



HYAS
GROUP

COUNTY OF SAN BERNARDINO

Combined Retirement and RMT Plans

September 30, 2019 Performance Report

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“FREE” TRADES

While nationalism and protectionist policies continue to dominate global economic headlines, the online brokerage business here in the US has gone all in on “free” trade policies. Industry titan Charles Schwab pioneered the discount brokerage model and developed a highly successful business focusing on lowering commissions for retail investors. The firm has been so successful at bringing down fees, they recently announced that they would no longer be charging commissions on stock, ETF and certain option trades. On the heels of this announcement other industry leaders followed suit. TD Ameritrade, E*Trade and Interactive Brokers have all initiated similar no fee trading policies. Trading is now “free”.

If you are not already, the question you should be asking is if trades are now “free”, how do these firms make enough money to stay in business and provide shareholders with competitive returns on capital? A recent article by The Wall Street Journal stated it well, “when you trade for free, you still pay – at a different tollbooth.” There are essentially two tollbooths we would like to address, and neither is particularly transparent to the average investor.

Today, one of the primary sources of revenue for brokerage firms is net interest margin. Net interest margin is the difference between the interest income generated by financial institutions and the amount of interest paid out to their lenders. In this case, account holders are the lenders, whether they realize it or not. Virtually all brokerage accounts are set-up to sweep idle cash into low interest bank accounts (sweep vehicles) sponsored by the brokerage firms. The brokerage firm then directs equivalent funds into higher yielding investment accounts of its own and pockets the difference. Over time, account holders have typically seen their choice of sweep vehicles increasingly restricted. Sweep vehicles are generally paying annual interest between 0.10% and 0.60% in today’s marketplace. This compares to ultra conservative US government money market funds yielding nearly 2.0%. This business model is not new, the banking industry has been built on revenues from net interest margin. Given this increasing focus on net interest revenues, brokerage clients should be diligent about reviewing their sweep vehicle options.

The other tollbooth we would like to highlight is even less transparent, and while a legal (as long as it is disclosed) common industry practice, has the potential to take money out of investors’ pockets, a nearly invisible pickpocket of sorts. Contrary to popular press, Charles Schwab is not leading the industry transition to free trading. They are merely responding to new competition that operates on a far different revenue model. Enter Robinhood, a relatively new brokerage firm founded on the premise of commission-free trading. What’s the catch?

In order to process trades brokerage firms have to route their orders through any number of execution firms that match buy and sell orders. Robinhood, and other new competitors, as a practice derive a significant portion of their revenues from selling their brokerage order flow to the highest paying execution firms. Brokerage firms are allowed to sell their order flow but are required by the SEC to disclose to whom and for how much. The execution firms can use the order flow information to run high frequency trading programs that exploit pricing trends, trends visible only with access to order flow. There is a case to be made that the high frequency trading profits come at the expense of brokerage clients in the form of higher execution costs. However, any difference in execution would generally be difficult to detect even for sophisticated investors. The election to sell order flow is unique to each brokerage firm. Investors can access more details on their brokerage firm’s order routing practices by referencing the SEC’s Rule 606 quarterly reporting.

GLOBAL ECONOMIC LANDSCAPE

- Domestic markets continue to weigh mixed economic signals. The US economy gained 136,000 jobs in September, which coincided with a 45,000 upward revision to the prior two months. This resulted in a monthly average of just over 156,000 for the quarter, not bad for an aging economic cycle. However, US manufacturing activity fell to its lowest level in more than 10 years in the most recent month. Manufacturing represents a modest 10% of our current economy versus 90% for services. The net result was an unemployment rate that fell to 3.5% in September, its lowest reading since December 1969. This is well below the 50-year average rate of 6.2% and indicates an economy operating near full capacity.
- Economies of developed world countries continue to show signs of economic weakness. Global manufacturing declined another 1.3 points in September to 47.8, the lowest level in a decade. Global service activity has been more positive but shows signs of slowing. UK services Purchasing Managers Index dropped 1.1 points to 49.5 in September. The drop below 50 indicates a shift from expansion to contraction occurred late in the quarter. German industrial activity is nearing recession levels and the United Kingdom's Brexit transition is an ongoing source of uncertainty. Ten-year yields across Germany, France, Switzerland and Japan are all negative, reflecting continued weak growth expectations out of Europe.
- Latin American countries continue to pursue policies of reform to stimulate economic growth. Argentina was experiencing the beginning of a cyclical upswing in its economy until unexpected primary election results in August led to a collapse in sovereign bond prices. The Mexican central bank cut their policy rate by 25 basis points to counter slowing capital expenditures resulting from expected slower growth in the US. Mexico continues to gain market share of US exports at the expense of China. Brazil continues to promote controversial policies of economic growth that include clearing of rainforest to promote agricultural production and transitioning certain sovereign energy rights over to private parties to enhance production.

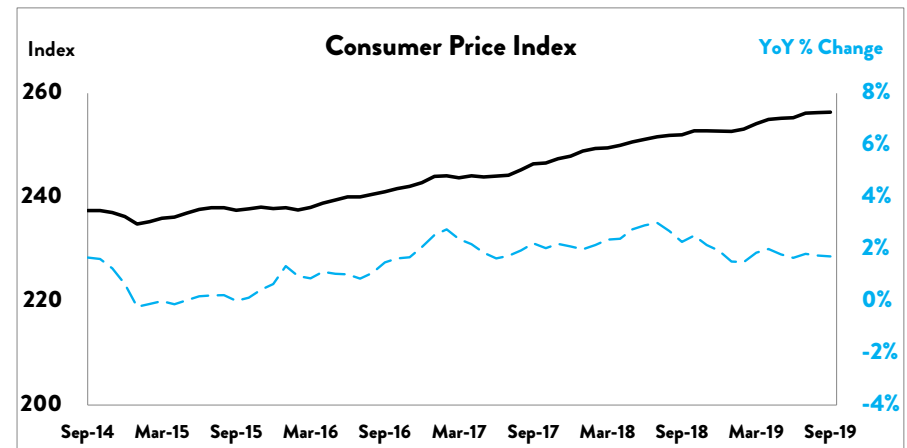
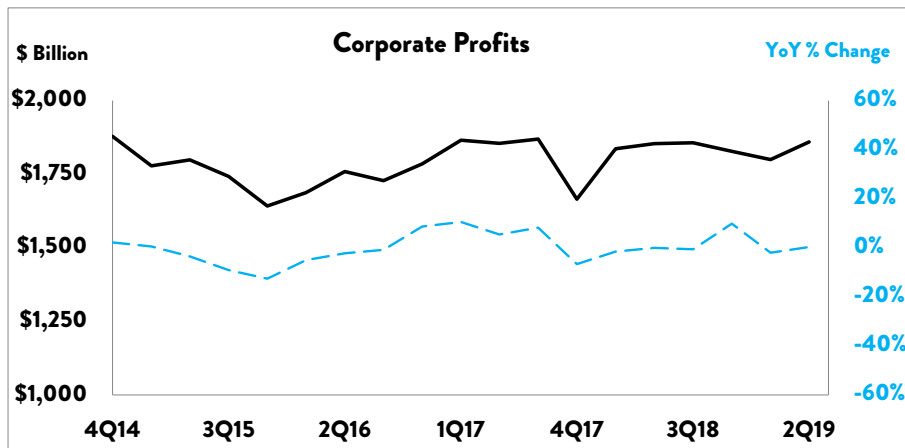
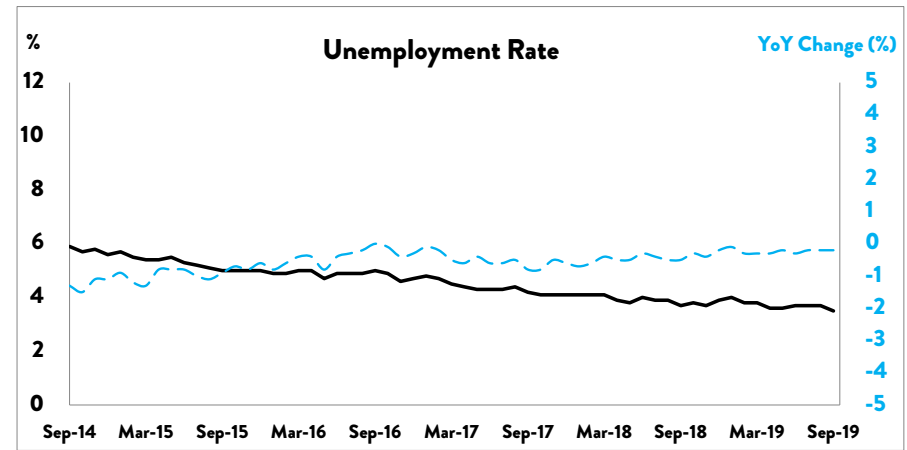
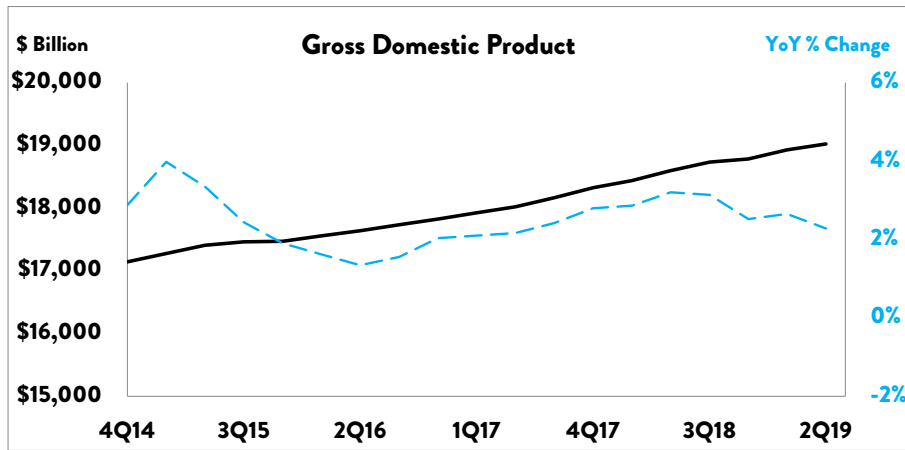
GLOBAL FINANCIAL MARKETS

- Domestic equity markets continue to see increasing cross-sector dispersion and are now seemingly split between cyclical and non-cyclical rotations. Throughout most of the quarter and year-to-date, non-cyclical sectors have trended higher on fears of a global economic recession. As a result, Technology, Real Estate and Utilities have been consistent outperformers. Cyclical sectors have lagged, dramatically led by Energy, Materials and Consumer Discretionary.
- Domestic fixed income markets benefited from a third consecutive quarter of declining interest rates. 10-year US Treasury yields ended the quarter just above 1.6%. Despite the decline in rates, the US continues to have the highest rate of any G7 country. The following highlights 10-year sovereign yields across the remaining G7 markets; Canada (1.23%), UK (0.44%), Germany (-0.59%), France (-0.28%), Italy (0.83%) and Japan (-0.21%).
- Drone strikes on Saudi Arabia oil production facilities took nearly half of their total daily production offline and sent oil prices skyrocketing by 15% in a single day. Markets were quick to reflect the temporary nature of this supply shock and the lack of any significant retaliation against Iran. In less than two weeks oil prices were back down below pre-attack valuations.
- Japanese corporate share repurchases are occurring at record pace. In 2018, Japanese companies announced \$7 trillion Yen (\$65B USD) in stock buybacks which represented a 40% year-over-year increase. This pace continues to pick up and is expected to reach \$9 Trillion Yen (\$85B USD) in 2019.
- Generally poor growth prospects overseas were reflected in negative developed and emerging stock returns this quarter. Though, year-to-date returns have been surprisingly resilient. Developed markets have benefited from central bank pledges of more accommodative policies. Emerging markets have also benefited from easier monetary policy but have been more directly impacted by increasing trade tensions between the US and China, resulting in slower growth expectations.

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3Q2019 Economic Data



Key: — Economic Series - - - Year-Over-Year Change

Labor Market Statistics (Monthly)					
Category	Recent	5-Yr High	5-Yr Low	5-Yr Avg.	Date
Jobs Added/Lost Monthly	136,000	351,000	14,000	203,033	Sep-19
Unemployment Rate	3.5%	5.9%	3.5%	4.5%	Sep-19
Median Unemployment Length (Weeks)	9.8	14.0	6.6	10.4	Sep-19
Average Hourly Earnings	\$28.09	\$28.10	\$24.58	\$26.22	Sep-19

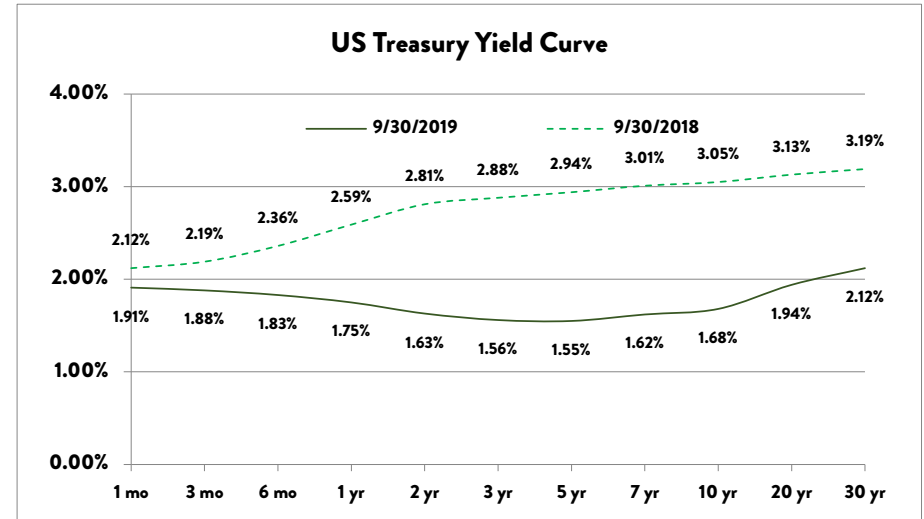
Source: Federal Reserve Bank of St. Louis and Bureau of Labor Statistics

Other Prices and Indexes (Monthly)					
Category	Recent	5-Yr High	5-Yr Low	% Off Peak	Date
Gas: Price per Gallon	\$2.56	\$3.20	\$1.79	-20.2%	Sep-19
Spot Oil	\$54.81	\$93.21	\$30.32	-41.2%	Aug-19
Case-Shiller Home Price Index	216.1	216.1	170.6	26.7%*	Jul-19
Medical Care CPI	502.3	502.3	437.5	14.8%*	Sep-19

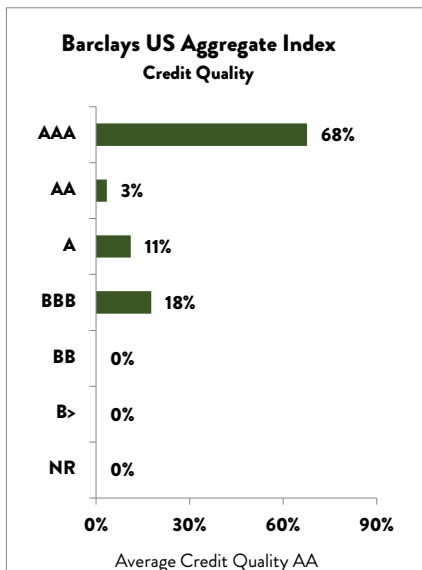
*% Off Low

3Q2019 Bond Market Data

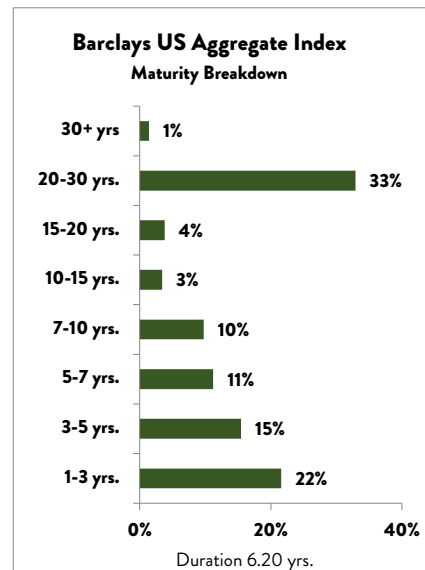
Index	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
90-Day T-Bill	0.58%	1.84%	2.35%	1.44%	0.90%	0.49%
Barclays US Aggregate	2.27%	8.52%	10.30%	2.92%	3.38%	3.75%
Barclays Short US Treasury	0.56%	1.95%	2.56%	1.57%	1.05%	0.62%
Barclays Int. US Treasury	1.18%	5.22%	7.58%	1.80%	2.19%	2.39%
Barclays Long US Treasury	7.92%	19.77%	24.79%	4.07%	6.77%	6.87%
Barclays US TIPS	1.35%	7.58%	7.13%	2.21%	2.45%	3.46%
Barclays US Credit	2.98%	12.61%	12.63%	4.33%	4.54%	5.32%
Barclays US Mortgage-Backed	1.37%	5.60%	7.80%	2.32%	2.80%	3.14%
Barclays US Asset-Backed	0.92%	4.13%	5.42%	2.24%	2.25%	2.82%
Barclays US 20-Yr Municipal	2.29%	8.59%	10.58%	4.04%	4.71%	5.24%
Barclays US High Yield	1.33%	11.41%	6.36%	6.07%	5.37%	7.94%
Barclays Global	0.71%	6.32%	7.60%	1.59%	1.99%	2.34%
Barclays International	-0.58%	4.38%	5.34%	0.43%	0.87%	1.27%
Barclays Emerging Market	1.28%	10.79%	10.60%	4.42%	5.04%	6.66%



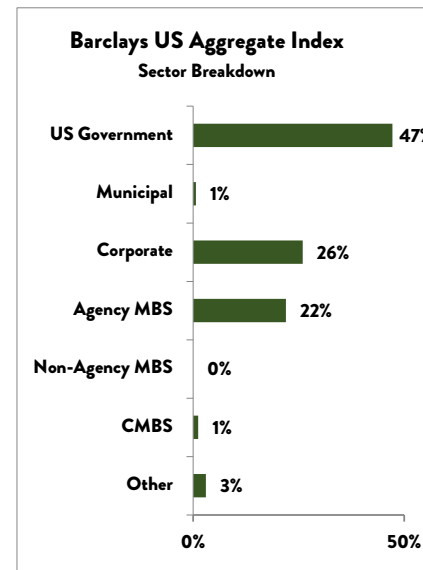
Source: Department of US Treasury



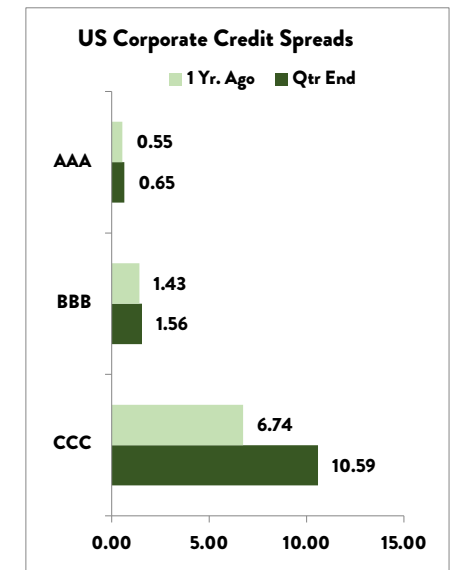
Source: Morningstar



Source: Morningstar



Source: Morningstar



Source: Federal Reserve / Bank of America

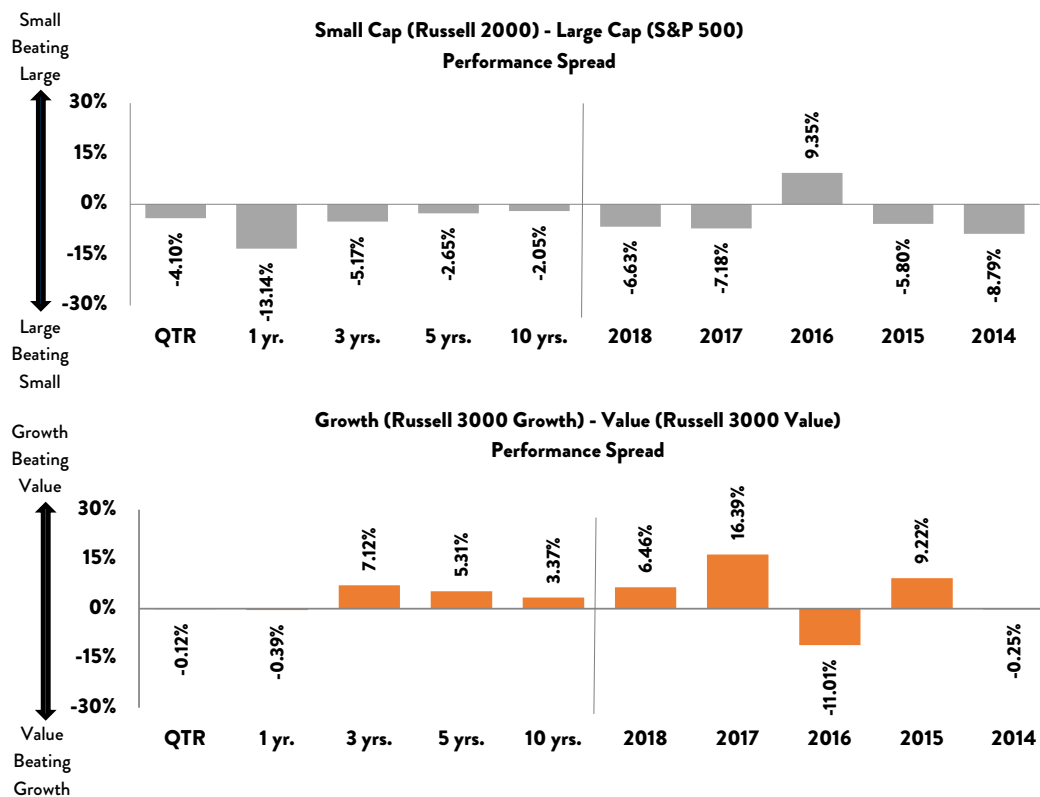
3Q2019 US Equity Market Data

Sectors Weights/Returns (ranked by quarter performance)

Index	Wgt.	Sector	QTR	YTD	1 yr.
	S&P 500 Index	4%	Utilities	9.33%	25.40%
3%		Real Estate	7.71%	29.71%	24.74%
8%		Consumer Staples	6.11%	23.28%	16.85%
22%		Information Technology	3.34%	31.37%	8.59%
10%		Communication Services	2.22%	21.74%	5.69%
13%		Financials	2.01%	19.60%	3.92%
9%		Industrials	0.99%	22.58%	1.39%
10%		Consumer Discretionary	0.51%	22.46%	2.36%
3%		Materials	-0.12%	17.11%	2.70%
14%		Health Care	-2.25%	5.64%	-3.57%
S&P Midcap 400 Index	5%	Energy	-6.30%	6.00%	-19.21%
	11%	Real Estate	7.26%	20.85%	8.09%
	5%	Utilities	3.28%	16.79%	15.94%
	3%	Consumer Staples	1.69%	7.59%	-1.03%
	17%	Financials	1.20%	20.28%	1.31%
	15%	Information Technology	1.08%	28.47%	6.82%
	12%	Consumer Discretionary	0.94%	17.45%	-3.87%
	16%	Industrials	-0.71%	23.20%	0.31%
	6%	Materials	-2.84%	13.08%	-8.97%
	10%	Health Care	-4.13%	10.49%	-11.53%
S&P Smallcap 600 Index	2%	Communication Services	-4.25%	12.00%	0.84%
	2%	Energy	-22.95%	-22.68%	-54.90%
	2%	Utilities	6.58%	22.90%	15.97%
	7%	Real Estate	6.47%	23.50%	9.71%
	14%	Information Technology	3.31%	24.97%	2.89%
	4%	Consumer Staples	2.14%	7.72%	-7.72%
	14%	Consumer Discretionary	1.27%	10.11%	-11.40%
	18%	Industrials	0.57%	20.86%	-7.33%
	18%	Financials	-0.56%	11.74%	-4.12%
	2%	Communication Services	-1.40%	2.87%	-18.80%
5%	Materials	-2.85%	12.23%	-17.47%	
12%	Health Care	-3.76%	5.44%	-18.89%	
4%	Energy	-22.26%	-19.97%	-56.62%	

Index Performance Data

Index	QTR	YTD	1 yr.	Annualized		
				3 yrs.	5 yrs.	10 yrs.
S&P 500	1.70%	20.55%	4.25%	13.39%	10.84%	13.24%
Russell 1000 Value	1.36%	17.81%	4.00%	9.43%	7.79%	11.46%
Russell 1000 Growth	1.49%	23.30%	3.71%	16.89%	13.39%	14.94%
Russell Mid Cap	0.48%	21.93%	3.19%	10.69%	9.10%	13.07%
Russell Mid Cap Value	1.22%	19.47%	1.60%	7.82%	7.55%	12.29%
Russell Mid Cap Growth	-0.67%	25.23%	5.20%	14.50%	11.12%	14.08%
Russell 2000	-2.40%	14.18%	-8.89%	8.23%	8.19%	11.19%
Russell 2000 Value	-0.57%	12.82%	-8.24%	6.54%	7.17%	10.06%
Russell 2000 Growth	-4.17%	15.34%	-9.63%	9.79%	9.08%	12.25%
Russell 3000	1.16%	20.09%	2.92%	12.83%	10.44%	13.08%
DJ US Select REIT	6.83%	24.64%	16.41%	6.48%	9.70%	12.69%



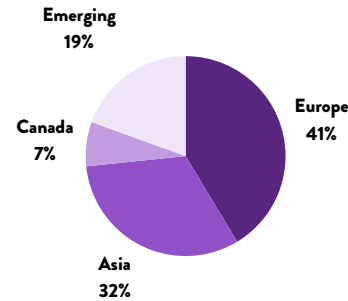
3Q2019 International Market Data

Index Performance Data (net)

Index (US\$)	QTR	YTD	1 yr.	3 yrs.	5 yrs.	10 yrs.
MSCI ACWI ex-US	-1.80%	11.56%	-1.23%	6.33%	2.90%	4.45%
MSCI EAFE	-1.07%	12.80%	-1.34%	6.48%	3.27%	4.90%
Europe	-1.80%	13.72%	-0.75%	6.57%	2.38%	4.61%
United Kingdom	-2.49%	10.09%	-2.88%	4.63%	0.44%	4.76%
Germany	-4.03%	9.90%	-7.11%	3.48%	1.87%	4.42%
France	-1.72%	15.87%	-1.57%	10.23%	5.08%	4.35%
Pacific	0.23%	11.43%	-2.17%	6.54%	5.11%	5.61%
Japan	3.13%	11.12%	-4.69%	6.22%	5.61%	5.51%
Hong Kong	-11.94%	2.82%	-1.84%	5.51%	6.24%	7.74%
Australia	-1.39%	17.86%	6.06%	7.80%	3.77%	5.07%
Canada	0.45%	21.55%	2.96%	6.45%	1.00%	3.61%
MSCI EM	-4.25%	5.89%	-2.02%	5.97%	2.33%	3.37%
MSCI EM Latin America	-5.61%	6.32%	6.70%	6.80%	-0.78%	-0.48%
MSCI EM Asia	-3.41%	5.98%	-3.87%	6.33%	4.09%	5.20%
MSCI EM Eur/Mid East	-4.13%	9.99%	5.25%	7.95%	-0.42%	0.19%
MSCI ACWI Value ex-US	-2.80%	6.94%	-4.51%	5.24%	0.89%	3.05%
MSCI ACWI Growth ex-US	-0.85%	16.21%	2.03%	7.37%	4.86%	5.82%
MSCI ACWI Sm Cap ex-US	-1.19%	10.28%	-5.63%	4.64%	3.98%	6.13%

Regional Exposure

MSCI ACWI ex-US

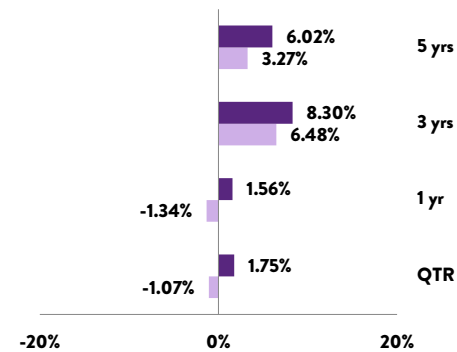


Top 10 Countries (MSCI AC World ex-US)

Japan	17%
UK	11%
China	9%
France	8%
Canada	7%
Switzerland	6%
Germany	6%
Australia	5%
South Korea	3%
Taiwan	3%

