy primarily due to investors' fears and liquidity events driving many forced sales in the largest, most liquid stocks. In addition, periods where investors seek yield (e.g., 2014 and first quarter of 2016) will not be favorable for the strategy.

The strategy has historically had a slightly higher beta which has resulted in higher upside market capture as well as higher downside market capture.

Points to Consider

The large asset level (over \$100B) of the strategy is an ongoing issue to watch. We would expect the large assets to limit flexibility and force Puglia to only own larger, more liquid securities. In addition, there is considerable stock overlap across all three large growth strategies.

Puglia has been the sole PM on the strategy since its inception so key-man risk is higher-than-average for the strategy. This is somewhat minimized by the team approach, however we would have to reevaluate our recommendation if he were to leave.

While the strategy allows up to 20% in non-US domiciled stocks, historically the allocation has been below 10%.

Recommendation Summary

The Research Group recommends TRP Large Cap Core Growth for both defined benefit and defined contribution clients looking for a diversified large cap growth option with consistently strong relative performance over time. In addition, PM Larry Puglia has been managing the strategy since its inception and is supported by a deep, experienced team of PMs and analysts. Clients should be cognizant that there have been periods where the fund has underperformed the index significantly (e.g., 2016) and we would continue to expect those periods to occur going forward. However, tracking error has been reasonable despite these periods of under-performance.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta.

Batting Average – A measure of a manager's ability to consistently beat the market. It is calculated by dividing the number of months in which the manager beat or matched an index by the total number of months in the period.

Best Quarter- This is the highest quarterly (3 month) return of the investment since its inception.

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.

Down Period Percent - Number of months below 0 divided by the total number of months.

Downmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance.

Downside Std Dev - This measures only deviations below a specified benchmark.

Excess Return- This is a measure of an investment's return in excess of a benchmark.

Information Ratio - This calculates the value-added contribution of the manager and is derived by dividing the excess 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.

Longest Down-Streak Return - Return for the longest series of negative monthly returns.

Longest Down-Streak # of Periods - Longest series of negative monthly returns.

Longest Up-Streak Return - Return for the longest series of positive monthly returns.

Longest Up-Streak - Longest series of positive monthly returns.

Kurtosis - Kurtosis indicates the peakedness of a distribution. For normal distribution, Kurtosis is 3.

Max Drawdown - The peak to trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak to the trough.

Max Drawdown # of Periods - This is the number of months that encompasses the max drawdown for an investment.

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.

Skewness - Skewness reflects the degree of asymmetry of a distribution. If the distribution has a longer left tail, the function has negative skewness. Otherwise, it has positive skewness. A normal distribution

is symmetric with skewness 0.

Sortino Ratio - The Sortino Ratio is similar to Sharpe Ratio except it uses downside risk (Downside Deviation) in the denominator. It was developed in early 1980's by Frank Sortino. Since upside variability is not necessarily a bad thing, Sortino ratio is sometimes more preferable than Sharpe ratio.

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.

Tracking Error - This is a measure of the standard deviation of a portfolio's excess returns versus its designated market benchmark.

Treynor Ratio - Similar to Sharpe Ratio, Treynor Ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe Ratio, Treynor Ratio utilizes "market" risk (beta) instead of total risk (standard deviation). Good performance efficiency is measured by a high ratio.

Up period Percent - Number of months above 0 divided by the total number of months.

Upmarket Capture Ratio - The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

Value-Growth Score - Morningstar assigns an Overall Value score and an Overall Growth score to each stock within a fund. Morningstar then calculates a net value-core-growth score for each stock by subtracting the stock's Overall Value score from its Overall Growth score. Once this is done, these raw scores are rescaled to range between -100 to 400 in order to fit within the Morningstar Style Box. Scores below 67 are classified as value, scores above 233 are classified as growth, and scores between 67 and 233 fit within the core boundaries.

Worst Quarter - This is the lowest quarterly (3 month) return of the investment since its inception.

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