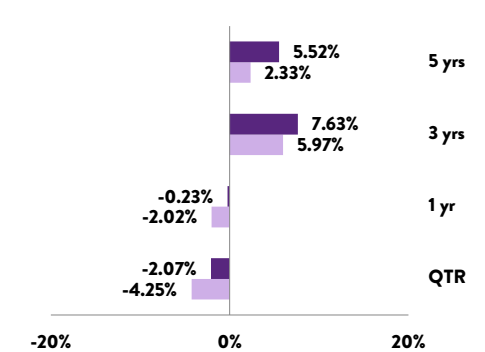
MSCI EAFE Index Return

Local (dark purple), US\$ (light purple)



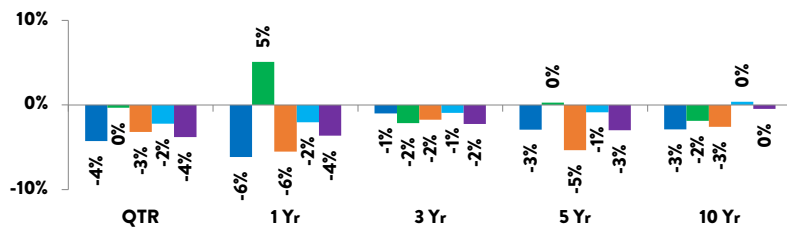
MSCI Emerging Index Return

Local (dark purple), US\$ (light purple)



Foreign Currency v. US\$ Returns

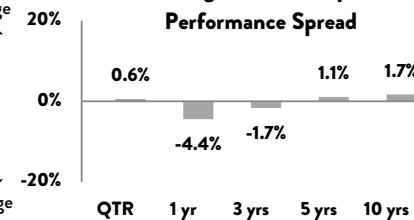
Euro (blue), Japanese Yen (green), Pound Sterling (orange), Swiss Franc (light blue), Chinese Yuan (purple)



Exchange Rates	QTR	2Q19	1Q19	4Q18	3Q18	2Q18
Japanese Yen	108.11	107.84	110.68	109.70	113.48	110.71
Euro	0.92	0.88	0.89	0.87	0.86	0.86
British Pound	0.81	0.79	0.77	0.78	0.77	0.76
Swiss Franc	1.00	0.98	1.00	0.98	0.98	0.99
Chinese Yuan	7.15	6.87	6.71	6.88	6.87	6.62

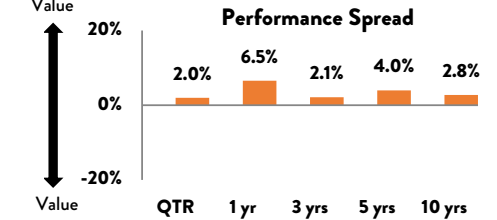
MSCI ACWI Ex US Large v. Small Cap Performance Spread

Small Beating Large (up arrow), Large Beating Small (down arrow)



MSCI ACWI Ex US Value v. Growth Performance Spread

Growth Beating Value (up arrow), Value Beating Growth (down arrow)



Historical Market Returns

Ranked by Performance

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD	3Q19
Emerging Markets 25.55%	Emerging Markets 34.00%	Emerging Markets 32.14%	Emerging Markets 39.42%	US Bonds 5.24%	Emerging Markets 78.51%	Small Cap 26.85%	Core Real Estate 14.96%	Emerging Markets 18.22%	Small Cap 38.82%	Large Cap 13.68%	Core Real Estate 13.95%	Small Cap 21.30%	Emerging Markets 37.28%	Core Real Estate 7.36%	Mid Cap 21.93%	US Bonds 2.27%
Intl 20.91%	Commod. 21.36%	Intl 26.65%	Intl 16.65%	Global Bonds 4.79%	High Yield 58.21%	Mid Cap 25.48%	TIPS 13.56%	Mid Cap 17.28%	Mid Cap 34.76%	Mid Cap 13.21%	Large Cap 1.38%	High Yield 17.12%	Intl 27.19%	Cash 1.69%	Large Cap 20.55%	Large Cap 1.70%
Mid Cap 20.22%	Core Real Estate 20.15%	Small Cap 18.37%	Commod. 16.23%	Cash 1.39%	Intl 41.45%	Emerging Markets 18.88%	US Bonds 7.84%	Intl 16.83%	Large Cap 32.39%	Core Real Estate 11.44%	US Bonds 0.55%	Mid Cap 13.79%	Large Cap 21.83%	US Bonds 0.01%	Small Cap 14.18%	TIPS 1.35%
Small Cap 18.33%	Intl 16.62%	Large Cap 15.79%	Core Real Estate 14.84%	TIPS -2.35%	Mid Cap 40.48%	Commod. 16.83%	Global Bonds 5.64%	Small Cap 16.35%	Intl 15.29%	US Bonds 5.97%	Cash 0.03%	Large Cap 11.95%	Mid Cap 18.52%	Global Bonds -1.20%	Global Balanced 12.84%	High Yield 1.33%
Global Balanced 12.18%	Mid Cap 12.65%	Core Real Estate 15.27%	TIPS 11.64%	Core Real Estate -10.70%	Small Cap 27.17%	Core Real Estate 15.26%	High Yield 4.98%	Large Cap 16.00%	Global Balanced 14.46%	Small Cap 4.89%	TIPS -1.43%	Commod. 11.76	Global Balanced 15.87%	TIPS -1.26%	Intl 11.56%	Core Real Estate 1.08%
Core Real Estate 12.00%	Large Cap 4.91%	Mid Cap 15.26%	Global Bonds 9.48%	Global Balanced -24.51%	Large Cap 26.46%	High Yield 15.12%	Large Cap 2.11%	High Yield 15.81%	Core Real Estate 12.95%	TIPS 3.64%	Global Balanced -1.45%	Emerging Markets 11.18%	Small Cap 14.65%	High Yield -2.08%	High Yield 11.41%	Global Bonds 0.71%
High Yield 11.13%	Small Cap 4.55%	Global Balanced 14.53%	Global Balanced 9.07%	High Yield -26.16%	Global Balanced 20.49%	Large Cap 15.06%	Cash 0.06%	Global Balanced 11.06%	High Yield 7.44%	Global Balanced 3.17%	Mid Cap -2.43%	Core Real Estate 7.76%	High Yield 7.50%	Large Cap -4.38%	US Bonds 8.52%	Global Balanced 0.60%
Large Cap 10.88%	Global Balanced 4.16%	High Yield 11.85%	US Bonds 6.97%	Small Cap -33.79%	Commod. 18.91%	Intl 11.15%	Global Balanced -0.97%	Core Real Estate 9.76%	Cash 0.07%	High Yield 2.45%	Global Bonds -3.15%	Global Balanced 5.38%	Global Bonds 7.39%	Global Balanced -5.30%	TIPS 7.58%	Cash 0.58%
Global Bonds 9.27%	Cash 3.25%	Global Bonds 6.64%	Mid Cap 5.60%	Commod. -35.65%	TIPS 11.41%	Global Balanced 9.40%	Mid Cap -1.55%	TIPS 6.98%	US Bonds -2.02%	Global Bonds 0.59%	Small Cap -4.41%	TIPS 4.68%	Core Real Estate 6.66%	Mid Cap -9.06%	Global Bonds 6.32%	Mid Cap 0.48%
Commod. 9.15%	TIPS 2.84%	Cash 4.85%	Large Cap 5.49%	Large Cap -37.00%	Global Bonds 6.93%	US Bonds 6.54%	Small Cap -4.18%	Global Bonds 4.32%	Global Bonds -2.60%	Cash 0.04%	High Yield -4.46%	Intl 4.50%	US Bonds 3.54%	Small Cap -11.01%	Emerging Markets 5.89%	Intl -1.80%
TIPS 8.46%	High Yield 2.74%	US Bonds 4.33%	Cash 4.44%	Mid Cap -41.46%	US Bonds 5.93%	TIPS 6.31%	Commod. -13.32%	US Bonds 4.21%	Emerging Markets -2.60%	Emerging Markets -2.18%	Intl -5.66%	US Bonds 2.65%	TIPS 3.01%	Commod. -11.25%	Commod. 3.13%	Commod. -1.84%
US Bonds 4.34%	US Bonds 2.43%	Commod. 2.07%	High Yield 1.87%	Intl -45.53%	Cash 0.16%	Global Bonds 5.54%	Intl -13.71%	Cash 0.08%	TIPS -8.61%	Intl -3.86%	Emerging Markets -14.90%	Global Bonds 2.09%	Commod. 1.70%	Intl -14.20%	Core Real Estate 3.08%	Small Cap -2.40%
Cash 1.44%	Global Bonds -4.49%	TIPS 0.41%	Small Cap -1.57%	Emerging Markets -53.33%	Core Real Estate -30.40%	Cash 0.15%	Emerging Markets -18.42%	Commod. -1.06%	Commod. -9.52%	Commod. -17.00%	Commod. -24.60%	Cash 0.25%	Cash 0.71%	Emerging Markets -14.58%	Cash 1.84%	Emerging Markets -4.25%

Global Balanced is composed of 60% MSCI World Stock Index, 35% Barclays Global Aggregate Bond Index, and 5% US 90-Day T-Bills.

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Section 2

COUNTY OF SAN BERNARDINO

All Plans - Combined

PLAN ASSET ALLOCATION

Third Quarter 2019

Fixed Income	Ticker	Assets	%
Stabilizer	-	\$276,780,924	23.6%
Voya Fixed Account	-	\$78,465,883	6.7%
Voya Government Money Market A	AEMXX	\$11,140	0.0%
Loomis Sayles Investment Grade Bond Y	LSIIX	\$26,668,207	2.3%
Invesco Oppenheimer International Bd R6	OIBIX	\$4,206,244	0.4%
Pioneer Global High Yield Y	GHYYX	\$6,561,149	0.6%
Total		\$392,693,547	33.5%

Large Cap	Ticker	Assets	%
Vanguard Institutional Index Instl Plus	VIIIIX	\$116,514,800	9.9%
American Funds Growth Fund of America R6	RGAGX	\$104,266,456	8.9%
Total		\$220,781,256	18.8%

Mid Cap	Ticker	Assets	%
Vanguard Mid Cap Index Instl	VMCIX	\$59,497,830	5.1%
Total		\$59,497,830	5.1%

Small Cap	Ticker	Assets	%
Invesco Small Cap Value Y	VSMIX	\$7,909,592	0.7%
Vanguard Small Cap Index Instl	VSCIX	\$40,538,829	3.5%
Baron Growth Instl	BGRIX	\$34,534,319	2.9%
Total		\$82,982,740	7.1%

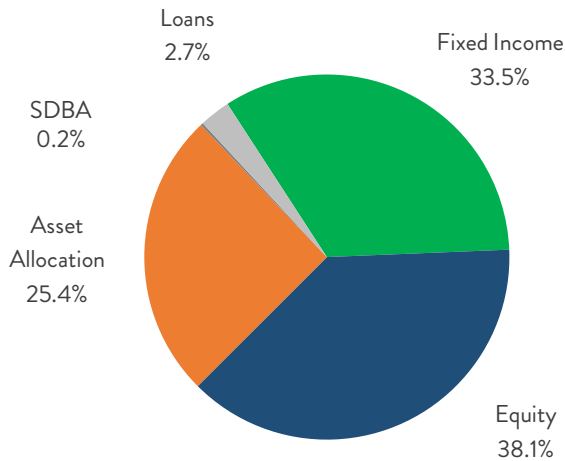
International	Ticker	Assets	%
Dodge & Cox International Stock	DODFX	\$11,426,037	1.0%
Vanguard Total Intl Stock Index I	VTSNX	\$22,682,169	1.9%
American Funds Capital World Gr & Inc R6	RWIGX	\$49,550,433	4.2%
Total		\$83,658,640	7.1%

Asset Allocation	Ticker	Assets	%
Conservative Allocation Portfolio	-	\$27,569,009	2.4%
Moderate Allocation Portfolio	-	\$78,915,429	6.7%
Aggressive Allocation Portfolio	-	\$55,415,065	4.7%
Vanguard Instl Target Retirement Income Instl	VITRX	\$6,044,404	0.5%
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$28,309,735	2.4%
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$43,781	0.0%
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$41,502,379	3.5%
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$25,223	0.0%
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$36,162,395	3.1%
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$25	0.0%
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$23,268,615	2.0%
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$2,386	0.0%
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$3	0.0%
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$8,963	0.0%
Total		\$297,267,413	25.4%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$2,494,881	0.2%
Participant Loans	-	\$32,108,654	2.7%
Total		\$34,603,535	3.0%

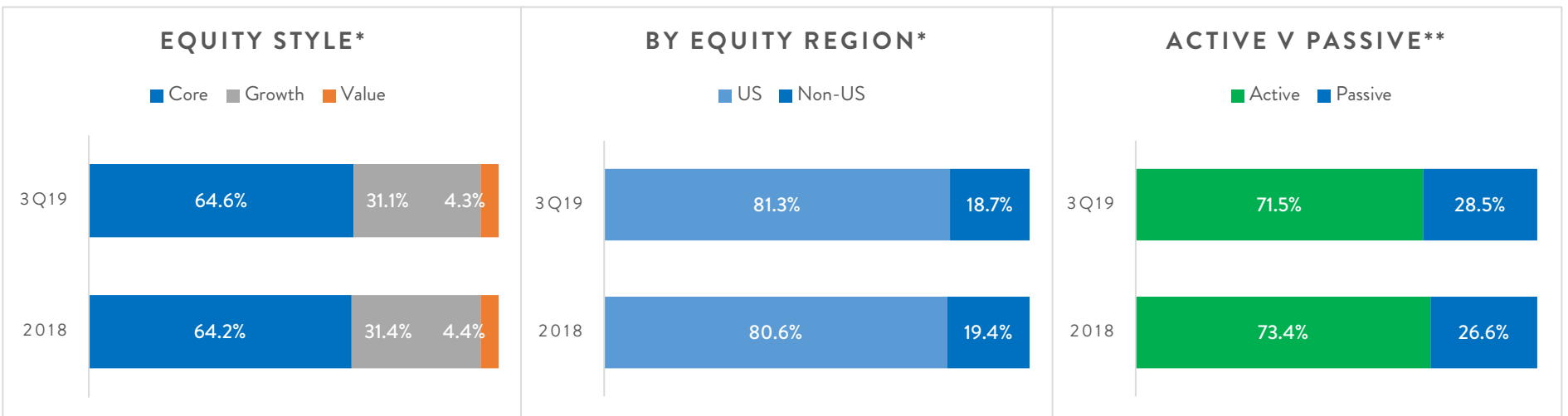
TOTAL PLAN ASSETS

\$1,171,484,960



HISTORICAL PLAN ALLOCATION

Asset Class	3Q19	2018	2017	2016	2015	2014	2013	2012
Fixed Income	33.5%	36.1%	N/A	N/A	N/A	N/A	N/A	N/A
Large Cap	18.8%	18.3%	N/A	N/A	N/A	N/A	N/A	N/A
Mid Cap	5.1%	4.7%	N/A	N/A	N/A	N/A	N/A	N/A
Small Cap	7.1%	6.5%	N/A	N/A	N/A	N/A	N/A	N/A
International	7.1%	7.1%	N/A	N/A	N/A	N/A	N/A	N/A
Asset Allocation	25.4%	24.2%	N/A	N/A	N/A	N/A	N/A	N/A
SDBA	0.2%	0.2%	N/A	N/A	N/A	N/A	N/A	N/A
Loans	2.7%	2.9%	N/A	N/A	N/A	N/A	N/A	N/A



*Excludes Fixed Income, Asset Allocation, SDBA, and Loan assets

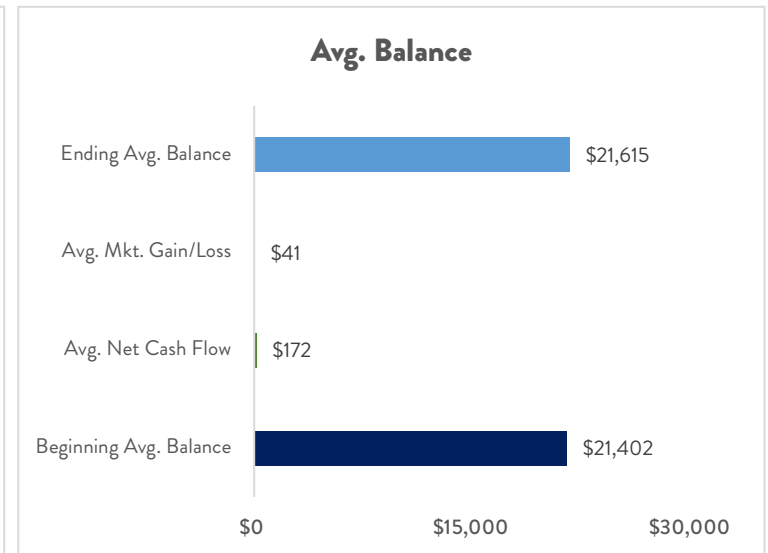
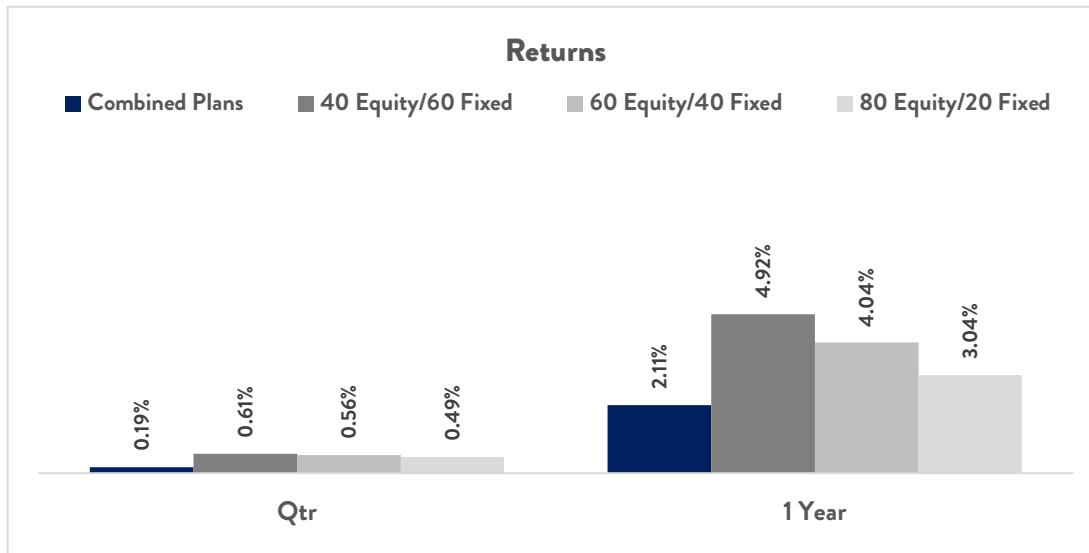
**Excludes Asset Allocation, SDBA, and Loan assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$385,204,391	\$9,156,655	(\$7,374,205)	\$3,054,088	\$2,652,618	\$392,693,547
Large Cap	\$222,202,282	\$3,328,258	(\$2,509,630)	(\$1,983,742)	(\$255,912)	\$220,781,256
Mid Cap	\$58,942,940	\$1,022,667	(\$763,544)	(\$57,491)	\$353,258	\$59,497,830
Small Cap	\$83,252,228	\$1,757,601	(\$980,044)	(\$31,204)	(\$1,015,841)	\$82,982,740
International	\$84,168,482	\$1,738,225	(\$964,045)	(\$437,759)	(\$846,265)	\$83,658,640
Asset Allocation	\$291,901,276	\$9,234,629	(\$4,602,105)	(\$554,511)	\$1,288,123	\$297,267,413
SDBA	\$2,486,341	\$0	\$0	\$10,618	(\$2,078)	\$2,494,881
Total	\$1,128,157,940	\$26,238,036	(\$17,193,574)	\$0	\$2,173,904	\$1,139,376,305

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$1,128,157,940	\$9,044,462	\$2,173,904	\$1,139,376,305
YTD	\$1,007,761,280	\$18,960,710	\$112,654,315	\$1,139,376,305
2018	N/A	N/A	N/A	\$1,007,761,280
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 90 Day T-Bill, Barclays Global

Aggregate Bond (rebalanced quarterly)

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COUNTY OF SAN BERNARDINO

457 Deferred Compensation Plan

PLAN ASSET ALLOCATION

Third Quarter 2019

Fixed Income	Ticker	Assets	%
Stabilizer	-	\$194,865,857	23.9%
Loomis Sayles Investment Grade Bond Y	LSIIX	\$22,666,651	2.8%
Invesco Oppenheimer International Bd R6	OIBIX	\$3,357,882	0.4%
Pioneer Global High Yield Y	GHYYX	\$5,031,138	0.6%
Total		\$225,921,528	27.7%

Large Cap	Ticker	Assets	%
Vanguard Institutional Index Instl Plus	VIIIX	\$94,300,258	11.6%
American Funds Growth Fund of America R6	RGAGX	\$83,670,181	10.3%
Total		\$177,970,439	21.8%

Mid Cap	Ticker	Assets	%
Vanguard Mid Cap Index Instl	VMCIX	\$47,318,396	5.8%
Total		\$47,318,396	5.8%

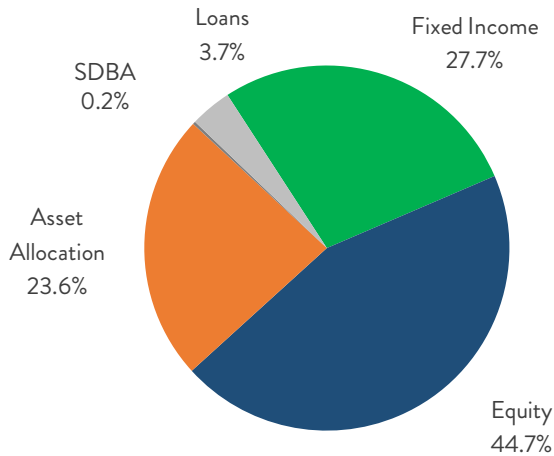
Small Cap	Ticker	Assets	%
Invesco Small Cap Value Y	VSMIX	\$6,249,567	0.8%
Vanguard Small Cap Index Instl	VSCIX	\$33,564,588	4.1%
Baron Growth Instl	BGRIX	\$28,228,259	3.5%
Total		\$68,042,414	8.3%

International	Ticker	Assets	%
Dodge & Cox International Stock	DODFX	\$9,470,446	1.2%
Vanguard Total Intl Stock Index I	VTSNX	\$18,996,688	2.3%
American Funds Capital World Gr & Inc R6	RWIGX	\$42,779,941	5.2%
Total		\$71,247,075	8.7%

Asset Allocation	Ticker	Assets	%
Conservative Allocation Portfolio	-	\$19,738,750	2.4%
Moderate Allocation Portfolio	-	\$59,449,894	7.3%
Aggressive Allocation Portfolio	-	\$43,466,841	5.3%
Vanguard Instl Target Retirement Income Instl	VITRX	\$3,657,870	0.4%
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$12,325,904	1.5%
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$39,232	0.0%
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$16,489,196	2.0%
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$25,182	0.0%
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$19,543,236	2.4%
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.0%
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$18,064,984	2.2%
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$2,364	0.0%
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.0%
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$8,963	0.0%
Total		\$192,812,415	23.6%

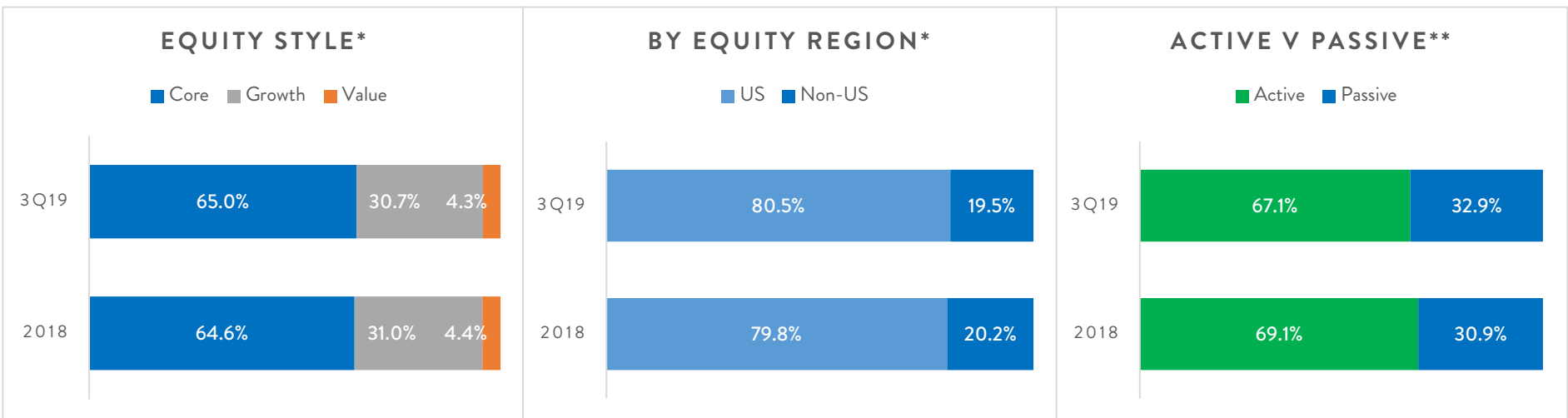
Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$2,001,976	0.2%
Participant Loans	-	\$29,970,294	3.7%
Total		\$31,972,270	3.9%

TOTAL PLAN ASSETS \$815,284,538



HISTORICAL PLAN ALLOCATION

Asset Class	3Q19	2018	2017	2016	2015	2014	2013	2012
Fixed Income	27.7%	30.2%	N/A	N/A	N/A	N/A	N/A	N/A
Large Cap	21.8%	21.4%	N/A	N/A	N/A	N/A	N/A	N/A
Mid Cap	5.8%	5.4%	N/A	N/A	N/A	N/A	N/A	N/A
Small Cap	8.3%	7.6%	N/A	N/A	N/A	N/A	N/A	N/A
International	8.7%	8.7%	N/A	N/A	N/A	N/A	N/A	N/A
Asset Allocation	23.6%	22.5%	N/A	N/A	N/A	N/A	N/A	N/A
SDBA	0.2%	0.3%	N/A	N/A	N/A	N/A	N/A	N/A
Loans	3.7%	3.9%	N/A	N/A	N/A	N/A	N/A	N/A



*Excludes Fixed Income, Asset Allocation, SDBA, and Loan assets

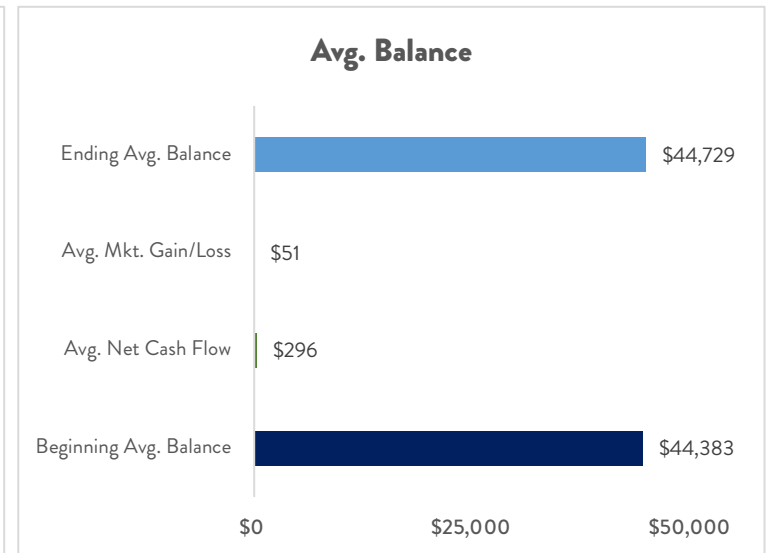
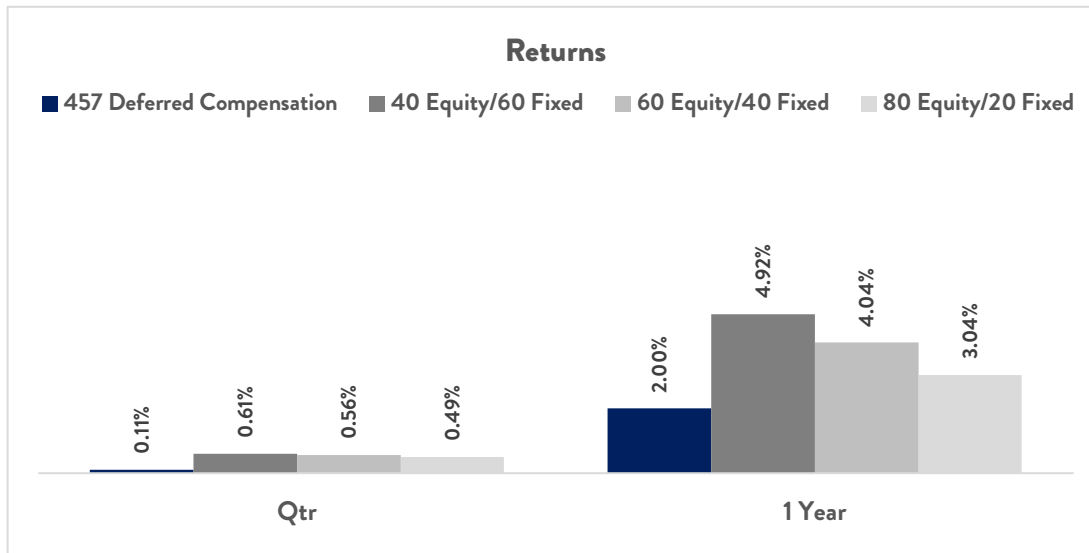
**Excludes Asset Allocation, SDBA, and Loan assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$221,672,041	\$2,989,015	(\$3,878,294)	\$3,467,811	\$1,670,956	\$225,921,528
Large Cap	\$179,474,485	\$2,707,337	(\$2,173,562)	(\$1,847,703)	(\$190,118)	\$177,970,439
Mid Cap	\$46,947,862	\$839,359	(\$654,472)	(\$97,771)	\$283,418	\$47,318,396
Small Cap	\$68,353,092	\$1,448,919	(\$869,455)	(\$59,673)	(\$830,467)	\$68,042,414
International	\$71,852,490	\$1,478,703	(\$862,604)	(\$503,677)	(\$717,836)	\$71,247,075
Asset Allocation	\$188,932,809	\$7,650,388	(\$3,483,773)	(\$962,575)	\$675,565	\$192,812,415
SDBA	\$1,993,199	\$0	\$0	\$3,588	\$5,189	\$2,001,976
Total	\$779,225,977	\$17,113,721	(\$11,922,160)	\$0	\$896,706	\$785,314,243

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$779,225,977	\$5,191,561	\$896,706	\$785,314,243
YTD	\$691,312,582	\$9,208,062	\$84,793,599	\$785,314,243
2018	N/A	N/A	N/A	\$691,312,582
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 90 Day T-Bill, Barclays Global

Aggregate Bond (rebalanced quarterly)

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COUNTY OF SAN BERNARDINO

401(a) Defined Contribution Plan

PLAN ASSET ALLOCATION

Third Quarter 2019

Fixed Income	Ticker	Assets	%
Stabilizer	-	\$1,397,879	6.1%
Loomis Sayles Investment Grade Bond Y	LSIIX	\$149,959	0.7%
Invesco Oppenheimer International Bd R6	OIBIX	\$37,816	0.2%
Pioneer Global High Yield Y	GHYYX	\$42,413	0.2%
Total		\$1,628,067	7.2%

Large Cap	Ticker	Assets	%
Vanguard Institutional Index Instl Plus	VIIIX	\$645,356	2.8%
American Funds Growth Fund of America R6	RGAGX	\$414,129	1.8%
Total		\$1,059,485	4.7%

Mid Cap	Ticker	Assets	%
Vanguard Mid Cap Index Instl	VMCIX	\$341,753	1.5%
Total		\$341,753	1.5%

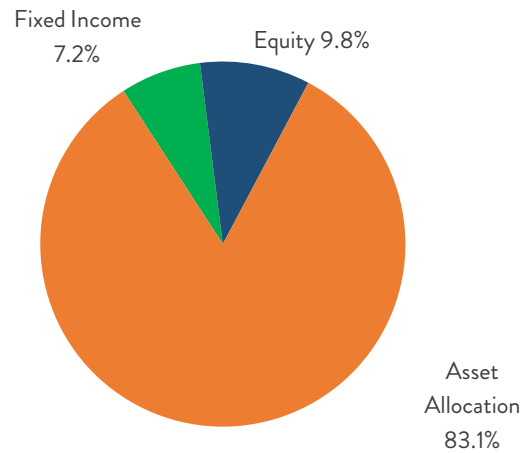
Small Cap	Ticker	Assets	%
Invesco Small Cap Value Y	VSMIX	\$99,034	0.4%
Vanguard Small Cap Index Instl	VSCIX	\$204,005	0.9%
Baron Growth Instl	BGRIX	\$211,441	0.9%
Total		\$514,480	2.3%

International	Ticker	Assets	%
Dodge & Cox International Stock	DODFX	\$52,947	0.2%
Vanguard Total Intl Stock Index I	VTSNX	\$138,276	0.6%
American Funds Capital World Gr & Inc R6	RWIGX	\$112,456	0.5%
Total		\$303,680	1.3%

Asset Allocation	Ticker	Assets	%
Conservative Allocation Portfolio	-	\$649,158	2.9%
Moderate Allocation Portfolio	-	\$916,895	4.0%
Aggressive Allocation Portfolio	-	\$867,423	3.8%
Vanguard Instl Target Retirement Income Instl	VITRX	\$588,950	2.6%
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$3,576,694	15.7%
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$4,539	0.0%
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$5,749,071	25.3%
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$41	0.0%
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$4,822,103	21.2%
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$25	0.0%
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$1,707,460	7.5%
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$22	0.0%
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$3	0.0%
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$0	0.0%
Total		\$18,882,383	83.1%

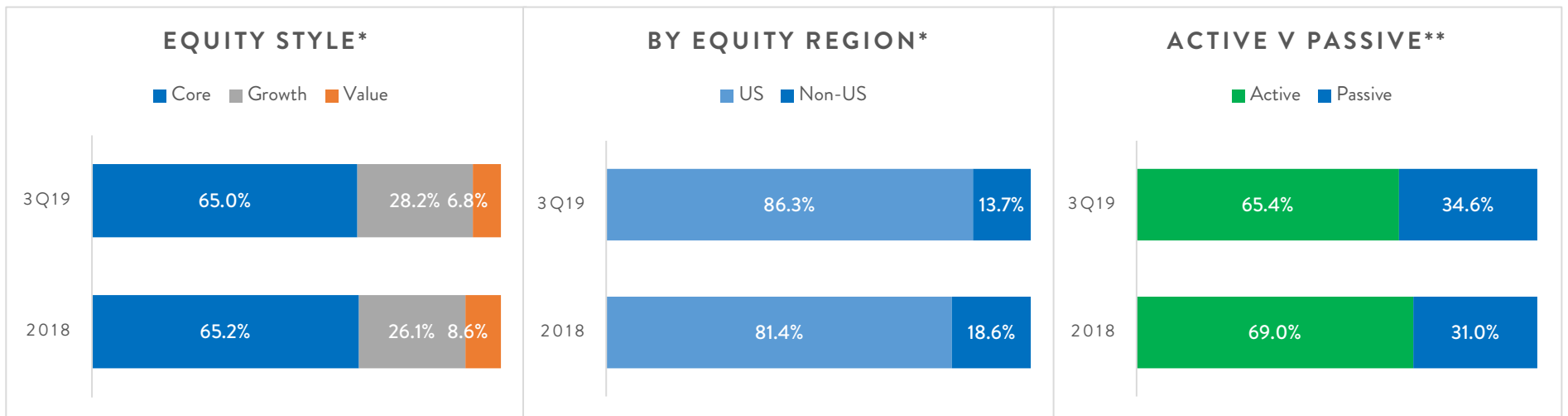
TOTAL PLAN ASSETS

\$22,729,847



HISTORICAL PLAN ALLOCATION

Asset Class	3Q19	2018	2017	2016	2015	2014	2013	2012
Fixed Income	7.2%	8.7%	N/A	N/A	N/A	N/A	N/A	N/A
Large Cap	4.7%	4.3%	N/A	N/A	N/A	N/A	N/A	N/A
Mid Cap	1.5%	1.4%	N/A	N/A	N/A	N/A	N/A	N/A
Small Cap	2.3%	1.9%	N/A	N/A	N/A	N/A	N/A	N/A
International	1.3%	1.7%	N/A	N/A	N/A	N/A	N/A	N/A
Asset Allocation	83.1%	82.0%	N/A	N/A	N/A	N/A	N/A	N/A



*Excludes Fixed Income and Asset Allocation assets

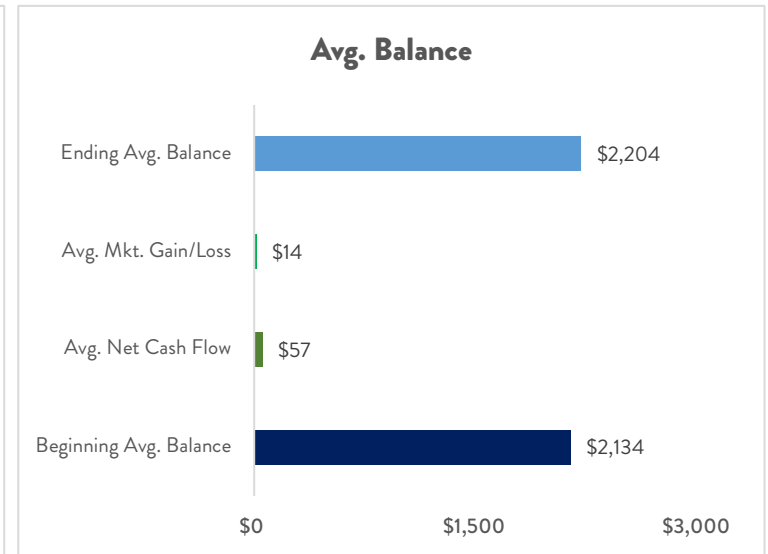
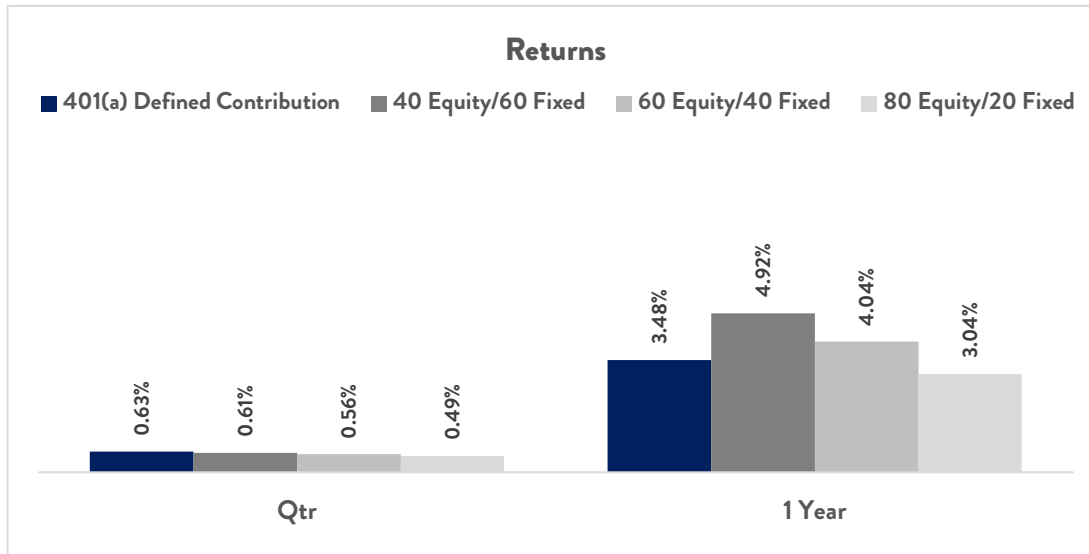
**Excludes Asset Allocation assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$1,524,804	\$48,375	(\$42,831)	\$86,736	\$10,983	\$1,628,067
Large Cap	\$1,022,112	\$47,796	(\$4,557)	(\$7,435)	\$1,568	\$1,059,485
Mid Cap	\$336,391	\$14,591	(\$4,184)	(\$6,834)	\$1,788	\$341,753
Small Cap	\$488,121	\$27,750	(\$6,771)	\$11,801	(\$6,420)	\$514,480
International	\$299,083	\$10,945	(\$1,375)	(\$1,272)	(\$3,701)	\$303,680
Asset Allocation	\$18,330,982	\$644,742	(\$147,638)	(\$82,996)	\$137,294	\$18,882,383
Total	\$22,001,493	\$794,198	(\$207,355)	\$0	\$141,512	\$22,729,847

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$22,001,493	\$586,842	\$141,512	\$22,729,847
YTD	\$18,802,415	\$1,371,582	\$2,555,850	\$22,729,847
2018	N/A	N/A	N/A	\$18,802,415
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 90 Day T-Bill, Barclays Global Aggregate Bond (rebalanced quarterly)

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COUNTY OF SAN BERNARDINO

401(k) Defined Contribution Plan

PLAN ASSET ALLOCATION

Third Quarter 2019

Fixed Income	Ticker	Assets	%
Stabilizer	-	\$43,142,797	27.7%
Loomis Sayles Investment Grade Bond Y	LSIIX	\$3,560,748	2.3%
Invesco Oppenheimer International Bd R6	OIBIX	\$666,442	0.4%
Pioneer Global High Yield Y	GHYYX	\$1,280,129	0.8%
Total		\$48,650,115	31.3%

Large Cap	Ticker	Assets	%
Vanguard Institutional Index Instl Plus	VIIIIX	\$19,545,854	12.6%
American Funds Growth Fund of America R6	RGAGX	\$17,871,983	11.5%
Total		\$37,417,837	24.1%

Mid Cap	Ticker	Assets	%
Vanguard Mid Cap Index Instl	VMCIX	\$9,800,839	6.3%
Total		\$9,800,839	6.3%

Small Cap	Ticker	Assets	%
Invesco Small Cap Value Y	VSMIX	\$1,220,850	0.8%
Vanguard Small Cap Index Instl	VSCIX	\$5,990,779	3.9%
Baron Growth Instl	BGRIX	\$4,920,305	3.2%
Total		\$12,131,934	7.8%

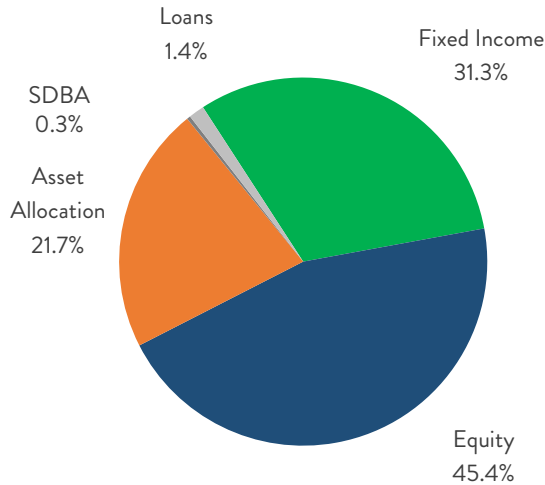
International	Ticker	Assets	%
Dodge & Cox International Stock	DODFX	\$1,679,414	1.1%
Vanguard Total Intl Stock Index I	VTSNX	\$3,260,750	2.1%
American Funds Capital World Gr & Inc R6	RWIGX	\$6,255,714	4.0%
Total		\$11,195,878	7.2%

Asset Allocation	Ticker	Assets	%
Conservative Allocation Portfolio	-	\$5,823,287	3.7%
Moderate Allocation Portfolio	-	\$14,010,882	9.0%
Aggressive Allocation Portfolio	-	\$6,551,483	4.2%
Vanguard Instl Target Retirement Income Instl	VITRX	\$336,861	0.2%
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$1,597,797	1.0%
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$0	0.0%
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$2,580,036	1.7%
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$0	0.0%
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$1,596,689	1.0%
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.0%
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$1,204,232	0.8%
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$0	0.0%
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.0%
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$0	0.0%
Total		\$33,701,267	21.7%

Miscellaneous	Ticker	Assets	%
Self-Directed Brokerage Account	-	\$492,905	0.3%
Participant Loans	-	\$2,138,360	1.4%
Total		\$2,631,265	1.7%

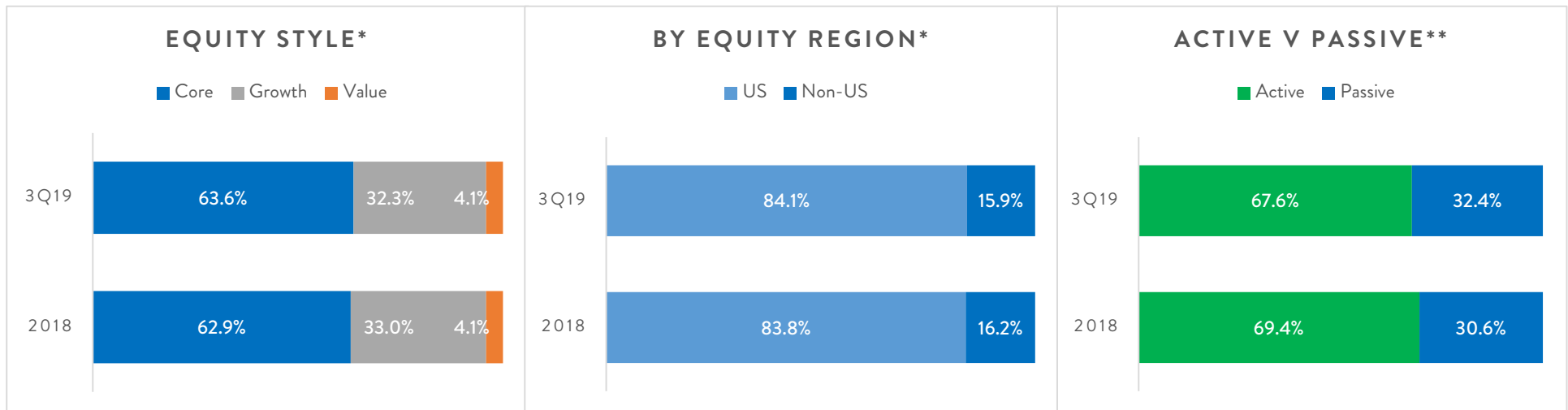
TOTAL PLAN ASSETS

\$155,529,135



HISTORICAL PLAN ALLOCATION

Asset Class	3Q19	2018	2017	2016	2015	2014	2013	2012
Fixed Income	31.3%	32.9%	N/A	N/A	N/A	N/A	N/A	N/A
Large Cap	24.1%	23.1%	N/A	N/A	N/A	N/A	N/A	N/A
Mid Cap	6.3%	5.8%	N/A	N/A	N/A	N/A	N/A	N/A
Small Cap	7.8%	7.4%	N/A	N/A	N/A	N/A	N/A	N/A
International	7.2%	7.0%	N/A	N/A	N/A	N/A	N/A	N/A
Asset Allocation	21.7%	22.1%	N/A	N/A	N/A	N/A	N/A	N/A
SDBA	0.3%	0.3%	N/A	N/A	N/A	N/A	N/A	N/A
Loans	1.4%	1.4%	N/A	N/A	N/A	N/A	N/A	N/A



*Excludes Fixed Income, Asset Allocation, SDBA, and Loan assets

**Excludes Asset Allocation, SDBA, and Loan assets

COUNTY OF SAN BERNARDINO

401(k) Defined Contribution Plan

PLAN ASSET ALLOCATION

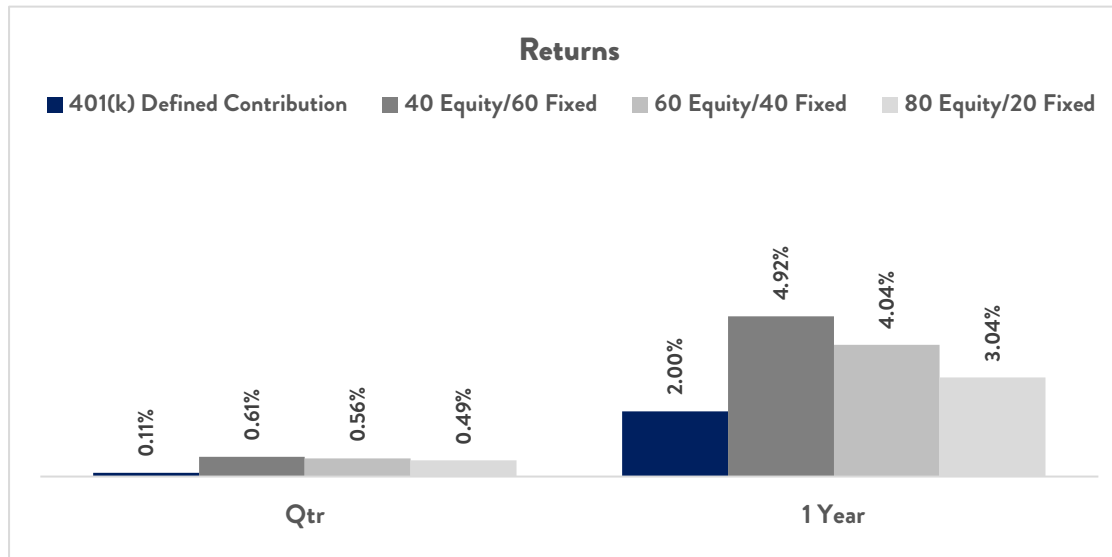
Third Quarter 2019

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$47,360,889	\$656,448	(\$1,319,011)	\$1,611,640	\$340,150	\$48,650,115
Large Cap	\$37,423,706	\$573,125	(\$281,637)	(\$243,260)	(\$54,098)	\$37,417,837
Mid Cap	\$9,640,466	\$168,717	(\$67,936)	\$2,091	\$57,499	\$9,800,839
Small Cap	\$12,178,282	\$280,289	(\$69,927)	(\$104,900)	(\$151,810)	\$12,131,934
International	\$11,154,999	\$248,522	(\$90,755)	(\$1,847)	(\$115,041)	\$11,195,878
Asset Allocation	\$34,505,700	\$938,719	(\$575,342)	(\$1,270,755)	\$102,945	\$33,701,267
SDBA	\$493,142	\$0	\$0	\$7,030	(\$7,267)	\$492,905
Total	\$152,757,184	\$2,865,820	(\$2,404,608)	\$0	\$172,379	\$153,390,776

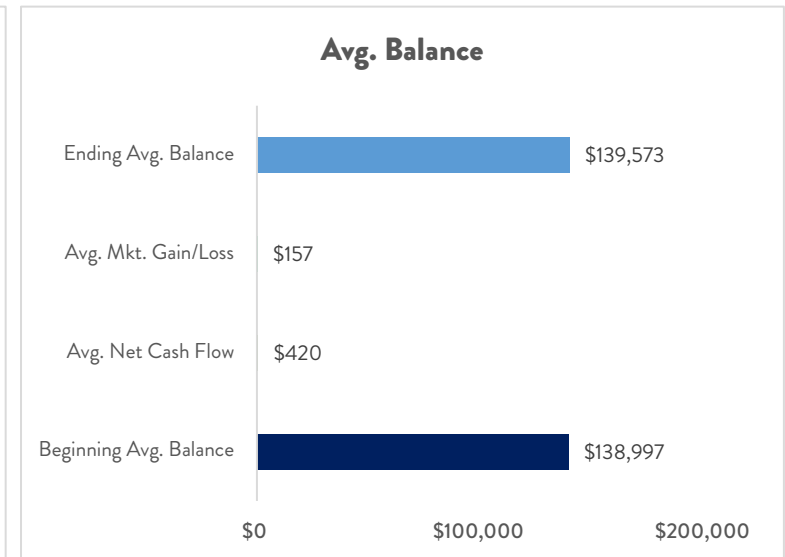
HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$152,757,184	\$461,213	\$172,379	\$153,390,776
YTD	\$136,406,428	\$936,320	\$16,048,027	\$153,390,776
2018	N/A	N/A	N/A	\$136,406,428
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 90 Day T-Bill, Barclays Global

Aggregate Bond (rebalanced quarterly)



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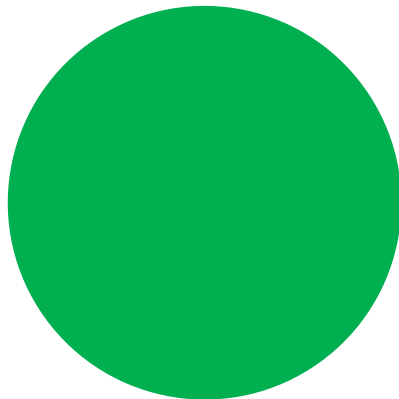
HISTORICAL PLAN CASH FLOWS

Fixed Income	Ticker	Assets	%
Stabilizer	-	\$37,374,391	100.0%
Total		\$37,374,391	100.0%

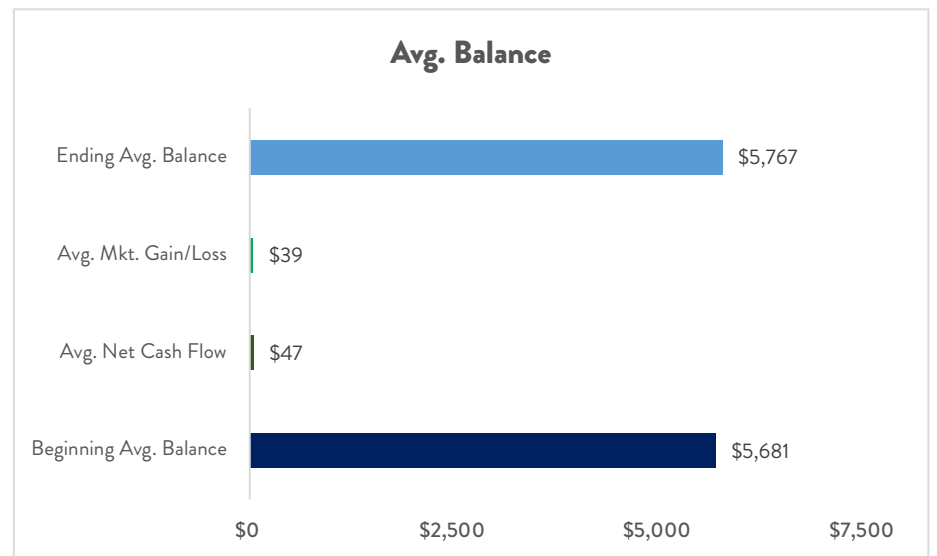
	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$36,817,633	\$304,010	\$252,748	\$37,374,391
YTD	\$36,665,327	\$10,288	\$698,776	\$37,374,391
2018	N/A	N/A	N/A	\$36,665,327
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A

TOTAL PLAN ASSETS \$37,374,391

Fixed Income
100.0%



Avg. Balance



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COUNTY OF SAN BERNARDINO

Retirement Medical Trust

PLAN ASSET ALLOCATION

Third Quarter 2019

Fixed Income	Ticker	Assets	%
Voya Fixed Account	-	\$78,465,883	55.8%
Voya Government Money Market A	AEMXX	\$11,140	0.0%
Loomis Sayles Investment Grade Bond Y	LSIIX	\$290,848	0.2%
Invesco Oppenheimer International Bd R6	OIBIX	\$144,104	0.1%
Pioneer Global High Yield Y	GHYYX	\$207,470	0.1%
Total		\$79,119,445	56.3%

Large Cap	Ticker	Assets	%
Vanguard Institutional Index Instl Plus	VIIIIX	\$2,023,332	1.4%
American Funds Growth Fund of America R6	RGAGX	\$2,310,163	1.6%
Total		\$4,333,494	3.1%

Mid Cap	Ticker	Assets	%
Vanguard Mid Cap Index Instl	VMCIX	\$2,036,843	1.4%
Total		\$2,036,843	1.4%

Small Cap	Ticker	Assets	%
Invesco Small Cap Value Y	VSMIX	\$340,140	0.2%
Vanguard Small Cap Index Instl	VSCIX	\$779,457	0.6%
Baron Growth Instl	BGRIX	\$1,174,314	0.8%
Total		\$2,293,912	1.6%

International	Ticker	Assets	%
Dodge & Cox International Stock	DODFX	\$223,231	0.2%
Vanguard Total Intl Stock Index I	VTSNX	\$286,454	0.2%
American Funds Capital World Gr & Inc R6	RWIGX	\$402,321	0.3%
Total		\$912,006	0.6%

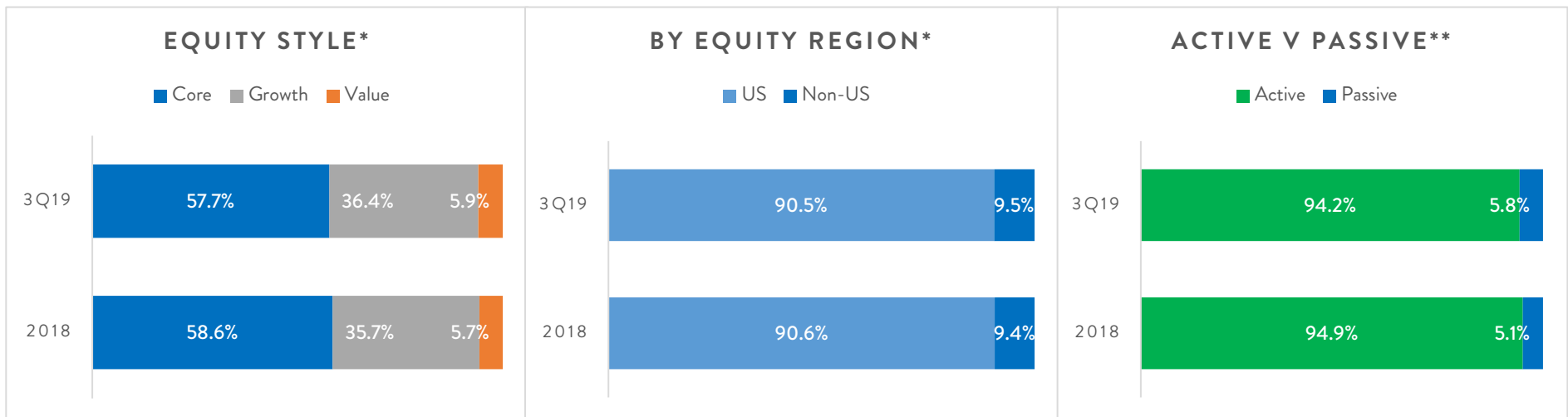
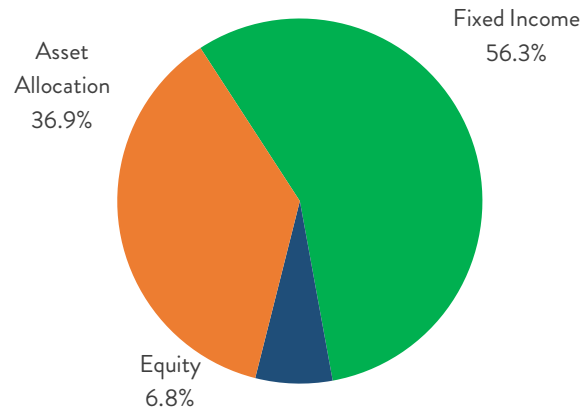
Asset Allocation	Ticker	Assets	%
Conservative Allocation Portfolio	-	\$1,357,814	1.0%
Moderate Allocation Portfolio	-	\$4,537,759	3.2%
Aggressive Allocation Portfolio	-	\$4,529,318	3.2%
Vanguard Instl Target Retirement Income Instl	VITRX	\$1,460,724	1.0%
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$10,809,340	7.7%
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$10	0.0%
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$16,684,076	11.9%
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$0	0.0%
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$10,200,368	7.3%
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.0%
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$2,291,939	1.6%
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$0	0.0%
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.0%
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$0	0.0%
Total		\$51,871,348	36.9%

TOTAL PLAN ASSETS

\$140,567,048

HISTORICAL PLAN ALLOCATION

Asset Class	3Q19	2018	2017	2016	2015	2014	2013	2012
Fixed Income	56.3%	59.5%	N/A	N/A	N/A	N/A	N/A	N/A
Large Cap	3.1%	2.8%	N/A	N/A	N/A	N/A	N/A	N/A
Mid Cap	1.4%	1.3%	N/A	N/A	N/A	N/A	N/A	N/A
Small Cap	1.6%	1.4%	N/A	N/A	N/A	N/A	N/A	N/A
International	0.6%	0.6%	N/A	N/A	N/A	N/A	N/A	N/A
Asset Allocation	36.9%	34.3%	N/A	N/A	N/A	N/A	N/A	N/A



*Excludes Fixed Income and Asset Allocation assets

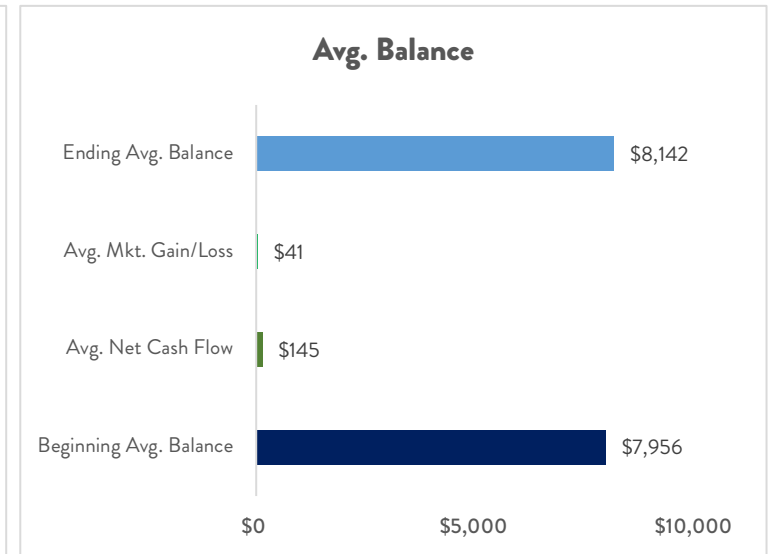
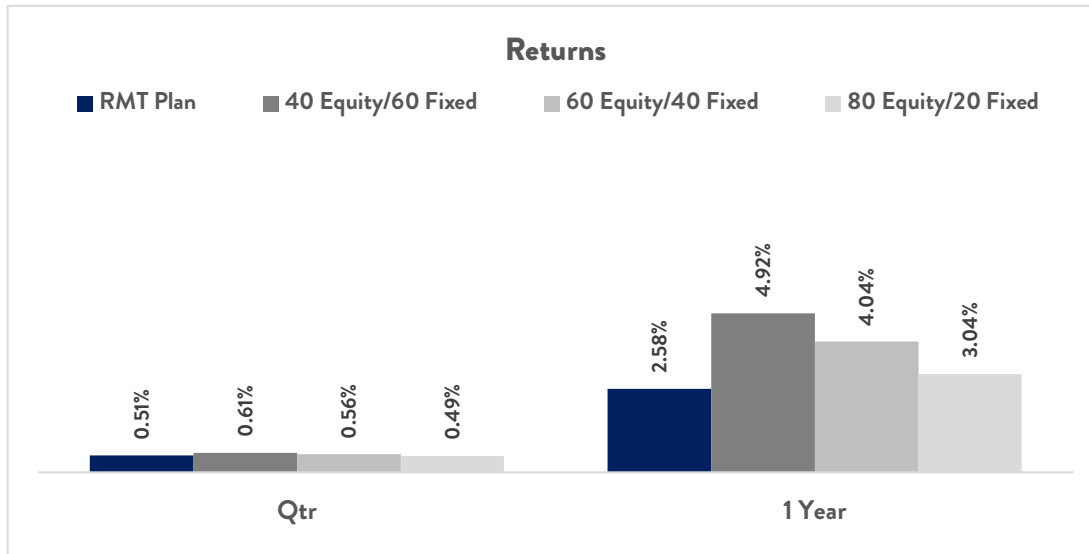
**Excludes Asset Allocation assets

PLAN LEVEL CASH FLOWS

	Beginning Value	Cash Flow (+)	Cash Flow (-)	Transfer	Market Gain/Loss	Ending Value
Fixed Income	\$77,829,025	\$4,381,723	(\$1,356,986)	(\$2,112,098)	\$377,781	\$79,119,445
Large Cap	\$4,281,979	\$0	(\$49,875)	\$114,655	(\$13,264)	\$4,333,494
Mid Cap	\$2,018,220	\$0	(\$36,953)	\$45,023	\$10,553	\$2,036,843
Small Cap	\$2,232,733	\$644	(\$33,890)	\$121,568	(\$27,144)	\$2,293,912
International	\$861,911	\$56	(\$9,311)	\$69,037	(\$9,687)	\$912,006
Asset Allocation	\$50,131,785	\$781	(\$395,353)	\$1,761,815	\$372,320	\$51,871,348
Total	\$137,355,653	\$4,383,204	(\$1,882,368)	\$0	\$710,559	\$140,567,048

HISTORICAL PLAN CASH FLOWS

	Beginning Value	Net Cash Flow	Market Gain/Loss	Ending Value
3Q19	\$137,355,653	\$2,500,836	\$710,559	\$140,567,048
YTD	\$124,574,529	\$7,434,457	\$8,558,062	\$140,567,048
2018	N/A	N/A	N/A	\$124,574,529
2017	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A



Equity Indices: Russell 3000, MSCI ACWI ex USA; Fixed Indices: US Treasury 90 Day T-Bill, Barclays Global

Aggregate Bond (rebalanced quarterly)

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Section 3

Key: Ⓟ Pass / ● Fail

Proposed Investment Policy Status

	Performance Factors	Qualitative Factors	On-Watch Date Initiated	Notes
Stabilizer	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement 2050 Instl	Ⓟ	Ⓟ	-	
Voya Government Money Market A	Ⓟ	Ⓟ	-	
Loomis Sayles Investment Grade Bond Y	●	Ⓟ	-	Trailing Benchmark and Peer Group for 5 year period.
Invesco Oppenheimer International Bd R6	Ⓟ	Ⓟ	-	
Pioneer Global High Yield Y	●	Ⓟ	4Q2018	Trailing Benchmark and Peer Group for 5 year period.
Vanguard Institutional Index Instl Plus	Ⓟ	Ⓟ	-	
American Funds Growth Fund of America R6	●	Ⓟ	-	Trailing Benchmark and Peer Group for 5 year period.
Vanguard Mid Cap Index Instl	Ⓟ	Ⓟ	-	
Invesco Small Cap Value Y	●	Ⓟ	3Q2018	Trailing Benchmark and Peer Group for 5 year period.
Vanguard Small Cap Index Instl	Ⓟ	Ⓟ	-	
Baron Growth Instl	Ⓟ	Ⓟ	-	
Dodge & Cox International Stock	●	Ⓟ	3Q2018	Trailing Benchmark and Peer Group for 5 year period.
Vanguard Total Intl Stock Index I	Ⓟ	Ⓟ	-	
American Funds Capital World Gr & Inc R6	●	Ⓟ	-	Trailing Benchmark and Peer Group for 5 year period.
Conservative Allocation Portfolio	Ⓟ	Ⓟ	-	
Moderate Allocation Portfolio	Ⓟ	Ⓟ	-	
Aggressive Allocation Portfolio	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement Income Instl	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement 2020 Instl	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement 2025 Instl	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement 2030 Instl	Ⓟ	Ⓟ	-	
Vanguard Instl Target Retirement 2035 Instl	Ⓟ	Ⓟ	-	

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

	QTR	YTD	1Yr	Annualized			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Stabilizer	0.67	1.91	2.55	2.50	2.45	2.35	2.50	N/A	N/A	N/A	N/A	N/A
5 Yr Constant Maturity US Treasury Yield	0.41	1.55	2.27	2.20	1.91	1.68	2.75	1.91	1.44	1.53	1.64	1.16
+/- Index	0.26	0.36	0.28	0.30	0.54	0.67	(0.25)	-	-	-	-	-
US Stable Value	4	7	5	4	3	13	8	N/A	N/A	N/A	N/A	N/A
Voya Fixed Account	0.48	1.42	1.90	1.92	2.05	2.40	1.90	N/A	N/A	N/A	N/A	N/A
5 Yr Constant Maturity US Treasury Yield	0.41	1.55	2.27	2.20	1.91	1.68	2.75	1.91	1.44	1.53	1.64	1.16
+/- Index	0.07	(0.13)	(0.37)	(0.28)	0.14	0.72	(0.85)	-	-	-	-	-
US Stable Value	75	68	66	32	14	11	43	N/A	N/A	N/A	N/A	N/A
Voya Government Money Market A	0.50	1.55	2.04	1.11	0.68	0.35	1.50	0.26	0.08	0.02	0.01	0.02
US 90 Day T-Bill	0.49	1.66	2.25	1.55	0.98	0.53	1.94	0.93	0.32	0.05	0.03	0.06
+/- Index	0.01	(0.11)	(0.21)	(0.44)	(0.29)	(0.18)	(0.43)	(0.67)	(0.24)	(0.03)	(0.02)	(0.03)
US Money Market - Taxable	30	39	41	54	50	50	45	76	43	25	26	14
Loomis Sayles Investment Grade Bond Y	2.10	8.54	7.90	4.14	3.16	5.24	-0.32	6.66	6.16	-5.08	5.14	1.36
BBgBarc Capital US Aggregate Bond Index	2.27	8.52	10.30	2.92	3.38	3.75	0.01	3.54	2.65	0.55	5.97	-2.02
+/- Index	(0.17)	0.02	(2.40)	1.22	(0.22)	1.49	(0.33)	3.12	3.51	(5.63)	(0.83)	3.38
US Fund Intermediate Core-Plus Bond	46	62	83	8	63	12	31	3	7	99	62	7
Invesco Oppenheimer International Bd R6	-2.68	5.20	4.74	1.92	2.52	2.78	-5.53	11.12	6.79	-3.31	0.77	-3.88
BBgBarc Capital Global Agg Ex-USA Index	-0.58	4.38	5.34	0.43	0.87	1.27	-2.15	10.51	1.49	-6.02	-3.08	-3.08
+/- Index	(2.11)	0.82	(0.59)	1.49	1.65	1.51	(3.38)	0.61	5.30	2.71	3.86	(0.80)
US Fund World Bond	93	60	62	35	16	40	91	9	13	34	55	68

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

	QTR	YTD	1Yr	Annualized			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Pioneer Global High Yield Y	-0.28	9.11	4.08	4.94	3.01	6.17	-5.13	10.21	13.57	-5.92	-1.72	5.07
BBgBarc Global High Yield Index	-0.67	8.76	4.97	4.77	4.54	7.43	-4.06	10.43	14.27	-2.72	0.01	7.33
+/- Index	0.38	0.35	(0.89)	0.17	(1.54)	(1.25)	(1.07)	(0.22)	(0.70)	(3.20)	(1.73)	(2.26)
US Fund High Yield Bond	95	70	79	61	90	79	93	3	48	82	95	85
Vanguard Institutional Index Instl Plus	1.70	20.55	4.24	13.38	10.83	13.24	-4.41	21.82	11.95	1.39	13.68	32.37
S&P 500 Index	1.70	20.55	4.25	13.39	10.84	13.24	-4.38	21.83	11.96	1.38	13.69	32.39
+/- Index	0.00	0.00	(0.01)	(0.02)	(0.01)	0.00	(0.02)	(0.02)	(0.01)	0.01	(0.01)	(0.02)
US Fund Large Blend	41	30	33	18	13	8	25	28	26	20	18	41
American Funds Growth Fund of America R6	-2.06	15.46	-1.93	13.10	10.97	12.76	-2.60	26.53	8.82	5.70	9.63	34.29
Russell 1000 Growth Index	1.49	23.30	3.71	16.89	13.39	14.94	-1.51	30.21	7.08	5.67	13.05	33.48
+/- Index	(3.55)	(7.83)	(5.64)	(3.79)	(2.42)	(2.18)	(1.09)	(3.69)	1.74	0.03	(3.42)	0.81
US Fund Large Growth	80	90	84	71	55	62	53	57	9	34	56	44
Vanguard Mid Cap Index Instl	0.60	22.62	3.65	10.68	9.21	13.06	-9.24	19.29	11.23	-1.33	13.78	35.17
Vanguard US Mid Cap Index	0.62	22.66	3.70	10.70	9.24	13.10	-9.22	19.30	11.25	-1.28	13.83	35.21
+/- Index	(0.02)	(0.04)	(0.04)	(0.02)	(0.03)	(0.04)	(0.02)	0.00	(0.02)	(0.05)	(0.04)	(0.04)
US Fund Mid-Cap Blend	40	11	20	20	15	8	32	17	73	17	5	40
Invesco Small Cap Value Y	-2.34	20.08	-8.64	6.07	4.22	10.50	-25.11	18.58	18.61	-8.64	7.43	44.55
Russell 2000 Value Index	-0.57	12.82	-8.24	6.54	7.17	10.06	-12.86	7.84	31.74	-7.47	4.22	34.52
+/- Index	(1.77)	7.27	(0.40)	(0.47)	(2.95)	0.44	(12.25)	10.74	(13.13)	(1.17)	3.21	10.03
US Fund Small Value	84	4	47	32	67	27	98	1	87	76	7	5

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

	QTR	YTD	1Yr	Annualized			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Vanguard Small Cap Index Instl	-1.45	17.81	-3.80	9.64	8.63	12.40	-9.32	16.25	18.32	-3.63	7.53	37.80
Vanguard US Small Cap Index	-1.47	17.79	-3.80	9.61	8.60	12.35	-9.33	16.24	18.26	-3.68	7.54	37.77
+/- Index	0.02	0.02	0.00	0.02	0.03	0.05	0.01	0.01	0.05	0.05	(0.01)	0.03
US Fund Small Blend	59	19	20	13	22	9	20	13	70	34	13	46
Baron Growth Instl	-0.69	29.32	5.36	17.00	11.89	14.00	-2.67	27.35	6.31	-4.06	4.66	38.69
Russell 2000 Growth Index	-4.17	15.34	-9.63	9.79	9.08	12.25	-9.31	22.17	11.32	-1.38	5.60	43.30
+/- Index	3.48	13.98	14.99	7.21	2.82	1.75	6.64	5.19	(5.01)	(2.68)	(0.95)	(4.62)
US Fund Small Growth	8	1	1	11	19	22	28	20	80	69	31	63
Dodge & Cox International Stock	-1.66	11.00	-2.75	5.26	0.64	4.92	-17.98	23.94	8.26	-11.35	0.08	26.31
MSCI ACWI Ex-USA Value (Net) Index	-2.80	6.94	-4.51	5.24	0.89	3.05	-13.97	22.66	8.92	-10.06	-5.10	15.04
+/- Index	1.14	4.06	1.76	0.02	(0.25)	1.87	(4.01)	1.28	(0.66)	(1.29)	5.18	11.27
US Fund Foreign Large Value	53	20	26	29	70	14	81	37	11	95	4	8
Vanguard Total Intl Stock Index I	-1.61	11.47	-1.53	6.09	3.17	4.55	-14.39	27.55	4.70	-4.24	-4.15	15.15
Vanguard Total International Stock Index	-1.65	11.48	-1.66	6.19	3.19	4.57	-14.62	27.41	4.72	-4.29	-3.39	15.76
+/- Index	0.04	(0.01)	0.13	(0.10)	(0.01)	(0.02)	0.22	0.14	(0.02)	0.05	(0.76)	(0.61)
US Fund Foreign Large Blend	63	66	42	39	43	52	50	23	12	79	33	83
American Funds Capital World Gr & Inc R6	-0.55	14.98	1.64	8.94	6.31	8.28	-9.97	25.08	6.85	-1.88	4.36	25.28
MSCI ACWI (Net) Index	-0.03	16.20	1.38	9.71	6.65	8.35	-9.41	23.97	7.86	-2.36	4.16	22.80
+/- Index	(0.52)	(1.21)	0.26	(0.77)	(0.34)	(0.06)	(0.55)	1.11	(1.01)	0.49	0.20	2.47
US Fund World Large Stock	62	63	49	49	53	54	56	33	34	55	30	51

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

	QTR	YTD	1Yr	Annualized			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Conservative Allocation Portfolio	0.53	6.23	2.38	4.94	4.18	5.47	-0.82	N/A	N/A	N/A	N/A	N/A
Dow Jones Conservative Index	0.96	6.57	5.23	2.96	2.94	3.87	-0.62	5.73	3.01	-0.63	3.86	1.41
+/- Index	(0.43)	(0.34)	(2.85)	1.98	1.24	1.60	(0.20)	-	-	-	-	-
US Fund Conservative Allocation	78	95	84	49	43	60	1	N/A	N/A	N/A	N/A	N/A
Moderate Allocation Portfolio	0.14	11.80	2.60	6.66	5.75	7.73	-6.01	N/A	N/A	N/A	N/A	N/A
Dow Jones Moderate Index	0.43	12.51	3.85	6.86	5.86	7.47	-5.21	15.15	7.67	-1.21	5.35	14.46
+/- Index	(0.29)	(0.71)	(1.25)	(0.20)	(0.11)	0.26	(0.80)	-	-	-	-	-
US Fund Moderate Allocation	75	61	56	42	29	39	50	N/A	N/A	N/A	N/A	N/A
Aggressive Allocation Portfolio	0.01	14.83	2.22	7.91	6.35	8.74	-8.33	N/A	N/A	N/A	N/A	N/A
Dow Jones Aggressive Index	-0.23	16.86	0.42	10.00	7.69	10.24	-9.45	23.20	10.98	-2.56	6.59	27.00
+/- Index	0.24	(2.03)	1.80	(2.09)	(1.34)	(1.50)	1.12	-	-	-	-	-
US Fund Aggressive Allocation	58	48	34	55	44	44	50	N/A	N/A	N/A	N/A	N/A
Vanguard Instl Target Retirement Income Instl	1.49	10.27	6.73	5.11	4.60	5.79	-1.98	8.54	5.29	-0.13	5.58	5.91
Vanguard Retirement Income Index	1.46	10.40	6.82	5.23	4.73	5.90	-1.98	8.67	5.35	0.12	5.76	6.03
+/- Index	0.03	(0.13)	(0.09)	(0.12)	(0.13)	(0.11)	0.00	(0.13)	(0.06)	(0.25)	(0.18)	(0.12)
US Fund Target-Date Retirement	27	51	19	33	19	27	10	58	38	11	15	47
Vanguard Instl Target Retirement 2020 Instl	1.20	12.65	5.34	7.12	6.01	8.00	-4.21	14.13	7.04	-0.63	7.16	15.90
Vanguard Retirement 2020 Index	1.16	12.74	5.45	7.27	6.16	8.19	-4.14	14.22	7.17	-0.40	7.37	16.21
+/- Index	0.04	(0.09)	(0.11)	(0.15)	(0.15)	(0.19)	(0.07)	(0.09)	(0.13)	(0.23)	(0.21)	(0.31)
US Fund Target-Date 2020	35	20	30	12	4	8	41	13	27	27	1	22

Longer term Institutional share class performance for Vanguard Target Date funds may represent Investor share class performance adjusted for the difference in expense ratios.

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

	QTR	YTD	1Yr	Annualized			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Vanguard Instl Target Retirement 2025 Instl	1.09	13.70	4.91	7.83	6.43	8.52	-5.02	15.94	7.56	-0.80	7.22	18.19
Vanguard Retirement 2025 Index	1.07	13.83	5.03	7.99	6.58	8.71	-5.01	16.08	7.66	-0.58	7.45	18.52
+/- Index	0.02	(0.13)	(0.12)	(0.16)	(0.15)	(0.19)	(0.01)	(0.14)	(0.10)	(0.22)	(0.23)	(0.33)
US Fund Target-Date 2025	33	18	28	11	4	12	38	22	23	30	5	31
Vanguard Instl Target Retirement 2030 Instl	0.87	14.27	4.15	8.32	6.72	8.97	-5.82	17.57	7.97	-0.97	7.23	20.55
Vanguard Retirement 2030 Index	0.88	14.39	4.30	8.50	6.86	9.16	-5.74	17.65	8.11	-0.80	7.51	20.88
+/- Index	(0.01)	(0.12)	(0.15)	(0.18)	(0.14)	(0.19)	(0.08)	(0.08)	(0.14)	(0.17)	(0.28)	(0.33)
US Fund Target-Date 2030	28	33	33	22	17	17	32	32	29	36	9	30
Vanguard Instl Target Retirement 2035 Instl	0.70	14.88	3.45	8.84	6.97	9.40	-6.56	19.14	8.39	-1.21	7.29	22.87
Vanguard Retirement 2035 Index	0.68	14.96	3.57	9.00	7.13	9.58	-6.48	19.24	8.55	-1.02	7.57	23.27
+/- Index	0.02	(0.08)	(0.12)	(0.16)	(0.16)	(0.18)	(0.08)	(0.10)	(0.16)	(0.19)	(0.28)	(0.40)
US Fund Target-Date 2035	33	42	31	27	24	14	28	38	27	40	9	28
Vanguard Instl Target Retirement 2045 Instl	0.32	15.79	2.13	9.47	7.29	9.72	-7.87	21.47	8.94	-1.51	7.22	24.43
Vanguard Retirement 2045 Index	0.31	15.91	2.31	9.66	7.48	9.92	-7.77	21.54	9.13	-1.25	7.61	24.79
+/- Index	0.01	(0.12)	(0.18)	(0.19)	(0.19)	(0.20)	(0.10)	(0.07)	(0.19)	(0.26)	(0.39)	(0.36)
US Fund Target-Date 2045	46	42	44	19	22	15	37	23	25	48	13	31
Vanguard Instl Target Retirement 2050 Instl	0.32	15.76	2.11	9.47	7.30	9.71	-7.87	21.47	8.95	-1.51	7.25	24.41
Vanguard Retirement 2050 Index	0.31	15.91	2.31	9.66	7.48	9.92	-7.77	21.54	9.13	-1.25	7.61	24.79
+/- Index	0.01	(0.15)	(0.20)	(0.19)	(0.18)	(0.21)	(0.10)	(0.07)	(0.18)	(0.26)	(0.36)	(0.38)
US Fund Target-Date 2050	41	44	40	24	20	16	30	30	28	51	19	32

Longer term Institutional share class performance for Vanguard Target Date funds may represent Investor share class performance adjusted for the difference in expense ratios.

COUNTY OF SAN BERNARDINO

All Plans - Combined

PERFORMANCE REVIEW

Third Quarter 2019

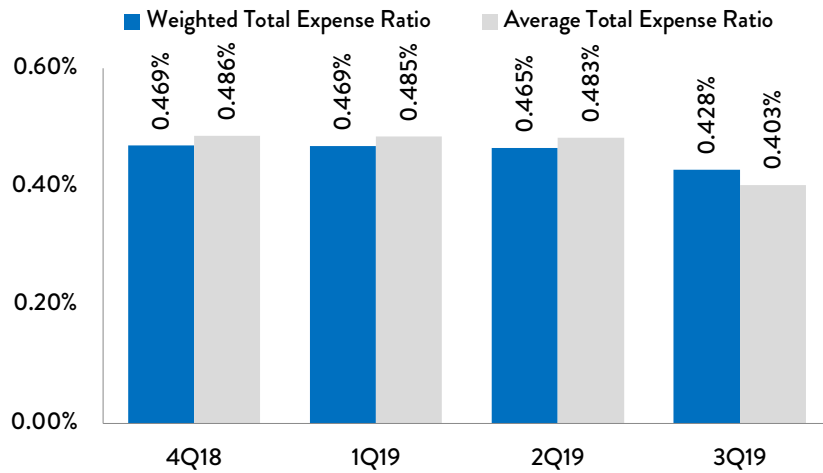
	QTR	YTD	1Yr	<i>Annualized</i>			2018	2017	2016	2015	2014	2013
				3Yr	5Yr	10Yr						
Vanguard Instl Target Retirement 2055 Instl	0.28	15.77	2.16	9.48	7.27	-	-7.84	21.47	8.94	-1.66	7.25	24.39
Vanguard Retirement 2055 Index	0.31	15.91	2.31	9.66	7.48	-	-7.77	21.54	9.13	-1.25	7.61	24.79
+/- Index	(0.03)	(0.14)	(0.15)	(0.18)	(0.21)	-	(0.07)	(0.07)	(0.19)	(0.41)	(0.36)	(0.40)
US Fund Target-Date 2055	38	47	35	29	27	-	30	40	28	53	17	35
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2018	2017	2016	2015	2014	2013
Vanguard Instl Target Retirement 2060 Instl	0.32	15.81	2.15	9.46	7.26	-	-7.88	21.42	8.94	-1.61	7.23	24.42
Vanguard Retirement 2060 Index	0.31	15.91	2.31	9.66	7.48	-	-7.77	21.54	9.13	-1.25	7.61	24.79
+/- Index	0.01	(0.10)	(0.16)	(0.20)	(0.22)	-	(0.11)	(0.12)	(0.19)	(0.36)	(0.38)	(0.37)
US Fund Target-Date 2060+	35	56	33	34	50	-	29	43	21	77	10	50
	QTR	YTD	1Yr	3Yr	5Yr	10Yr	2018	2017	2016	2015	2014	2013
Vanguard Instl Target Retirement 2065 Instl	0.31	15.87	2.22	-	-	-	-7.84	-	-	-	-	-
Vanguard Retirement 2065 Index	0.31	15.91	2.31	-	-	-	-7.77	-	-	-	-	-
+/- Index	0.00	(0.04)	(0.09)	-	-	-	(0.07)	-	-	-	-	-
US Fund Target-Date 2060+	38	52	35	-	-	-	30	-	-	-	-	-

Longer term Institutional share class performance for Vanguard Target Date funds may represent Investor share class performance adjusted for the difference in expense ratios.

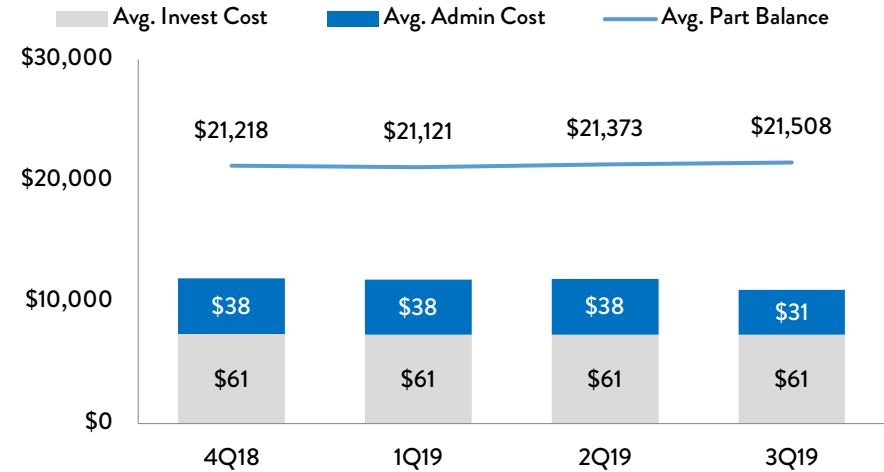
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Section 4

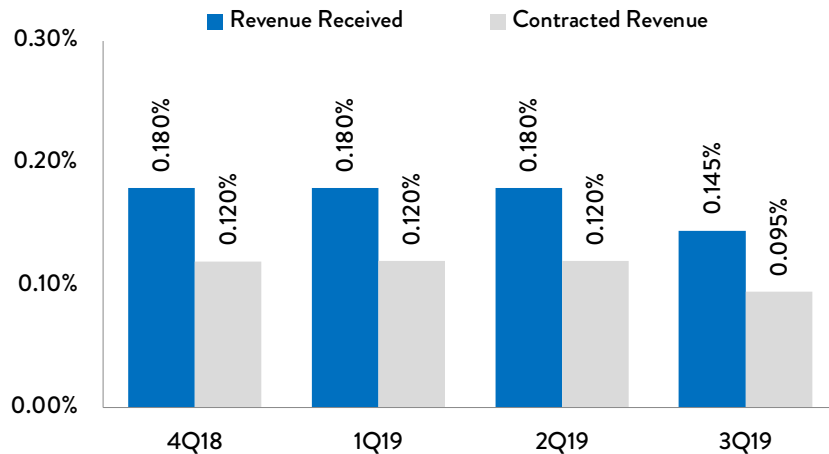
Annualized Plan Cost (%)



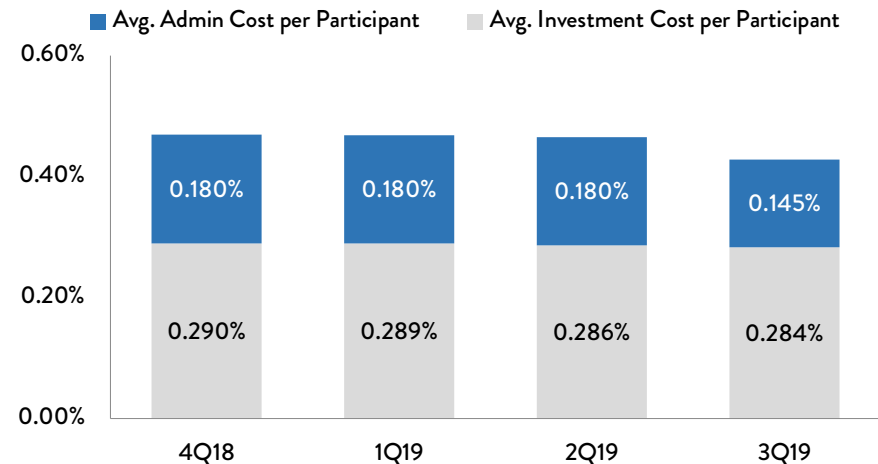
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received*
(as a % of total assets)



Annualized Investment Cost Summary
(as a % of total assets)



*Beginning July 1, 2019 revenue received is 0.145% annually on all assets excluding SDBA. Contracted revenue is 0.095% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO

All Plans - Combined

PLAN FEE ANALYSIS

Third Quarter 2019

Annualized

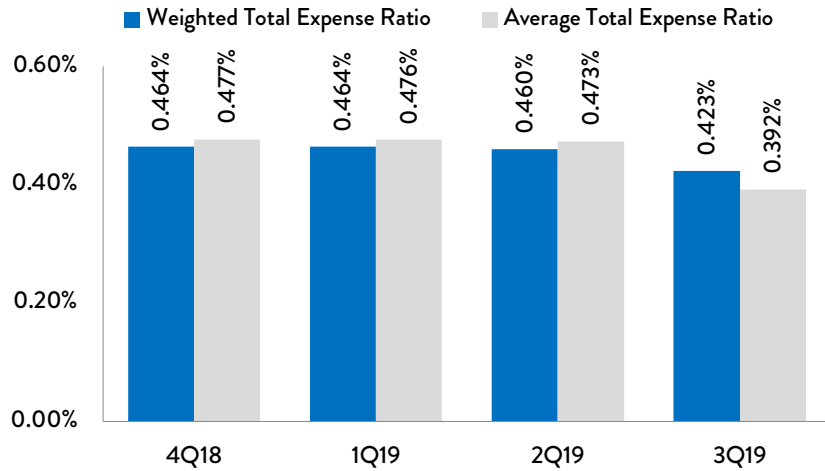
Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Stabilizer	-	\$274,448,911	0.44%	0.145%	\$1,207,575	\$397,951
Voya Fixed Account**	-	\$77,831,925	0.41%	0.145%	\$319,111	\$112,856
Voya Government Money Market A	AEMXX	\$10,770	0.40%	0.145%	\$43	\$16
Loomis Sayles Investment Grade Bond Y*	LSIIX	\$25,971,584	0.36%	0.145%	\$93,498	\$37,659
Invesco Oppenheimer International Bd R6	OIBIX	\$4,233,987	0.56%	0.145%	\$23,710	\$6,139
Pioneer Global High Yield Y*	GHYYX	\$6,451,791	0.67%	0.145%	\$43,227	\$9,355
Vanguard Institutional Index Instl Plus	VIIIX	\$115,516,330	0.02%	0.145%	\$23,103	\$167,499
American Funds Growth Fund of America R6	RGAGX	\$105,975,439	0.33%	0.145%	\$349,719	\$153,664
Vanguard Mid Cap Index Instl	VMCIX	\$59,220,385	0.04%	0.145%	\$23,688	\$85,870
Invesco Small Cap Value Y*	VSMIX	\$7,965,930	0.62%	0.145%	\$49,389	\$11,551
Vanguard Small Cap Index Instl	VSCIX	\$40,720,776	0.04%	0.145%	\$16,288	\$59,045
Baron Growth Instl*	BGRIX	\$34,430,777	0.88%	0.145%	\$302,991	\$49,925
Dodge & Cox International Stock*	DODFX	\$11,522,501	0.53%	0.145%	\$61,069	\$16,708
Vanguard Total Intl Stock Index I	VTSNX	\$22,939,197	0.08%	0.145%	\$18,351	\$33,262
American Funds Capital World Gr & Inc R6	RWIGX	\$49,451,862	0.44%	0.145%	\$217,588	\$71,705
Conservative Allocation Portfolio	-	\$27,630,044	0.32%	0.145%	\$88,416	\$40,064
Moderate Allocation Portfolio*	-	\$79,277,134	0.22%	0.145%	\$174,410	\$114,952
Aggressive Allocation Portfolio*	-	\$55,357,126	0.14%	0.145%	\$77,500	\$80,268
Vanguard Instl Target Retirement Income Instl	VITRX	\$5,959,556	0.09%	0.145%	\$5,364	\$8,641
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$27,593,735	0.09%	0.145%	\$24,834	\$40,011
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$21,891	0.09%	0.145%	\$20	\$32
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$40,452,604	0.09%	0.145%	\$36,407	\$58,656
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$12,612	0.09%	0.145%	\$11	\$18
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$35,480,342	0.09%	0.145%	\$31,932	\$51,446
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$13	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$22,793,613	0.09%	0.145%	\$20,514	\$33,051
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$1,193	0.09%	0.145%	\$1	\$2
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$2	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2065 Instl	VSFXF	\$4,481	0.09%	0.145%	\$4	\$6
Self-Directed Brokerage Account	-	\$2,490,611	-	0.000%	-	\$0
TOTAL		\$1,133,767,123			\$3,208,765	\$1,640,351

Plan Administration Cost	Quarter	Annualized
Contracted Revenue to Voya (9.5 bps excluding SDBA - est):	\$268,678	\$1,074,713
Additional Administrative Allowance (5 bps excluding SDBA - est):	\$141,410	\$565,638
Total Plan Administration Cost (14.5 bps excluding SDBA - est):	\$410,088	\$1,640,351

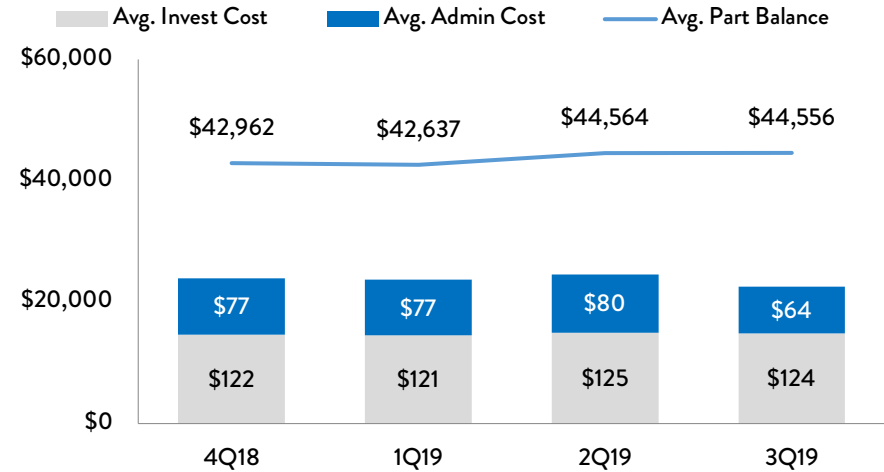
*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.

**No explicit expense ratio given for Voya Fixed Account. An expense ratio of 0.41% is assumed for reporting purposes.

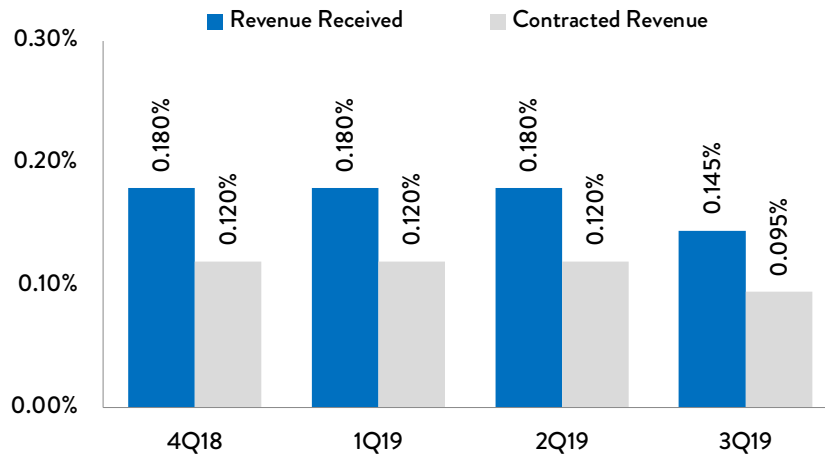
Annualized Plan Cost (%)



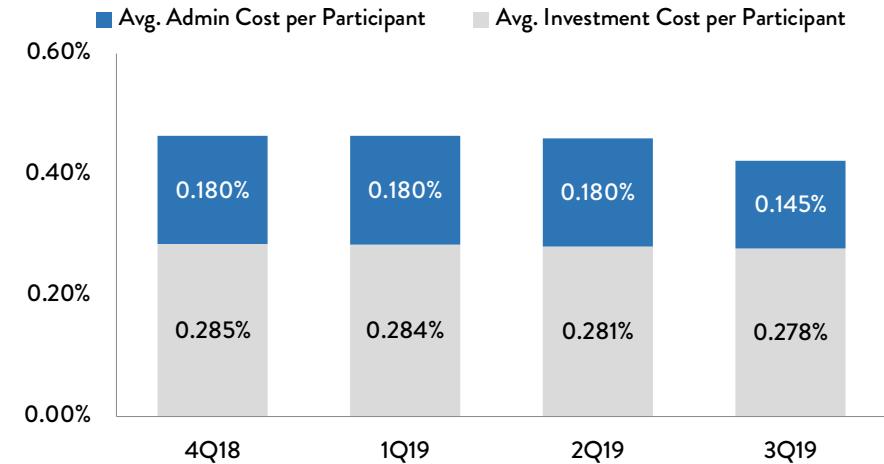
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received*
(as a % of total assets)



Annualized Investment Cost Summary
(as a % of total assets)



*Revenue received is 0.18% annually on all assets excluding SDBA. Contracted revenue is 0.12% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO

457 Deferred Compensation Plan

PLAN FEE ANALYSIS

Third Quarter 2019

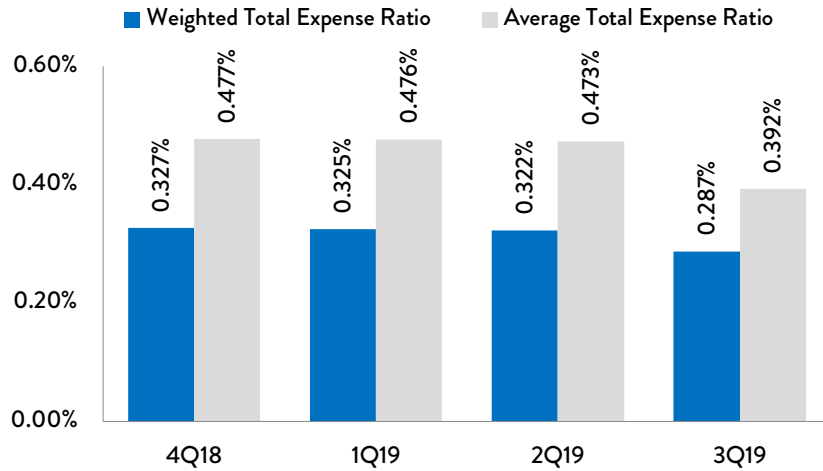
Annualized

Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Stabilizer	-	\$193,413,526	0.44%	0.145%	\$851,020	\$280,450
Loomis Sayles Investment Grade Bond Y*	LSIIX	\$22,061,224	0.36%	0.145%	\$79,420	\$31,989
Invesco Oppenheimer International Bd R6	OIBIX	\$3,380,521	0.56%	0.145%	\$18,931	\$4,902
Pioneer Global High Yield Y*	GHYYX	\$4,941,513	0.67%	0.145%	\$33,108	\$7,165
Vanguard Institutional Index Instl Plus	VIIIX	\$93,554,536	0.02%	0.145%	\$18,711	\$135,654
American Funds Growth Fund of America R6	RGAGX	\$85,167,926	0.33%	0.145%	\$281,054	\$123,493
Vanguard Mid Cap Index Instl	VMCIX	\$47,133,129	0.04%	0.145%	\$18,853	\$68,343
Invesco Small Cap Value Y*	VSMIX	\$6,286,898	0.62%	0.145%	\$38,979	\$9,116
Vanguard Small Cap Index Instl	VSCIX	\$33,763,020	0.04%	0.145%	\$13,505	\$48,956
Baron Growth Instl*	BGRIX	\$28,147,835	0.88%	0.145%	\$247,701	\$40,814
Dodge & Cox International Stock*	DODFX	\$9,562,199	0.53%	0.145%	\$50,680	\$13,865
Vanguard Total Intl Stock Index I	VTSNX	\$19,247,175	0.08%	0.145%	\$15,398	\$27,908
American Funds Capital World Gr & Inc R6	RWIGX	\$42,740,408	0.44%	0.145%	\$188,058	\$61,974
Conservative Allocation Portfolio	-	\$19,700,691	0.32%	0.145%	\$63,042	\$28,566
Moderate Allocation Portfolio*	-	\$59,430,307	0.22%	0.145%	\$130,747	\$86,174
Aggressive Allocation Portfolio*	-	\$43,444,706	0.14%	0.145%	\$60,823	\$62,995
Vanguard Instl Target Retirement Income Instl	VITRX	\$3,559,113	0.09%	0.145%	\$3,203	\$5,161
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$11,819,183	0.09%	0.145%	\$10,637	\$17,138
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$19,616	0.09%	0.145%	\$18	\$28
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$15,916,172	0.09%	0.145%	\$14,325	\$23,078
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$12,591	0.09%	0.145%	\$11	\$18
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$19,240,009	0.09%	0.145%	\$17,316	\$27,898
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$17,724,561	0.09%	0.145%	\$15,952	\$25,701
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$1,182	0.09%	0.145%	\$1	\$2
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$4,481	0.09%	0.145%	\$4	\$6
Self-Directed Brokerage Account	-	\$1,997,587	-	0.000%	-	\$0
TOTAL		\$782,270,110			\$2,171,496	\$1,131,395

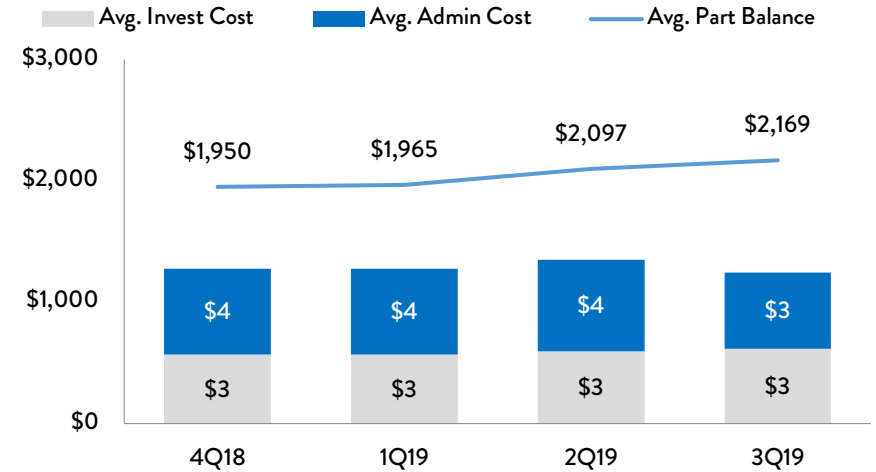
Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (est):	\$282,849	\$1,131,395
Contracted Revenue (est):	\$185,315	\$741,259
Net Excess/(Deficit) (est):	\$97,534	\$390,136

*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.

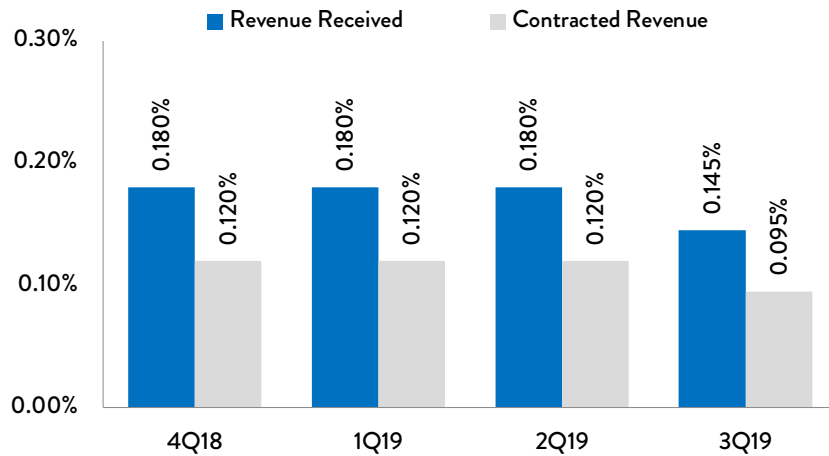
Annualized Plan Cost (%)



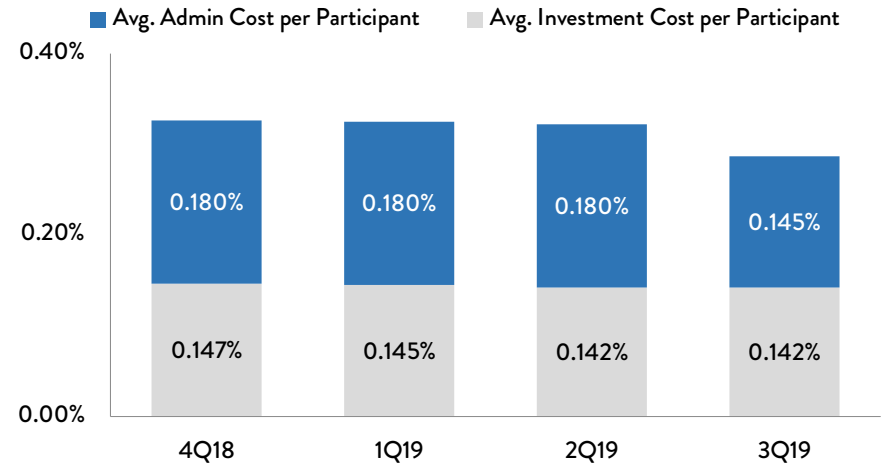
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received* (as a % of total assets)



Annualized Investment Cost Summary (as a % of total assets)



*Revenue received is 0.145% annually on all assets excluding SDBA. Contracted revenue is 0.095% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO

401(a) Defined Contribution Plan

PLAN FEE ANALYSIS

Third Quarter 2019

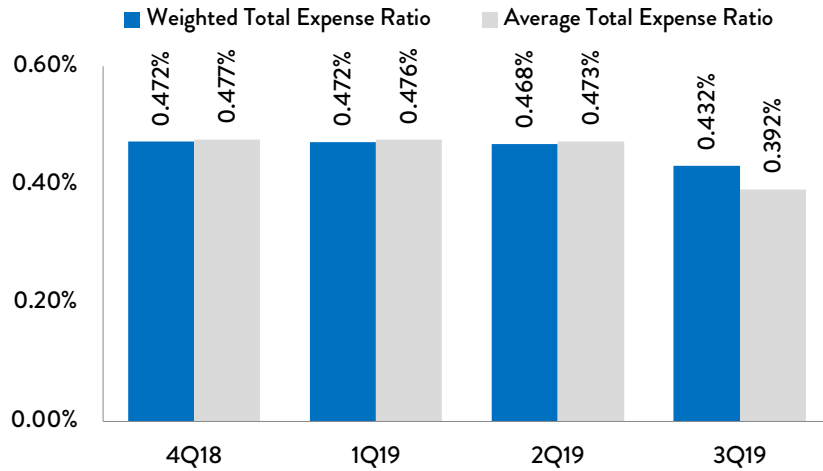
Annualized

Fund	Ticker	Quarter Average			Est. Total Invest. Cost	Est. Total Admin. Cost
		Assets	Net Expense Ratio	Admin Fee		
Stabilizer	-	\$1,357,481	0.44%	0.145%	\$5,973	\$1,968
Loomis Sayles Investment Grade Bond Y*	LSIIX	\$142,818	0.36%	0.145%	\$514	\$207
Invesco Oppenheimer International Bd R6	OIBIX	\$37,481	0.56%	0.145%	\$210	\$54
Pioneer Global High Yield Y*	GHYYX	\$38,656	0.67%	0.145%	\$259	\$56
Vanguard Institutional Index Instl Plus	VIIIIX	\$627,724	0.02%	0.145%	\$126	\$910
American Funds Growth Fund of America R6	RGAGX	\$413,075	0.33%	0.145%	\$1,363	\$599
Vanguard Mid Cap Index Instl	VMCIX	\$339,072	0.04%	0.145%	\$136	\$492
Invesco Small Cap Value Y*	VSMIX	\$95,775	0.62%	0.145%	\$594	\$139
Vanguard Small Cap Index Instl	VSCIX	\$200,176	0.04%	0.145%	\$80	\$290
Baron Growth Instl*	BGRIX	\$205,350	0.88%	0.145%	\$1,807	\$298
Dodge & Cox International Stock*	DODFX	\$52,881	0.53%	0.145%	\$280	\$77
Vanguard Total Intl Stock Index I	VTSNX	\$136,863	0.08%	0.145%	\$109	\$198
American Funds Capital World Gr & Inc R6	RWIGX	\$111,638	0.44%	0.145%	\$491	\$162
Conservative Allocation Portfolio	-	\$638,691	0.32%	0.145%	\$2,044	\$926
Moderate Allocation Portfolio*	-	\$909,853	0.22%	0.145%	\$2,002	\$1,319
Aggressive Allocation Portfolio*	-	\$854,166	0.14%	0.145%	\$1,196	\$1,239
Vanguard Instl Target Retirement Income Instl	VITRX	\$590,069	0.09%	0.145%	\$531	\$856
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$3,553,958	0.09%	0.145%	\$3,199	\$5,153
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$2,269	0.09%	0.145%	\$2	\$3
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$5,652,191	0.09%	0.145%	\$5,087	\$8,196
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$21	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$4,739,095	0.09%	0.145%	\$4,265	\$6,872
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$13	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$1,666,345	0.09%	0.145%	\$1,500	\$2,416
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$11	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$2	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$0	0.09%	0.145%	\$0	\$0
TOTAL		\$22,365,670			\$31,767	\$32,430

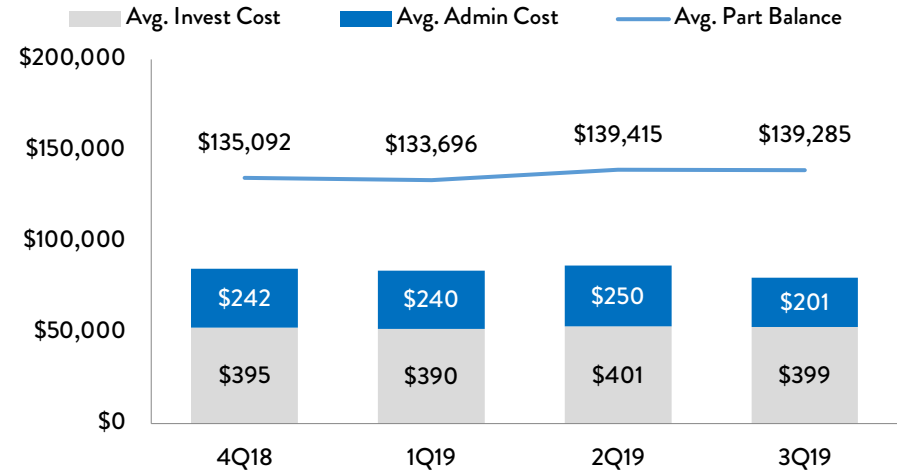
Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (est):	\$8,108	\$32,430
Contracted Revenue (est):	\$5,312	\$21,247
Net Excess/(Deficit) (est):	\$2,796	\$11,183

*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.

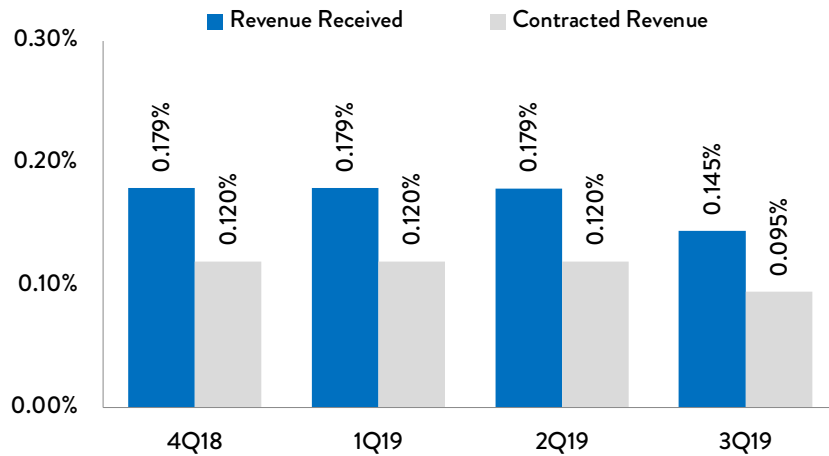
Annualized Plan Cost (%)



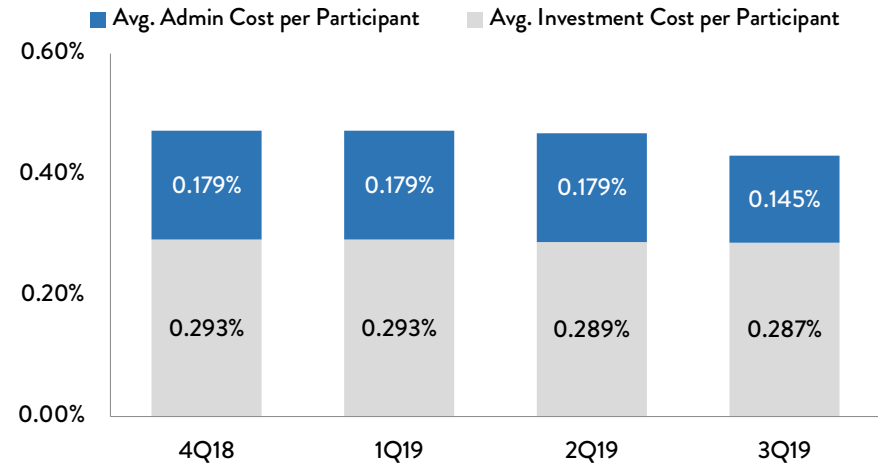
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received*
(as a % of total assets)



Annualized Investment Cost Summary
(as a % of total assets)



*Revenue received is 0.145% annually on all assets excluding SDBA. Contracted revenue is 0.095% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO
401(k) Defined Contribution Plan

PLAN FEE ANALYSIS
Third Quarter 2019

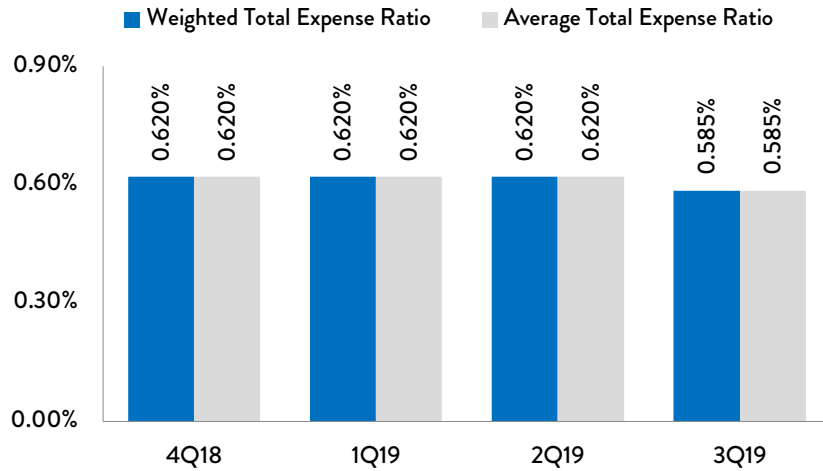
Annualized

Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Stabilizer	-	\$42,581,892	0.44%	0.145%	\$187,360	\$61,744
Loomis Sayles Investment Grade Bond Y*	LSIIX	\$3,482,992	0.36%	0.145%	\$12,539	\$5,050
Invesco Oppenheimer International Bd R6	OIBIX	\$673,014	0.56%	0.145%	\$3,769	\$976
Pioneer Global High Yield Y*	GHYYX	\$1,267,604	0.67%	0.145%	\$8,493	\$1,838
Vanguard Institutional Index Instl Plus	VIIIX	\$19,331,095	0.02%	0.145%	\$3,866	\$28,030
American Funds Growth Fund of America R6	RGAGX	\$18,089,677	0.33%	0.145%	\$59,696	\$26,230
Vanguard Mid Cap Index Instl	VMCIX	\$9,720,652	0.04%	0.145%	\$3,888	\$14,095
Invesco Small Cap Value Y*	VSMIX	\$1,241,368	0.62%	0.145%	\$7,696	\$1,800
Vanguard Small Cap Index Instl	VSCIX	\$5,995,869	0.04%	0.145%	\$2,398	\$8,694
Baron Growth Instl*	BGRIX	\$4,917,871	0.88%	0.145%	\$43,277	\$7,131
Dodge & Cox International Stock*	DODFX	\$1,683,212	0.53%	0.145%	\$8,921	\$2,441
Vanguard Total Intl Stock Index I	VTSNX	\$3,272,193	0.08%	0.145%	\$2,618	\$4,745
American Funds Capital World Gr & Inc R6	RWIGX	\$6,220,034	0.44%	0.145%	\$27,368	\$9,019
Conservative Allocation Portfolio	-	\$5,945,212	0.32%	0.145%	\$19,025	\$8,621
Moderate Allocation Portfolio*	-	\$14,367,841	0.22%	0.145%	\$31,609	\$20,833
Aggressive Allocation Portfolio*	-	\$6,556,357	0.14%	0.145%	\$9,179	\$9,507
Vanguard Instl Target Retirement Income Instl	VITRX	\$360,854	0.09%	0.145%	\$325	\$523
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$1,535,387	0.09%	0.145%	\$1,382	\$2,226
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$2,553,771	0.09%	0.145%	\$2,298	\$3,703
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$1,573,239	0.09%	0.145%	\$1,416	\$2,281
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$1,210,822	0.09%	0.145%	\$1,090	\$1,756
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2065 Instl	VSXFX	\$0	0.09%	0.145%	\$0	\$0
Self-Directed Brokerage Account	-	\$493,024	-	0.000%	-	\$0
TOTAL		\$153,073,980			\$438,214	\$221,242

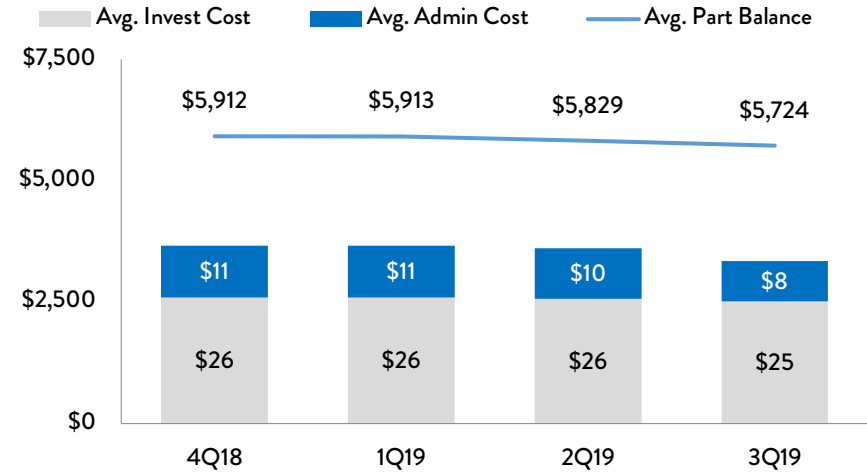
Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (est):	\$55,311	\$221,242
Contracted Revenue (est):	\$36,238	\$144,952
Net Excess/(Deficit) (est):	\$19,073	\$76,290

*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.

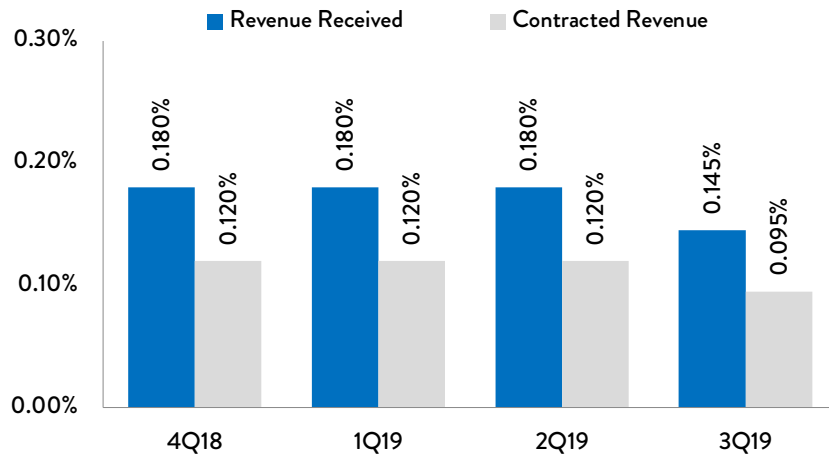
Annualized Plan Cost (%)



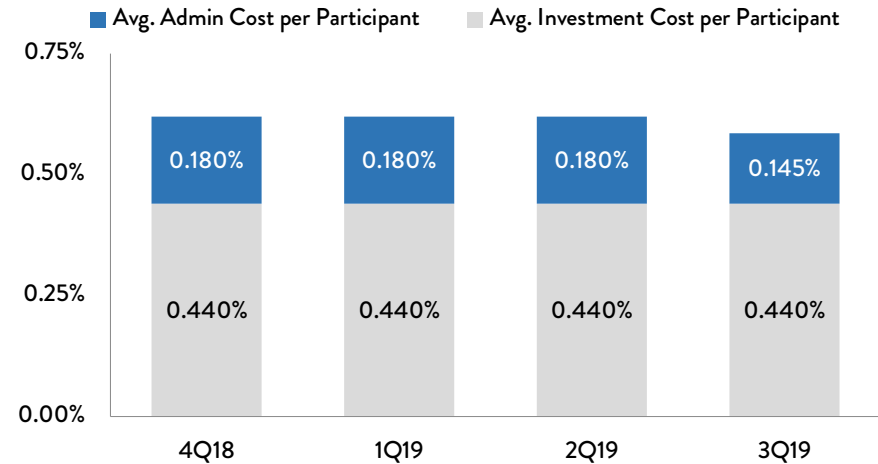
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received*
(as a % of total assets)



Annualized Investment Cost Summary
(as a % of total assets)



*Revenue received is 0.145% annually on all assets excluding SDBA. Contracted revenue is 0.095% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO
PST Deferred Compensation Retirement Plan

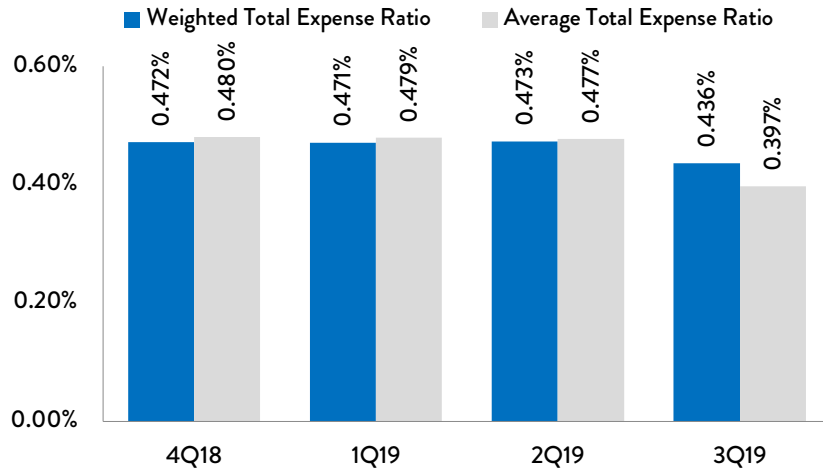
PLAN FEE ANALYSIS
Third Quarter 2019

Annualized

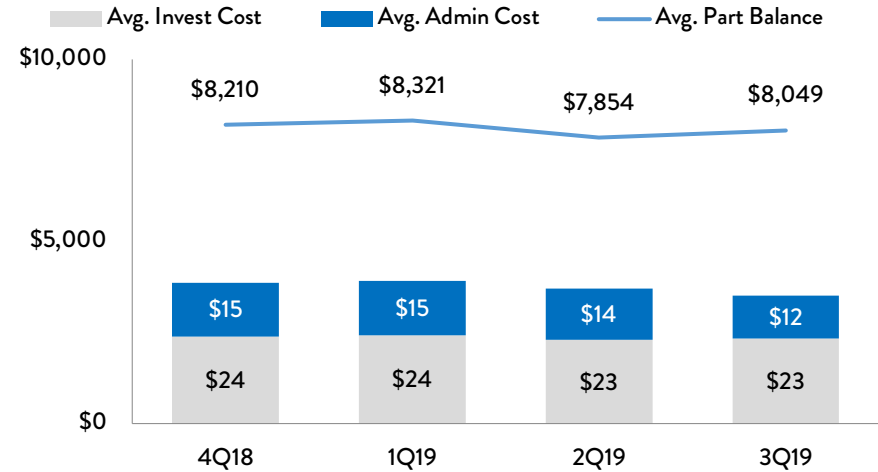
Fund	Ticker	Quarter Average Assets	Net Expense Ratio	Admin Fee	Est. Total Invest. Cost	Est. Total Admin. Cost
Stabilizer	-	\$37,096,012	0.44%	0.145%	\$163,222	\$53,789
TOTAL		\$37,096,012			\$163,222	\$53,789

Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (est):	\$13,447	\$53,789
Contracted Revenue (est):	\$8,810	\$35,241
Net Excess/(Deficit) (est):	\$4,637	\$18,548

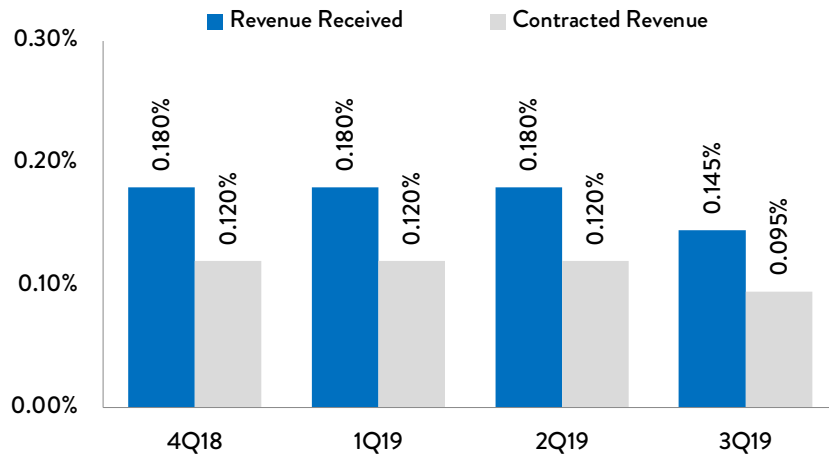
Annualized Plan Cost (%)



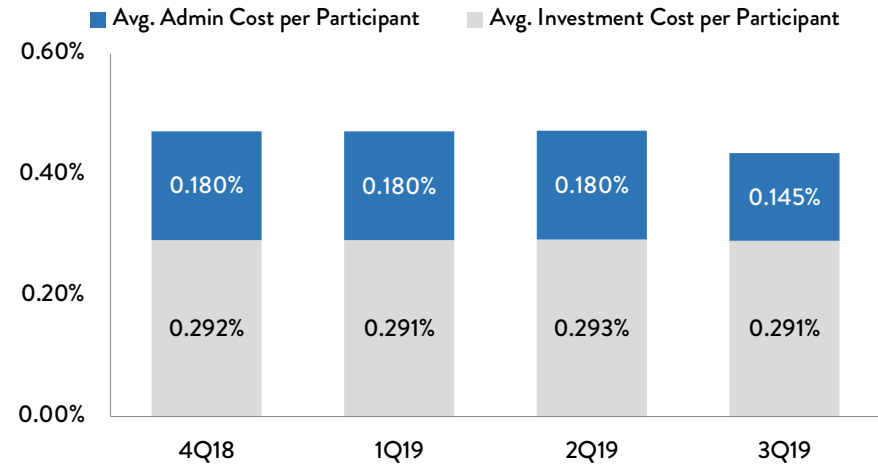
Average Participant Balance and Cost (\$)



Annualized Contracted Revenue v. Revenue Received*
(as a % of total assets)



Annualized Investment Cost Summary
(as a % of total assets)



*Revenue received is 0.145% annually on all assets excluding SDBA. Contracted revenue is 0.095% annually on all assets excluding SDBA.

COUNTY OF SAN BERNARDINO

Retirement Medical Trust

PLAN FEE ANALYSIS

Third Quarter 2019

Annualized

Fund	Ticker	Quarter Average			Est. Total Invest.	Est. Total Admin.
		Assets	Net Expense Ratio	Admin Fee	Cost	Cost
Voya Fixed Account**	-	\$77,831,925	0.41%	0.145%	\$319,111	\$112,856
Voya Government Money Market A	AEMXX	\$10,770	0.40%	0.145%	\$43	\$16
Loomis Sayles Investment Grade Bond Y*	LSIIX	\$284,550	0.36%	0.145%	\$1,024	\$413
Invesco Oppenheimer International Bd R6	OIBIX	\$142,971	0.56%	0.145%	\$801	\$207
Pioneer Global High Yield Y*	GHYYX	\$204,019	0.67%	0.145%	\$1,367	\$296
Vanguard Institutional Index Instl Plus	VIIIIX	\$2,002,975	0.02%	0.145%	\$401	\$2,904
American Funds Growth Fund of America R6	RGAGX	\$2,304,762	0.33%	0.145%	\$7,606	\$3,342
Vanguard Mid Cap Index Instl	VMCIX	\$2,027,531	0.04%	0.145%	\$811	\$2,940
Invesco Small Cap Value Y*	VSMIX	\$341,889	0.62%	0.145%	\$2,120	\$496
Vanguard Small Cap Index Instl	VSCIX	\$761,711	0.04%	0.145%	\$305	\$1,104
Baron Growth Instl*	BGRIX	\$1,159,721	0.88%	0.145%	\$10,206	\$1,682
Dodge & Cox International Stock*	DODFX	\$224,210	0.53%	0.145%	\$1,188	\$325
Vanguard Total Intl Stock Index I	VTSNX	\$282,966	0.08%	0.145%	\$226	\$410
American Funds Capital World Gr & Inc R6	RWIGX	\$379,782	0.44%	0.145%	\$1,671	\$551
Conservative Allocation Portfolio	-	\$1,345,450	0.32%	0.145%	\$4,305	\$1,951
Moderate Allocation Portfolio*	-	\$4,569,133	0.22%	0.145%	\$10,052	\$6,625
Aggressive Allocation Portfolio*	-	\$4,501,897	0.14%	0.145%	\$6,303	\$6,528
Vanguard Instl Target Retirement Income Instl	VITRX	\$1,449,520	0.09%	0.145%	\$1,305	\$2,102
Vanguard Instl Target Retirement 2020 Instl	VITWX	\$10,685,207	0.09%	0.145%	\$9,617	\$15,494
Vanguard Instl Target Retirement 2025 Instl	VRIVX	\$5	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2030 Instl	VTTWX	\$16,330,470	0.09%	0.145%	\$14,697	\$23,679
Vanguard Instl Target Retirement 2035 Instl	VITFX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2040 Instl	VIRSX	\$9,927,999	0.09%	0.145%	\$8,935	\$14,396
Vanguard Instl Target Retirement 2045 Instl	VITLX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2050 Instl	VTRLX	\$2,191,885	0.09%	0.145%	\$1,973	\$3,178
Vanguard Instl Target Retirement 2055 Instl	VIVLX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2060 Instl	VILVX	\$0	0.09%	0.145%	\$0	\$0
Vanguard Instl Target Retirement 2065 Instl	V SXFX	\$0	0.09%	0.145%	\$0	\$0
TOTAL		\$138,961,350			\$404,066	\$201,494

Plan Administration Cost	Quarter	Annualized
Plan Generated Revenue (est):	\$50,373	\$201,494
Contracted Revenue (est):	\$33,003	\$132,013
Net Excess/(Deficit) (est):	\$17,370	\$69,481

*Revenue derived from funds credited to participant accounts in which they are held. For fee reporting purposes, the credit has been used to offset the reported fund expense ratio.

**No explicit expense ratio given for the Voya Fixed Account. An expense ratio of 0.41% is assumed for reporting purposes.

Section 5

Asset Class: **Asset Allocation**
Category: **Lifestyle**

FUND FACTS

Inception Date: **October 1, 2004**

Investment advisory fee for period ended September 30, 2019: **0.15%**

12b-1 fee: **0.00%**

Other expenses: **0.03%**

Total fund annual expenses without waivers or reductions for period ended September 30, 2019: **0.18%**

Total waivers, recoupments, and reductions: **-0.01%**

Net fund annual expenses after waivers or reductions for period ended September 30, 2019: **0.17%**

Turnover rate: **15%**

If offered through a retirement program, additional fees and expenses may be charged under that program.

Important Information

Category is interpreted by Voya® using Fund Company and/or Morningstar category information.

Investment advisory fee reflects a weighted blend of fees charged by the underlying investment options within the Lifestyle Portfolio, based upon the percentage allocations designated by San Bernardino and detailed within the Strategy section.

This Portfolio is not a registered investment company, and interests in the Portfolio have not been registered with the Securities and Exchange Commission. It is only available to participants in the San Bernardino qualified retirement program. Only eligible participants in the plan may invest in the Portfolio.

You can obtain copies of free prospectuses for the underlying funds which contain additional information on the charges and expenses for the funds at any time by calling your local Voya representative. Other fees and expenses may be charged under your

retirement program. More information is included in the enrollment material.

Each sub-fund description must accompany this Lifestyle Portfolio description.

Investment Objective

The investment objective of the Aggressive Allocation Portfolio is to provide long-term growth of capital with income as a minor consideration. Eighty-five percent (85%) of the total fund assets are allocated to equities and fifteen percent (15%) are allocated to fixed income securities. It is the most aggressive of the three Lifestyle funds in terms of its potential for the greatest investment return as well as the greatest risk. It is most suitable for participants who are able to remain invested for ten or more years, or who are comfortable with the higher short-term fluctuations that are characteristic of investing in equity markets.

Strategy

The strategy for the Aggressive Allocation Portfolio is to invest in a combination of active and passive investments in the following proportions: ---7% in the Loomis Sayles Investment Grade Bond – Class Y, which seeks high total investment return through a combination of current income and capital appreciation.

---6% in the Oppenheimer International Bond Fund – Class I, which seeks total return.

---32% in the Vanguard® Total International Stock Index Fund - Institutional Shares which seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in developed and emerging markets, excluding the United States.

---48% in the Vanguard® Total Stock Market Index Fund - Institutional Shares, which seeks to track the performance of a benchmark index that measures the investment return of the overall stock market.

---7% Pioneer Global High Yield Fund - Class Y Shares, which seeks to maximize total return through a combination of income and capital appreciation.

Principal Risks

All equity (both U.S. and International) and fixed income investments exhibit certain risk characteristics that include the potential for loss of principal value. Generally, the probability of loss of principal is greater with investment funds that also provide the greatest potential for investment return. International stocks do carry additional risks that relate to currency and political uncertainty. The risks of Lifestyle Portfolios are based on the proportionate risk characteristics of the underlying sub-funds described above.

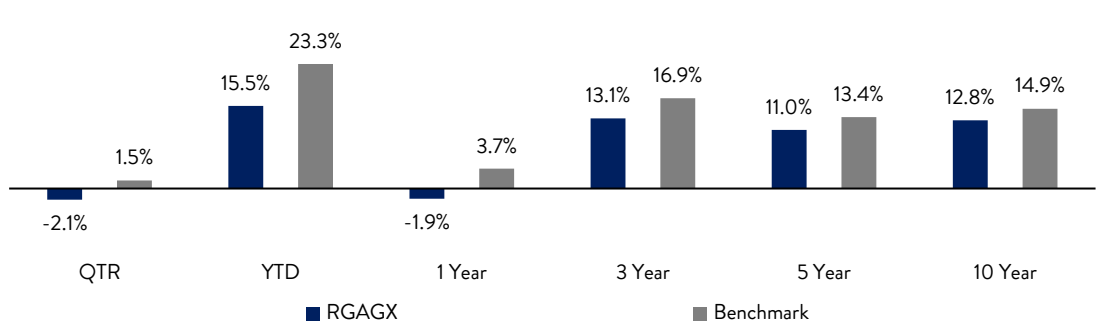
American Funds Growth Fund of Amer R6
RGAGX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	American Funds Growth Fund of Amer R6
Ticker	RGAGX
Expense Ratio	0.330%
Morningstar Category	US Fund Large Growth
Benchmark	Russell 1000 Growth TR USD
Inception Date	5/1/2009
Longest Tenured Manager	Donald D. O'Neal
Longest Manager Tenure	26.00 Years
Fund Size	\$193,578,087,911

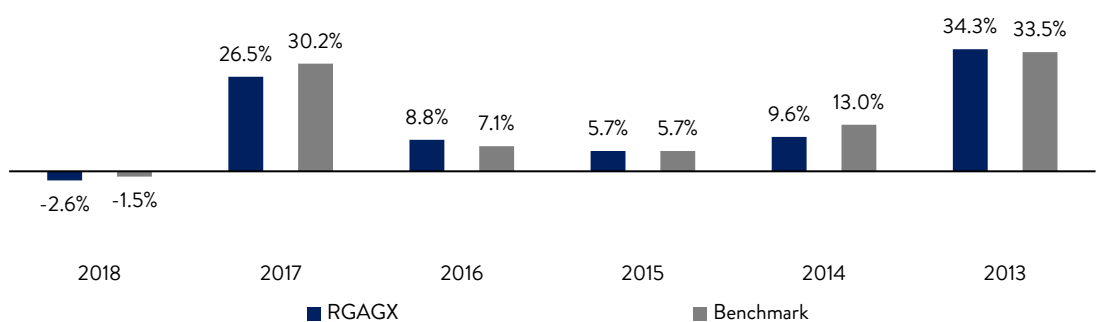
Trailing Performance



Fund Characteristics

RGAGX	+/- Category	
% Assets in Top 10 Holdings	28.80%	-20.39%
Average Market Cap (mil)	\$92,962	-\$76,081
P/E Ratio (TTM)	23.32	-3.10
P/B Ratio (TTM)	3.81	-2.28
Est. Dividend Yield	1.13%	0.01%

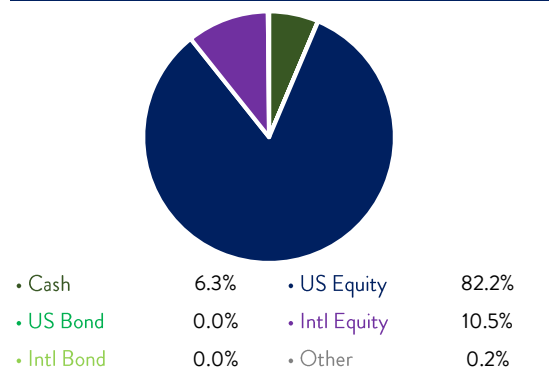
Annual Performance



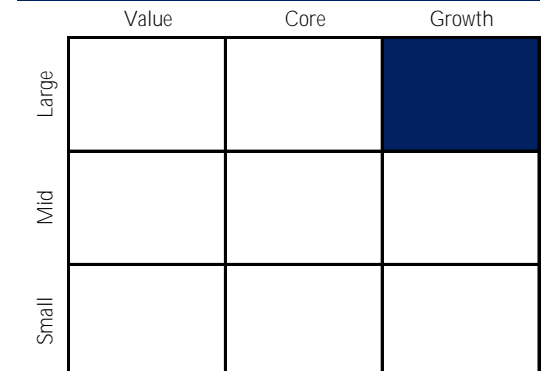
Sector Allocations

RGAGX	Category	+/- Category	
Materials	2.1%	1.8%	0.3%
Communication Services	2.7%	1.5%	1.1%
Consumer Discretionary	17.3%	17.0%	0.3%
Consumer Staples	3.8%	5.0%	-1.2%
Healthcare	15.9%	14.6%	1.4%
Industrials	10.6%	9.3%	1.3%
Real Estate	1.6%	2.0%	-0.4%
Technology	30.9%	34.7%	-3.8%
Energy	3.7%	1.1%	2.6%
Financial Services	11.4%	12.4%	-1.0%
Utilities	0.0%	0.6%	-0.6%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box



American Funds Growth Fund of Amer R6
RGAGX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• RGAGX	-2.06%	15.46%	-1.93%	13.10%	10.97%	12.76%
• Benchmark	1.49%	23.30%	3.71%	16.89%	13.39%	14.94%
+/- Benchmark	-3.55%	-7.83%	-5.64%	-3.79%	-2.42%	-2.18%
Peer Group Rank	78	88	83	71	57	65

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• RGAGX	-2.06%	3.53%	13.87%	-15.06%
• Benchmark	1.49%	4.64%	16.10%	-15.89%
+/- Benchmark	-3.55%	-1.11%	-2.23%	0.82%

Annual Performance	2018	2017	2016	2015	2014	2013
• RGAGX	-2.60%	26.53%	8.82%	5.70%	9.63%	34.29%
• Benchmark	-1.51%	30.21%	7.08%	5.67%	13.05%	33.48%
+/- Benchmark	-1.09%	-3.69%	1.74%	0.03%	-3.42%	0.81%
Peer Group Rank	53	62	11	39	61	53

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• RGAGX	5.05%	5.97%	3.01%	7.01%
• Benchmark	9.17%	5.76%	1.42%	7.86%
+/- Benchmark	-4.12%	0.22%	1.59%	-0.86%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• RGAGX	10.97%	11.54%	11.87%	9.22%	14.91%	15.83%
• Benchmark	13.39%	13.39%	13.50%	10.40%	16.58%	16.36%
+/- Benchmark	-2.42%	-1.85%	-1.63%	-1.19%	-1.67%	-0.53%
Peer Group Rank	57	54	48	37	43	34

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• RGAGX	5.09%	4.00%	8.18%	1.68%
• Benchmark	5.90%	4.67%	8.91%	1.01%
+/- Benchmark	-0.80%	-0.67%	-0.73%	0.67%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-2.57	0.00	-1.52	0.00	-1.55	0.00
Beta	0.95	1.00	0.94	1.00	0.97	1.00
Standard Deviation	13.03	13.30	12.62	12.88	13.22	13.22
Sharpe Ratio	0.89	1.12	0.81	0.97	0.94	1.08
Information Ratio	-1.08	-	-0.70	-	-0.71	-
Treynor Ratio	12.14	15.28	10.53	12.37	12.54	14.39
Upside Capture Ratio	87.91	100.00	90.44	100.00	93.58	100.00
Downside Capture Ratio	100.80	100.00	99.12	100.00	102.37	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• RGAGX	6.58%	2.96%	-2.47%	7.84%
• Benchmark	4.58%	0.61%	0.74%	7.32%
+/- Benchmark	2.00%	2.34%	-3.21%	0.53%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• RGAGX	-6.63%	1.45%	3.47%	2.82%
• Benchmark	-5.29%	0.12%	3.84%	4.78%
+/- Benchmark	-1.34%	1.33%	-0.37%	-1.97%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

American Funds® The Growth Fund of America® - Class R-6

Release Date
09-30-19

Category
Large Growth

Investment Objective & Strategy

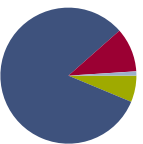
From the investments' prospectus

The investment seeks growth of capital.

The fund invests primarily in common stocks and seeks to invest in companies that appear to offer superior opportunities for growth of capital. It may invest up to 25% of its assets in securities of issuers domiciled outside the United States. The investment adviser uses a system of

Portfolio Analysis

Composition as of 09-30-19



- U.S. Stocks
- Non-U.S. Stocks
- Bonds
- Cash
- Other

Morningstar Style Box™ as of 09-30-19		% Assets
Large	Micro	82.2
Mid	Small	10.5
Small	Micro	0.0
Value Blend	Growth	0.00

Morningstar Style Box™ as of 09-30-19		% Mkt Cap
Large	Micro	53.81
Mid	Small	31.52
Small	Micro	13.59
Value Blend	Growth	1.08
		0.00

Top 10 Holdings as of 09-30-19

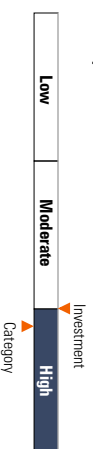
Company	% Assets
Capital Group Central Cash Fund	6.30
Facebook Inc A	5.24
Microsoft Corp	5.04
Amazon.com Inc	3.90
Netflix Inc	3.71
Alphabet Inc Class C	2.29
UnitedHealth Group Inc	2.29
Broadcom Inc	1.82
Mastercard Inc A	1.58
The Home Depot Inc	1.54

Morningstar Equity Sectors as of 09-30-19

Sector	% Fund
Cyclical	32.37
Basic Materials	2.08
Consumer Cyclical	17.31
Financial Services	11.35
Real Estate	1.63
Sensitive	47.80
Communication Services	2.67
Energy	3.72
Industrials	10.55
Technology	30.86
Defensive	19.82
Consumer Defensive	3.84
Healthcare	15.94
Utilities	0.04

Volatility and Risk

Volatility as of 09-30-19



Risk Measures as of 09-30-19	Port Avg	Rel. S&P 500	Rel. Cat
3-Yr. Std Dev	13.03	1.07	0.94
3-Yr. Beta	1.01	—	0.97

Principal Risks

Foreign Securities, Long-Term Outlook and Projections, Loss of Money, Not FDIC Insured, Growth Investing, Active Management, Issuer, Market/Market Volatility

Important Information

Morningstar Investment Profiles must be accompanied by Morningstar Disclosure and Glossary.

Funds or their affiliates may pay compensation to Voya® affiliates offering a fund. Such compensation may be paid out of distribution, service and/or 12b-1 fees that are deducted from the fund's assets, and/or may be paid directly by the fund's affiliates. Any fees deducted from fund assets are discussed in the fund's prospectus and disclosed in the fund fact sheet. Because these fees are paid on an on-going basis, over time these fees will increase the cost of your investment and may cost you more than paying other types of sales changes. If offered through a retirement program, additional fees and expenses may be charged under that program. NOT A DEPOSIT. NOT FDIC INSURED. NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY. NOT GUARANTEED BY THE INSTITUTION. MAY GO DOWN IN VALUE.

Operations

Gross Prosp Exp Ratio	0.33% of fund assets
Net Prosp Exp Ratio	0.33% of fund assets
Management Fee	0.27%
12b-1 Fee	—
Other Fee	0.00%
Miscellaneous Fee(s)	0.06%
Fund Inception Date	05-01-09
Total Fund Assets (\$mill)	186,278.4
Annual Turnover Ratio %	28.00
Fund Family Name	American Funds

Notes

Waiver Data

Waiver Data	Type	Exp. Date	%
—	—	—	—

Portfolio Manager(s)

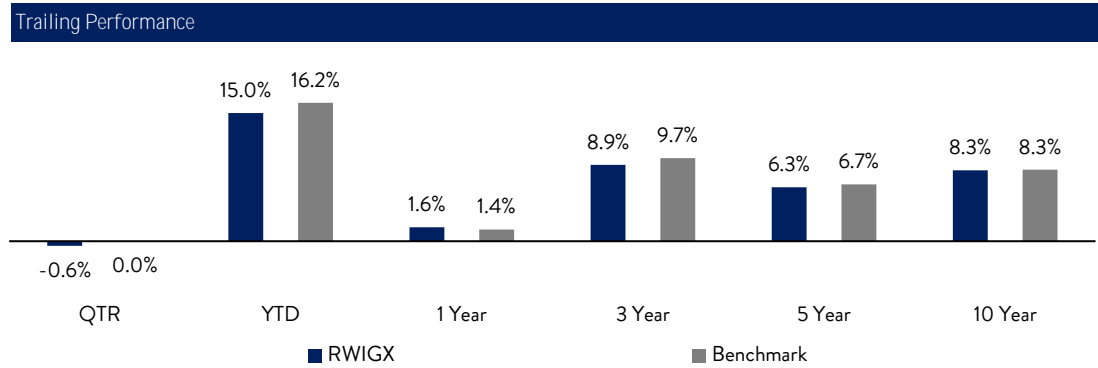
Donald O'Neal, Since 1993.	—	—	—
Michael Kerr, Since 1998.	—	—	—

Advisor

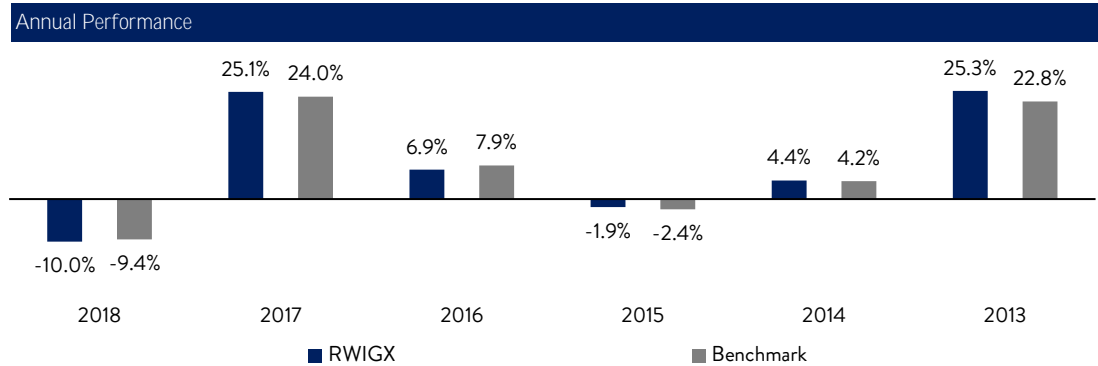
Capital Research and Management Company	—	—	—
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Subadvisor

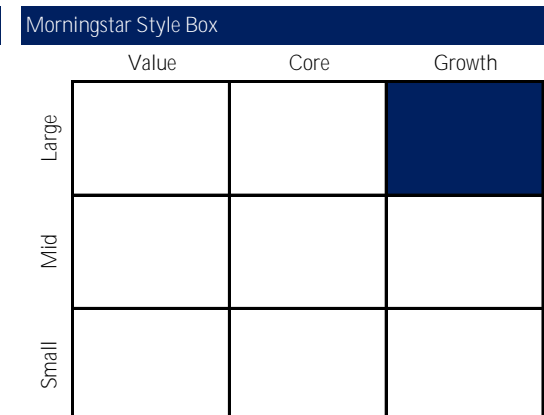
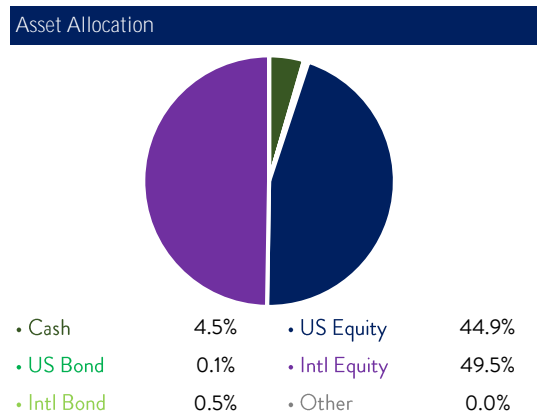
Product Details	
Name	American Funds Capital World Gr&Inc R6
Ticker	RWIGX
Expense Ratio	0.440%
Morningstar Category	US Fund World Large Stock
Benchmark	MSCI ACWI NR USD
Inception Date	5/1/2009
Longest Tenured Manager	Sung Lee
Longest Manager Tenure	13.75 Years
Fund Size	\$99,013,088,006



Fund Characteristics	RWIGX	+/- Category
% Assets in Top 10 Holdings	15.94%	-8.95%
Average Market Cap (mil)	\$74,968	\$2,597
P/E Ratio (TTM)	17.09	-2.00
P/B Ratio (TTM)	2.32	-0.07
Est. Dividend Yield	2.88%	0.46%



Sector Allocations	RWIGX	Category	+/- Category
Materials	4.2%	4.2%	0.0%
Communication Services	2.3%	2.9%	-0.6%
Consumer Discretionary	11.5%	12.4%	-0.9%
Consumer Staples	7.8%	8.8%	-1.0%
Healthcare	13.7%	12.6%	1.1%
Industrials	9.1%	12.2%	-3.0%
Real Estate	4.0%	2.6%	1.4%
Technology	20.3%	19.6%	0.7%
Energy	7.1%	4.2%	2.8%
Financial Services	15.4%	17.4%	-2.0%
Utilities	4.6%	3.1%	1.5%
Other	0.0%	0.0%	0.0%



American Funds Capital World Gr&Inc R6

RWIGX

Fund Fact Sheet

Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• RWIGX	-0.55%	14.98%	1.64%	8.94%	6.31%	8.28%
• Benchmark	-0.03%	16.20%	1.38%	9.71%	6.65%	8.35%
+/- Benchmark	-0.52%	-1.21%	0.26%	-0.77%	-0.34%	-0.06%
Peer Group Rank	60	63	45	49	54	55

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• RWIGX	-0.55%	3.00%	12.25%	-11.60%
• Benchmark	-0.03%	3.61%	12.18%	-12.75%
+/- Benchmark	-0.52%	-0.61%	0.07%	1.15%

Annual Performance	2018	2017	2016	2015	2014	2013
• RWIGX	-9.97%	25.08%	6.85%	-1.88%	4.36%	25.28%
• Benchmark	-9.41%	23.97%	7.86%	-2.36%	4.16%	22.80%
+/- Benchmark	-0.55%	1.11%	-1.01%	0.49%	0.20%	2.47%
Peer Group Rank	55	40	33	61	36	52

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• RWIGX	1.23%	0.18%	0.43%	5.13%
• Benchmark	4.28%	0.53%	-0.96%	5.73%
+/- Benchmark	-3.05%	-0.36%	1.40%	-0.60%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• RWIGX	6.31%	6.03%	6.34%	4.26%	8.48%	9.92%
• Benchmark	6.65%	6.16%	6.45%	4.26%	8.67%	9.41%
+/- Benchmark	-0.34%	-0.13%	-0.11%	0.00%	-0.19%	0.51%
Peer Group Rank	54	48	46	43	49	42

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• RWIGX	5.11%	5.29%	7.50%	-0.15%
• Benchmark	5.18%	4.27%	6.91%	1.19%
+/- Benchmark	-0.07%	1.02%	0.60%	-1.34%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.23	0.00	0.05	0.00	0.25	0.00
Beta	0.94	1.00	0.93	1.00	0.96	1.00
Standard Deviation	10.79	11.32	11.05	11.71	12.88	13.21
Sharpe Ratio	0.70	0.73	0.52	0.52	0.64	0.63
Information Ratio	-0.35	-	-0.15	-	-0.03	-
Treynor Ratio	7.83	8.09	5.70	5.63	8.07	7.80
Upside Capture Ratio	92.05	100.00	93.69	100.00	96.48	100.00
Downside Capture Ratio	92.03	100.00	93.18	100.00	95.00	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• RWIGX	5.11%	1.44%	0.36%	4.08%
• Benchmark	5.30%	0.99%	0.24%	5.03%
+/- Benchmark	-0.19%	0.45%	0.12%	-0.95%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• RWIGX	-8.54%	0.34%	2.74%	0.03%
• Benchmark	-9.45%	0.35%	2.31%	0.41%
+/- Benchmark	0.91%	-0.01%	0.43%	-0.38%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

American Funds Capital World GrG Inc R6

Ticker Yield **Total Assets** **Mstar Category**
 RWIGX 2.3% \$97,691 mil World Large Stock

Benchmark 1: MSCI ACWI Large Cap NR USD
Benchmark 2: MSCI ACWI Ex USA NR USD

Morningstar Analyst Rating 05-09-19

Gold

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Neutral		

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	2.74	0.34	-8.54	4.08	-1.88
2016	0.36	1.44	5.11	-0.15	6.85
2017	7.50	5.29	5.11	5.13	25.08
2018	0.43	0.18	1.23	-11.60	-9.97
2019	12.25	3.00	-0.55	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	13.57	Avg	★★★★
3 Yr	10.71	Avg	★★★★
5 Yr	6.57	Avg	★★★★
10 Yr	8.81	Avg	★★★★
Incept	10.83	Avg	★★★★

Tax Analysis

	Total Return %	+/- Benchmark	+/- Benchmark	% Rank Cat	Tax-Cost Rat	% Rank Cat	Growth of \$10,000
3 Yr (estimated)	2.60	0.11	-0.27	41	1.60	73	10,260
5 Yr (estimated)	2.63	-0.39	0.67	45	10.263	—	—
10 Yr (estimated)	13.57	0.90	2.30	37	11.357	—	—
3 Yr-Avg	10.71	-0.96	2.64	45	13.571	—	—
5 Yr-Avg	6.57	-0.62	2.75	52	13.745	—	—
10 Yr-Avg	8.81	0.09	3.86	53	23.254	—	—
15 Yr-Avg	—	—	—	—	—	—	—

Morningstar's Take by Alec Lucas 05-09-19

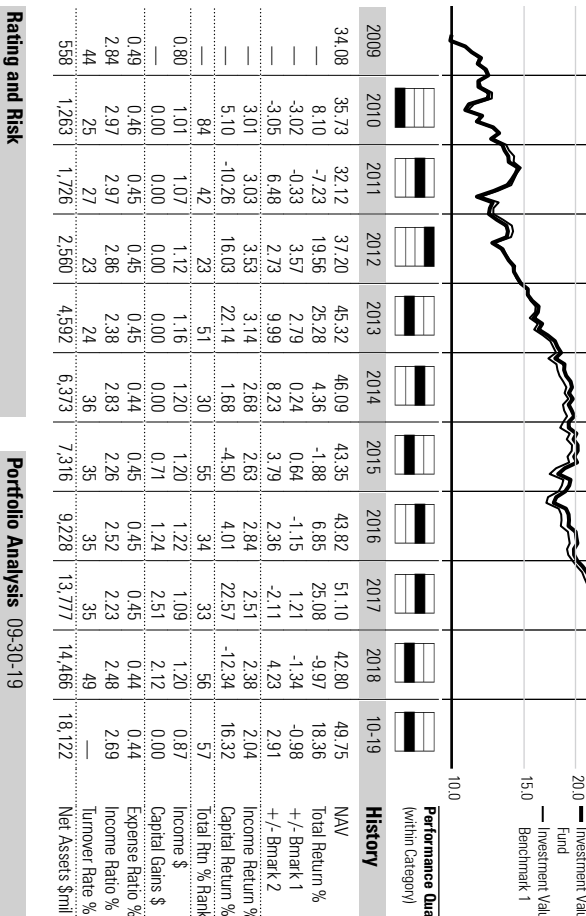
American Funds Capital World Growth and Income has altered its talent base without diminishing its prospects. It retains a Morningstar Analyst Rating of Gold.

Capital Group, the parent of American Funds, divides itself into smaller subsidiaries to manage money. Two of those, Capital Research Global Investors and Capital International Investors, split this fund's roughly \$100 billion asset base until July 2018, when Capital World Investors replaced CII, amid a firmwide reorganization of investment personnel.

The subsidiary switch led to a reshuffling of the now eight-person management team, but the fund remains in capable hands. Longest-tenured manager Mark Deming and Michael Cohen have joined forces at CWI, and in February 2019, Capital Group named veterans Jin Lee and Alex Sheynkman as managers here. Lee has run a sleeve of Gold-rated American Funds Washington Mutual AWSHX for five years, and Sheynkman has been an analyst on this fund for 18 years.

Historical Profile

Year	Return	Average	Below Avg	Rating
2009	34.08	35.73	32.12	★★★★
2010	—	8.10	-7.23	★★★★
2011	—	-3.02	-0.33	★★★★
2012	—	-3.05	6.48	Neutral
2013	—	3.01	3.03	—
2014	—	5.10	-10.26	—
2015	—	84	42	—
2016	—	0.80	1.01	—
2017	—	0.00	0.00	—
2018	—	0.49	0.46	—
2019	—	2.84	2.97	—
	—	44	25	—
	—	558	1,263	—



Portfolio Analysis 09-30-19

Total Stocks: 319

Share change since 06-30-19	Company	Sector	Country	% Assets
⊕	Capital Group Central Cas	—	United States	4.27
⊕	Broadcom Inc	Technology	United States	2.64
⊕	Microsoft Corp	Technology	United States	2.12
⊕	AbbVie Inc	Pharm	United States	1.54
⊕	Facebook Inc A	Technology	United States	1.52
⊕	UnitedHealth Group Inc	Health Care	United States	1.43
⊕	Nestle SA	Food/Beverage	Switzerland	1.37
⊕	Novartis AG	Pharm	Switzerland	1.36
⊕	Taiwan Semiconductor Manu	Technology	Taiwan	1.36
⊕	Airbus SE	Transportation	France	1.30
⊕	CME Group Inc Class A	Financial	United States	1.30
⊕	Samsung Electronics Co Lt	Technology	South Korea	1.28
⊕	Netflix Inc	Entertainment	United States	1.23
⊕	Abbott Laboratories	Pharm	United States	1.22
⊕	British American Tobacco	Pharm	United Kingdom	1.22
⊕	AIA Group Ltd	Financial	Hong Kong	1.20
⊕	The Home Depot Inc	Retail	United States	1.14
⊕	Angen Inc	Health Care	United States	1.04
⊕	Zurich Insurance Group AG	Financial	Switzerland	0.98
⊕	Amazon.com Inc	Retail	United States	0.96

The managers, based in the United States, England, and Asia, maintain a good mix of investing styles in running their individual sleeves. For example, Lee invests opportunistically, while Sheynkman tends to favor dividend-growth names.

The fund's 300-stock portfolio can still stand out. Its 9% stake in semiconductor stocks, as of March 2019, nearly tripled the MSCI All-Country World Index and that didn't include a top 15 position in Samsung Electronics, which in 2018 got two fifths of its revenue from its semiconductor chip business.

Overweighting economically sensitive stocks can hurt in downturns. Samsung weighed on the fund's 2018 returns, as did the more traditionally resilient British American Tobacco. The fund's 10.2% calendar-year loss lagged the index by 84 basis points and finished in the world large-stock Morningstar Category's bottom half.

Over longer periods, though, the fund has a superior record, and that's unlikely to change. The fund has talented managers. They're free to focus on income without sacrificing total return, and they face a modest fee hurdle.

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of
Large	Giant	64.2	⬆️ Cyclical	Stocks
Mid	Large	28.7	Basic/Mat	Stocks
Small	Mid	6.8	Cnsm/Cyc	Stocks
Micro	Small	0.2	Finan/Svs	Stocks
	Micro	0.0	Real Est	Stocks
	Avg Sml:	3.98		
	Sensitive	38.81		
	Comm/Svs	2.30		
	Energy	7.05		
	Industri	9.13		
	Technology	20.33		
	Defensive	26.07		
	Cnsm/Def	7.81		
	Hlthcare	13.88		
	Utilities	4.58		

Value Measures

Price/Earnings	15.55	Rel Category	74.968
Price/Book	2.03	Rel Category	—
Price/Sales	1.78	Rel Category	—
Price/Cash Flow	7.46	Rel Category	—
Dividend Yield %	2.88	Rel Category	—
Growth Measures	—	Rel Category	—
Long-Term Eings	9.55	Rel Category	0.98
Book Value	8.19	Rel Category	1.23
Sales	3.11	Rel Category	0.51
Cash Flow	14.46	Rel Category	1.45
Historical Eings	13.14	Rel Category	1.05

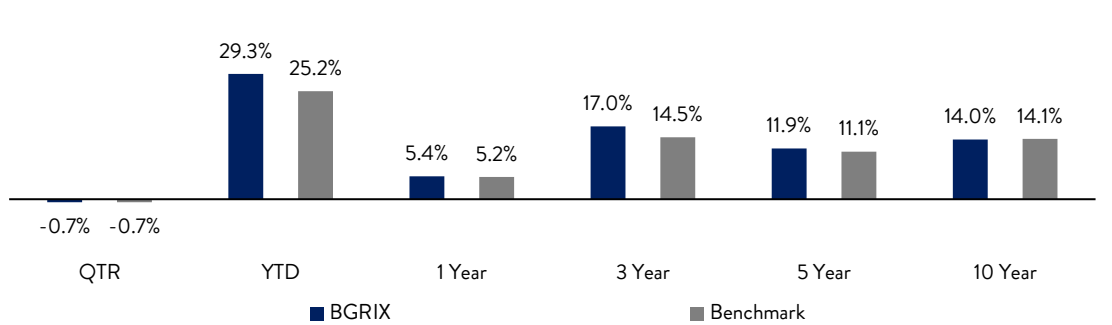
Composition - Net

Cash	4.5	Bonds	0.6	Country Exposure	% Stock
Stocks	94.4	Other	0.5	United States	47
Foreign (% of Stock)	52.4			UK	9
				Japan	4
				China	4
				France	2
				Asia X Japan	15
				Other	2

Product Details

Name	Baron Growth Instl
Ticker	BGRIX
Expense Ratio	1.030%
Morningstar Category	US Fund Mid-Cap Growth
Benchmark	Russell Mid Cap Growth TR USD
Inception Date	5/29/2009
Longest Tenured Manager	Ronald Baron
Longest Manager Tenure	24.92 Years
Fund Size	\$6,954,141,032

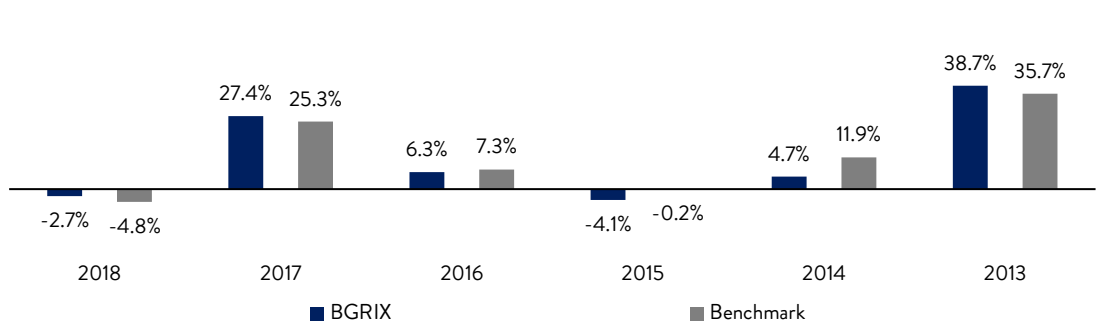
Trailing Performance



Fund Characteristics

BGRIX	+/- Category
% Assets in Top 10 Holdings	52.27%
Average Market Cap (mil)	\$8,616
P/E Ratio (TTM)	31.35
P/B Ratio (TTM)	4.10
Est. Dividend Yield	1.11%

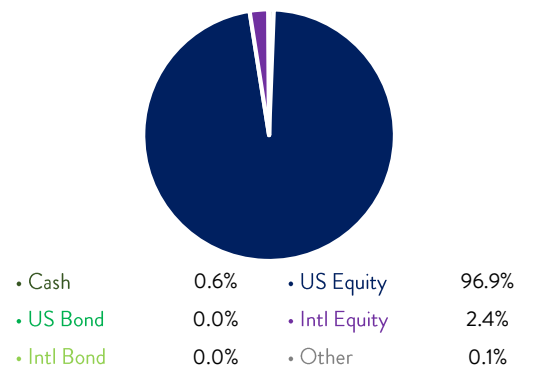
Annual Performance



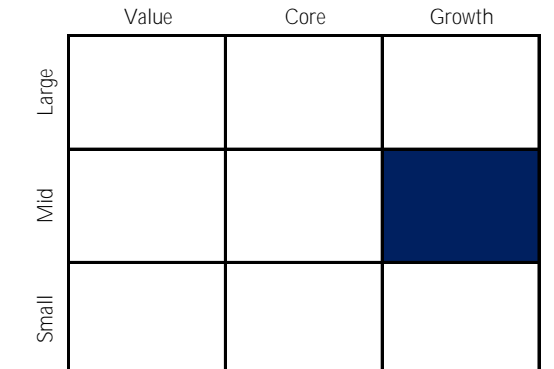
Sector Allocations

BGRIX	Category	+/- Category
2.0%	2.9%	-0.9%
2.8%	0.7%	2.1%
21.4%	15.6%	5.8%
1.0%	3.8%	-2.9%
10.5%	16.0%	-5.4%
3.5%	16.2%	-12.7%
15.6%	5.2%	10.3%
17.8%	28.4%	-10.6%
0.0%	1.5%	-1.5%
25.4%	8.9%	16.5%
0.0%	0.7%	-0.7%
0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box



Baron Growth Instl

BGRIX

Fund Fact Sheet

Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• BGRIX	-0.69%	29.32%	5.36%	17.00%	11.89%	14.00%
• Benchmark	-0.67%	25.23%	5.20%	14.50%	11.12%	14.08%
+/- Benchmark	-0.02%	4.08%	0.15%	2.50%	0.78%	-0.09%
Peer Group Rank	34	10	31	14	24	25

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• BGRIX	-0.69%	7.03%	21.67%	-18.53%
• Benchmark	-0.67%	5.40%	19.62%	-15.99%
+/- Benchmark	-0.02%	1.62%	2.05%	-2.54%

Annual Performance	2018	2017	2016	2015	2014	2013
• BGRIX	-2.67%	27.35%	6.31%	-4.06%	4.66%	38.69%
• Benchmark	-4.75%	25.27%	7.33%	-0.20%	11.90%	35.74%
+/- Benchmark	2.08%	2.09%	-1.02%	-3.86%	-7.24%	2.94%
Peer Group Rank	24	29	43	85	76	22

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• BGRIX	7.94%	8.01%	2.47%	5.35%
• Benchmark	7.57%	3.16%	2.17%	6.81%
+/- Benchmark	0.36%	4.85%	0.30%	-1.45%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• BGRIX	11.89%	11.31%	9.94%	5.76%	11.90%	12.55%
• Benchmark	11.12%	11.10%	10.89%	7.42%	13.00%	13.37%
+/- Benchmark	0.78%	0.20%	-0.95%	-1.66%	-1.10%	-0.82%
Peer Group Rank	24	33	41	56	51	50

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• BGRIX	3.23%	6.06%	10.41%	-0.08%
• Benchmark	5.28%	4.21%	6.89%	0.46%
+/- Benchmark	-2.05%	1.85%	3.51%	-0.53%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	1.59	0.00	0.89	0.00	0.79	0.00
Beta	1.07	1.00	0.99	1.00	0.94	1.00
Standard Deviation	15.99	14.38	14.35	13.60	14.58	14.71
Sharpe Ratio	0.97	0.91	0.79	0.77	0.94	0.94
Information Ratio	0.53	-	0.16	-	-0.02	-
Treynor Ratio	14.44	12.88	10.95	10.09	14.36	13.53
Upside Capture Ratio	111.08	100.00	101.94	100.00	96.08	100.00
Downside Capture Ratio	105.31	100.00	97.98	100.00	93.14	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• BGRIX	2.59%	3.38%	0.31%	1.40%
• Benchmark	4.59%	1.56%	0.58%	4.12%
+/- Benchmark	-2.00%	1.82%	-0.27%	-2.72%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• BGRIX	-8.66%	-1.11%	4.75%	7.29%
• Benchmark	-7.99%	-1.14%	5.38%	5.84%
+/- Benchmark	-0.67%	0.04%	-0.63%	1.45%

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Baron Growth Instl

Ticker Yield **Total Assets** **Master Category**
 BGRHX 0.0% \$6,954 mil Mid-Cap Growth

Benchmark 1: Russell Mid Cap Growth TR USD
Benchmark 2: S&P 500 TR USD



Morningstar Analyst Rating 08-28-19

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Negative

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Negative	Neutral	Positive

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	4.75	-1.11	-8.66	1.40	4.06
2016	0.31	3.38	2.59	-0.08	6.31
2017	10.41	6.06	3.23	5.35	27.35
2018	2.47	8.01	7.94	-18.53	-2.67
2019	21.67	7.03	-0.69	—	—

Trailing

	Total Return	+/- Benchmark	+/- Benchmark	% Rank	Growth of \$10,000
3 Mo	1.39	2.53	-1.04	9	10,139
6 Mo	3.20	1.16	-0.95	24	10,320
1 Yr	21.21	2.28	6.89	10	12,121
3 Yr-Avg	20.06	3.25	5.15	7	17,304
5 Yr-Avg	11.65	0.73	0.87	20	17,350
10 Yr-Avg	14.50	-0.26	0.80	23	38,730
15 Yr-Avg	—	—	—	—	—

Tax Analysis

	Tax Adv. Ratio	% Rank	Cat. Tax-Cost Rat	% Rank	Growth of \$10,000
3 Yr (estimated)	17.39	9	2.22	71	71
5 Yr (estimated)	9.48	26	1.94	58	58
10 Yr (estimated)	13.10	27	1.22	45	45

Potential Capital Gain Exposure: 76% of assets

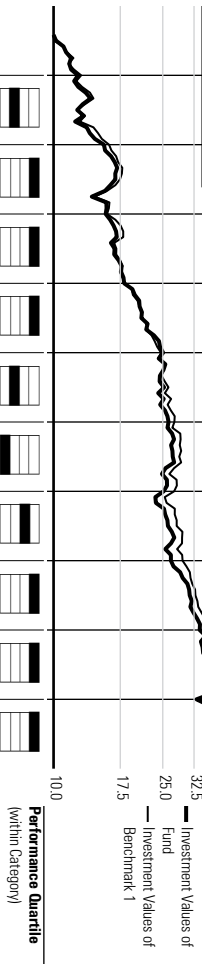
Morningstar's Take by Christopher Franz 08-28-19

Baron Growth features a veteran stock-picker and appealing approach, but succession risk and high fees limit its Morningstar Analyst Rating to Bronze.

Ron Baron, CEO and CIO of his eponymous firm, has led this fund since its 1994 inception, but he's no longer alone. Longtime analyst Neal Rosenberg, who first joined here as assistant manager in 2016, took on greater comanager duties in August 2018. The move eases concern about succession but doesn't remove it entirely as Rosenberg lacks a track record of his own. Rosenbergs addition hasn't altered the fund's approach. Baron has long gravitated toward small-cap companies with strong prospects for secular growth thanks to emerging, if not established, competitive advantages. He typically buys stocks as small caps-- those he added to the portfolio in 2019's second quarter all had market capitalizations under \$5 billion-- but he tends to hold on, a practice that lands the fund in mid-cap territory. Baron rarely trades and stays within his circle of competence. He tends to avoid speculative areas like biotech, positioning the fund in more-established names like CosStar Group CSGP and

Historical Profile

Year	Return	Above Avg	Average	Below Avg
2009	41.37	51.43	51.35	54.06
2010	—	24.32	1.51	16.74
2011	—	-2.07	3.16	0.94
2012	—	9.25	-0.60	0.74
2013	—	0.00	0.00	0.56
2014	—	24.32	1.51	16.18
2015	—	69	16	24
2016	—	0.00	0.00	0.26
2017	—	0.00	0.83	5.59
2018	—	1.13	1.06	1.06
2019	-0.29	-0.53	-0.33	0.83
2009-2019	27	16	14	14



Rating and Risk

Time Period	Load-Adj Return	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	21.21	High	+Avg	★★★★★
3 Yr	20.06	+Avg	Avg	★★★★★
5 Yr	11.65	+Avg	Avg	★★★★★
10 Yr	14.50	+Avg	Avg	★★★★★
Incept	15.32	—	—	—

Other Measures

Measure	Value	Standard Index	Best Fit Index
Alpha	2.7	2.7	2.0
Beta	1.17	1.17	1.05
R-Squared	82	82	91
Standard Deviation	15.60	15.60	20.06
Mean Sharpe Ratio	20.06	20.06	1.15

Portfolio Analysis 09-30-19

Total Stocks: 57

Company	Share change since 06-30-19	Yield	Market Cap	% of Assets
CosStar Group Inc	—	—	64.31	60.82
Vail Resorts Inc	—	—	4.06	6.31
Ach Capital Group Ltd	—	—	-3.86	-1.02
MSCI Inc	—	—	-5.44	-5.65
Ansys Inc	—	—	0.03	0.00
Gartner Inc A	—	—	-4.09	6.31
Factorial Research Systems	—	—	0.02	0.00
IDEXX Laboratories Inc	—	—	6.03	7.64
Choice Hotels International	—	—	1.04	1.05
Bright Horizons Family So	—	—	-0.37	0.37
Primera Inc	—	—	7	13
Gaming and Leisure Proper	—	—	3.230	2.936
Iridium Communications In	—	—	2.936	3.548
SSGC Technologies Holding	—	—	2.936	3.198
Morningstar Inc	—	—	—	—
Bio-Techne Corp	—	—	—	—
Douglas Emmett Inc	—	—	—	—
Marratt Vacations Worldw	—	—	—	—
Trex Co Inc	—	—	—	—
Guidewire Software Inc	—	—	—	—

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of Assets
Large	Giant	0.0	Cyclical	64.41
Mid	Large	11.9	BasicMat	2.01
Small	Mid	74.0	CsmmCyc	21.41
Micro	Small	14.1	FinanSvs	25.41
Avg \$mil	Micro	0.0	Real Est	15.58
			Sensitive	24.11
			CommSvs	2.79
			Energy	0.00
			Industri	3.53
			Technology	17.79
			Defensive	1.49
			CsmmDef	0.95
			Hlthcare	10.54
			Utilities	0.00

Value Measures

Measure	Value	Peer Category
Price/Earnings	26.79	1.02
Price/Book	4.03	0.92
Price/Sales	3.66	1.29
Price/Cash Flow	18.23	1.09
Dividend Yield %	1.11	1.56
Growth Measures	% Rel Category	
Long-Term Engfs	11.75	0.93
Book Value	10.85	1.01
Sales	9.14	0.94
Cash Flow	9.84	0.75
Historical Engfs	11.97	0.45

Profitability

Measure	Value	%
Return on Equity	23.17	—
Return on Assets	8.70	—
Net Margin	16.14	—

Composition - Net

Asset Class	Percentage
Cash	0.6
Stocks	99.3
Bonds	0.0
Other	0.1
Foreign (% of Stock)	2.4

Asset Class: **Asset Allocation**
Category: **Lifestyle**

FUND FACTS

Inception Date: **October 1, 2004**

Investment advisory fee for period ended
September 30, 2019: **0.01%**

12b-1 fee: **0.00%**

Other expenses: **0.31%**

Total fund annual expenses without
waivers or reductions for period ended
September 30, 2019: **0.32%**

Total waivers, recoupments, and
reductions: **0.00%**

Net fund annual expenses after waivers
or reductions for period ended
September 30, 2019: **0.32%**

Turnover rate: **1%**

If offered through a retirement program,
additional fees and expenses may be
charged under that program.

Important Information

Category is interpreted by Voya® using
Fund Company and/or Morningstar
category information.

Investment advisory fee reflects a
weighted blend of fees charged by the
underlying investment options within the
Lifestyle Portfolio, based upon the
percentage allocations designated by
San Bernardino and detailed within the
Strategy section.

This Portfolio is not a registered
investment company, and interests in the
Portfolio have not been registered with
the Securities and Exchange
Commission. It is only available to
participants in the San Bernardino
qualified retirement program. Only
eligible participants in the plan may
invest in the Portfolio.

**You can obtain copies of free
prospectuses for the underlying
funds which contain additional
information on the charges and
expenses for the funds at any time by
calling Your local Voya
representative. Other fees and
expenses may be charged under your
retirement program. More**

**Information is included in the
enrollment material.**

Investment Objective

The investment objective of the
Conservative Allocation Portfolio is to
provide total returns with an emphasis
on income and lower volatility of
principal. Thirty percent (30%) of the
total fund assets are allocated to equities
and seventy percent (70%) are allocated
to fixed income securities. It is the most
conservative of the three Lifestyle Funds
in terms of its potential for investment
return, but also has the lowest risk of the
Lifestyle Funds. It is most suitable for
participants who are close to retirement,
need access to their money within five
years, or are not comfortable with the
higher short-term fluctuations that are
characteristic of investing a large portion
of their portfolio in equity markets.

All equity (both U.S. and International)
and fixed income investments exhibit
certain risk characteristics that include
the potential for loss of principal value.
Generally, the probability of loss of
principal is greater with investment funds
that also provide the greatest potential
for investment return. International
stocks carry additional risks that relate to
currency and political uncertainty. The
risks of Lifestyle Portfolios are based on
the proportionate risk characteristics of
the underlying sub-funds described
above.

Strategy

The strategy for the Conservative
Allocation Portfolio is to invest in a
combination of active and passive
investments in the following proportions:
--- 70% in the San Bernardino Stable
Value Option where stability of principal
is the primary objective. StabilizerSM
guarantees a minimum rate of interest
for the life of the contract, and may credit
a higher interest rate from time to time.
The current rate is subject to change, but
will never fall below the guaranteed
minimum.

---12% in the Vanguard® Total
International Stock Market Index Fund –
Institutional Shares, which seeks to track
the performance of a benchmark index
that measures the investment return of
stocks issued by companies located in
developed and emerging markets,
excluding the United States.

--- 18% in the Vanguard® Total Stock
Market Index Fund - Institutional Shares,
which seeks to track the performance of
a benchmark index that measures the
investment return of the overall stock
market.

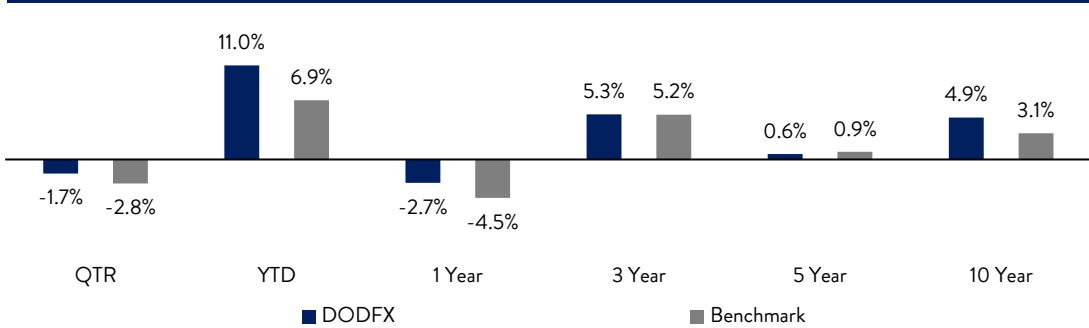
Each sub-fund description contains more
detailed information regarding the sub-
funds' Investment Advisers, Portfolio
Managers, Investment Objectives,
Strategies and Principal Risks, and must
accompany this Lifestyle Portfolio
description.

Principal Risks

Product Details

Name	Dodge & Cox International Stock
Ticker	DODFX
Expense Ratio	0.630%
Morningstar Category	US Fund Foreign Large Value
Benchmark	MSCI ACWI Ex USA Value NR USD
Inception Date	5/1/2001
Longest Tenured Manager	C. Bryan Cameron; Diana S. Strandberg;
Longest Manager Tenure	18.50 Years
Fund Size	\$47,225,359,649

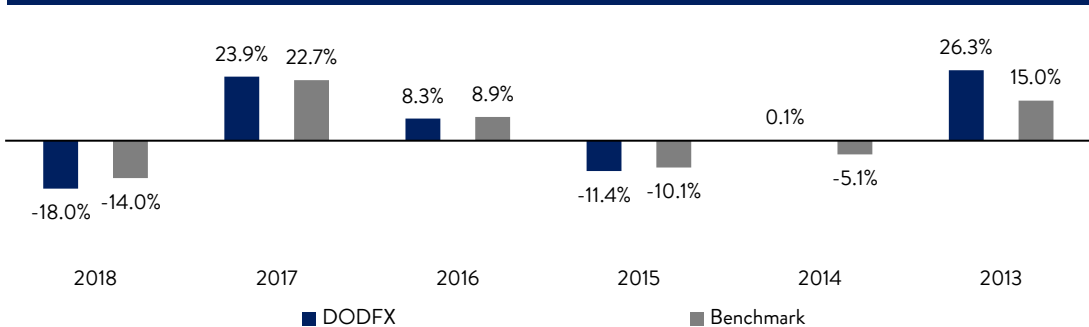
Trailing Performance



Fund Characteristics

	DODFX	+/- Category
% Assets in Top 10 Holdings	27.74%	12.49%
Average Market Cap (mil)	\$41,319	\$12,094
P/E Ratio (TTM)	13.46	0.90
P/B Ratio (TTM)	1.07	-0.08
Est. Dividend Yield	3.73%	-0.69%

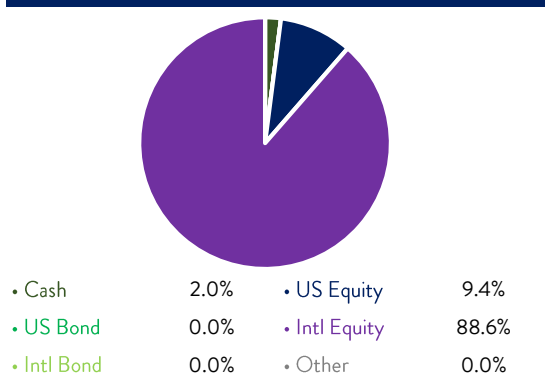
Annual Performance



Sector Allocations

Sector Allocations	DODFX	Category	+/- Category
Materials	5.9%	9.5%	-3.5%
Communication Services	4.4%	6.0%	-1.6%
Consumer Discretionary	8.0%	11.4%	-3.4%
Consumer Staples	1.1%	7.2%	-6.1%
Healthcare	16.0%	9.3%	6.7%
Industrials	6.5%	12.1%	-5.6%
Real Estate	0.9%	2.1%	-1.2%
Technology	16.5%	6.5%	10.0%
Energy	9.3%	8.9%	0.4%
Financial Services	30.4%	23.8%	6.6%
Utilities	1.0%	3.3%	-2.3%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Dodge & Cox International Stock
DODFX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• DODFX	-1.66%	11.00%	-2.75%	5.26%	0.64%	4.92%
• Benchmark	-2.80%	6.94%	-4.51%	5.24%	0.89%	3.05%
+/- Benchmark	1.14%	4.06%	1.76%	0.02%	-0.25%	1.87%
Peer Group Rank	51	15	17	16	60	13

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• DODFX	-1.66%	2.81%	9.78%	-12.39%
• Benchmark	-2.80%	1.57%	8.33%	-10.71%
+/- Benchmark	1.14%	1.25%	1.46%	-1.68%

Annual Performance	2018	2017	2016	2015	2014	2013
• DODFX	-17.98%	23.94%	8.26%	-11.35%	0.08%	26.31%
• Benchmark	-13.97%	22.66%	8.92%	-10.06%	-5.10%	15.04%
+/- Benchmark	-4.01%	1.28%	-0.66%	-1.29%	5.18%	11.27%
Peer Group Rank	75	37	19	88	2	14

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• DODFX	0.81%	-5.12%	-2.14%	1.21%
• Benchmark	1.72%	-3.84%	-1.50%	4.23%
+/- Benchmark	-0.90%	-1.28%	-0.64%	-3.03%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• DODFX	0.64%	0.42%	0.85%	-0.48%	3.74%	5.78%
• Benchmark	0.89%	0.29%	1.08%	-0.38%	2.87%	4.75%
+/- Benchmark	-0.25%	0.13%	-0.23%	-0.09%	0.87%	1.03%
Peer Group Rank	60	40	43	40	33	32

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• DODFX	6.94%	4.75%	9.32%	3.36%
• Benchmark	5.99%	4.08%	6.68%	3.29%
+/- Benchmark	0.95%	0.67%	2.64%	0.07%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.26	0.00	-0.07	0.00	1.81	0.00
Beta	1.12	1.00	1.09	1.00	1.05	1.00
Standard Deviation	13.67	11.74	14.93	13.23	16.40	15.16
Sharpe Ratio	0.32	0.36	0.05	0.05	0.34	0.24
Information Ratio	0.01	-	-0.06	-	0.47	-
Treynor Ratio	3.24	3.62	-0.35	-0.13	4.16	2.50
Upside Capture Ratio	109.75	100.00	106.67	100.00	109.62	100.00
Downside Capture Ratio	112.70	100.00	108.11	100.00	101.61	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• DODFX	10.15%	-1.20%	-3.76%	0.83%
• Benchmark	7.79%	-1.76%	-0.42%	1.43%
+/- Benchmark	2.35%	0.57%	-3.34%	-0.60%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• DODFX	-15.38%	-0.30%	4.20%	-4.66%
• Benchmark	-13.60%	0.47%	2.14%	-5.44%
+/- Benchmark	-1.79%	-0.77%	2.07%	0.78%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Dodge & Cox International Stock

Ticker DODFX **Yield** 2.5% **Total Assets** \$47,225 mil **Mistar Category** Foreign Large Value

Benchmark 1: MSCI ACWI Ex-USA Value NR USD
Benchmark 2: MSCI ACWI Ex-USA NR USD
Morningstar Analyst Rating 06-25-19



Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Positive	Negative	Negative	Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	4.20	-0.30	-15.38	0.83	-11.35
2016	-3.76	-1.20	10.15	3.36	8.26
2017	9.32	4.75	6.94	1.21	23.94
2018	-2.14	-5.12	0.81	-12.39	-17.98
2019	9.78	2.81	-1.66	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	%Rank Cat	Growth of \$10,000
3 Mo	4.72	1.95	1.84	33	10,472
6 Mo	0.47	0.58	-1.49	63	10,047
1 Yr	7.22	-1.27	-4.04	39	10,722
3 Yr-Avg	5.92	-0.28	-2.16	50	11,883
5 Yr-Avg	1.70	-0.19	-2.12	67	10,877
10 Yr-Avg	5.63	2.03	0.68	13	17,285
15 Yr-Avg	6.08	1.22	0.42	8	24,223

Tax Analysis Tax Adj. Rate% %Rank Cat Tax-Cost Rat %Rank Cat
 3 Yr (estimated) 5.22 32 0.66 18
 5 Yr (estimated) 1.01 46 0.68 15
 10 Yr (estimated) 4.92 8 0.67 17

Morningstar's Take by Tony Thomas, Ph.D. 06-25-19

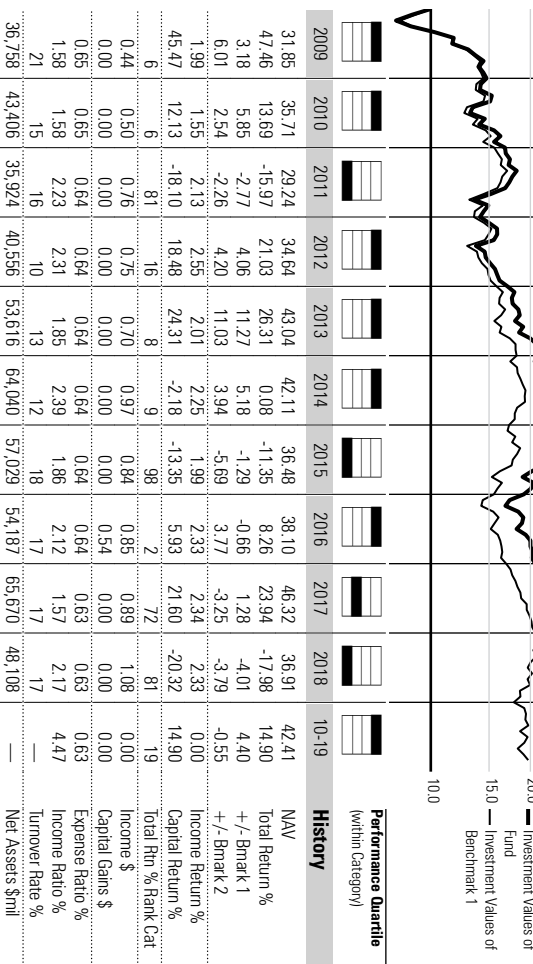
Ample resources, a valuation-driven process, and an excellent track record earn Dodge & Cox International Stock a Morningstar Analyst Rating of Gold. It reopened to new investors on May 1, 2019.

The strategy is in good hands. The firm's talented, nine-member international equity investment committee runs the portfolio. Veteran investors steer the committee, including director of international equity Diana Strandberg and CIO Charles Pohl. Its members average 24 years' tenure at the firm. Though no retirements are imminent, the firm has promoted new members to the committee (most recently, analyst Ray Mertens in 2018) as part of its gradual approach to succession planning. A team of 24 other equity managers and analysts provides further support.

A contrarian instinct drives the team's intensive, collaborative process. The managers look for cheap stocks using various metrics, often seizing on bad news or economic weakness to build positions. Bottom-up research gives the managers confidence in their picks. Broader macroeconomic views are less important. The analysts seek businesses with competitive advantages.

Historical Profile

Return	Above Avg
Risk	High
Rating	★★★★
	Neutral



Rating and Risk

Time Period	Load-Adj Return%	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	7.22			
3 Yr	5.92	Avg	High	★★★★
5 Yr	1.70	Avg	High	★★
10 Yr	5.63	+Avg	High	★★★★★
Incept	6.90			

Other Measures

	Standard Index	Best Fit Index
Alpha	-2.7	-0.7
Beta	1.14	1.12
R-Squared	90	94
Standard Deviation	13.77	5.92
Mean	5.92	0.36
Sharpe Ratio	0.36	

good growth potential, and capable executives. The managers can be patient with such firms, sticking with picks for three to five years—or longer.

The team boasts a solid track record using this approach. From Bryan Cameron and Strandberg's May 2001 start through May 2019, the strategy's 6.6% annualized gain beat the MSCI ACWI's 4.9% rise. (The ACWI's emerging-markets exposure makes it a better yardstick.) It also topped 97% of its foreign large-value Morningstar Category peers and 95% of foreign large-blend funds. (The fund was in the foreign large-blend category from 2012 to 2018.)

The manager's emerging-markets stakes (19% of the March 2019 portfolio) and contrarian style made the strategy among the most volatile in its category during the period. Yet the team's patience helps them ride out the storms, and investors here should take a similar approach. This is a fine, competitively priced option for non-U.S. investing.

Portfolio Analysis 09-30-19

Total Stocks: 72

State change since 06-30-19	Sector	Country	% Assets
Sanofi SA	Hlth Care	France	3.27
BNP Paribas	Finan Svcs	France	2.97
ICICI Bank Ltd	Finan Svcs	India	2.91
Rochie Holding AG Dividend	Hlth Care	Switzerland	2.85
UBS Group AG	Finan Svcs	Switzerland	2.84
Mitsubishi Electric Corp	Technology	Japan	2.76
Bayer AG	Hlth Care	Germany	2.69
Credit Suisse Group AG	Finan Svcs	Switzerland	2.53
Unicredit SPA	Finan Svcs	Italy	2.47
GlaxoSmithKline PLC	Hlth Care	United Kingdom	2.43
Banco Santander SA	Finan Svcs	Spain	2.36
Novartis AG	Hlth Care	Switzerland	2.25
Hau Umbano Holding SA	Finan Svcs	Brazil	2.23
Johnson Controls Internet	Industrl	United States	2.13
Suncor Energy Inc	Energy	Canada	2.11
Astrazeneca PLC	Hlth Care	United Kingdom	2.10
Barclays PLC	Finan Svcs	United Kingdom	2.08
Total SA	Energy	France	2.02
Samsung Electronics Co Lt	Technology	South Korea	2.01
Naspers Ltd Class N	Technology	South Africa	1.95

Current Investment Style

Value Blend Growth	Market Cap	% Weights	% of Stocks	Rel Brnk 1
Large	Giant	52.3	45.22	0.81
Mid	Large	41.3	5.95	0.67
Small	Mid	6.4	7.97	0.88
	Small	0.0	30.43	0.92
	Micro	0.0	0.87	0.19
	Avg Sml:	41.319		

Value Measures

Value Measure	Rel Category
Price/Earnings	11.89
Price/Book	1.02
Price/Sales	1.09
Price/Cash Flow	2.42
Dividend Yield %	3.73
Growth Measures	% Rel Category
Long-Term Engfs	6.98
Book Value	1.75
Sales	-0.79
Cash Flow	8.49
Historical Engfs	4.96

Regional Exposure

Region	% Stock
UK/W. Europe	53
N. America	13
Latin America	6
Asia X Japan	12
Other	3

Composition - Net

Asset Class	% Stock
Cash	2.0
Bonds	0.0
Stocks	98.1
Other	-0.2
Foreign (% of Stock)	90.4

Address: Dodge & Cox Funds
 San Francisco, CA 94104
 800-621-3979
 www.dodgeandcox.com
Web Address: www.dodgeandcox.com
Inception: 05-01-01
Advisor: Dodge & Cox
Subadvisor: None

Minimum Purchase: \$2500 **Add:** \$100 **IRA:** \$1000
Mfn Auto Inv Plan: — **Adt:** \$100
Sales Fees: No-load
Management Fee: 0.60%
Actual Fees: Mgr 0.60% Dist: —
Expense Projections: 3Yr: \$202 5Yr: \$351 10Yr: \$766
Income Distribution: Annually

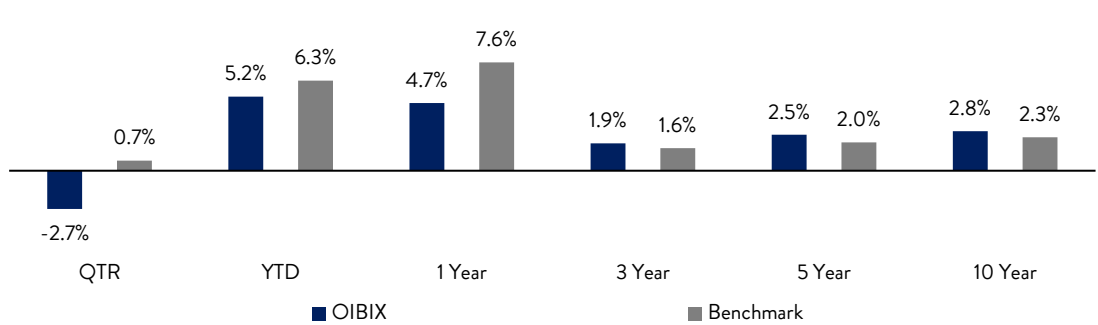
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Product Details

Name	Invesco Oppenheimer International Bd R6
Ticker	OIBIX
Expense Ratio	0.560%
Morningstar Category	US Fund World Bond
Benchmark	BBgBarc Global Aggregate TR USD
Inception Date	1/27/2012
Longest Tenured Manager	Hemant Bajjal
Longest Manager Tenure	6.83 Years
Fund Size	\$3,764,567,641

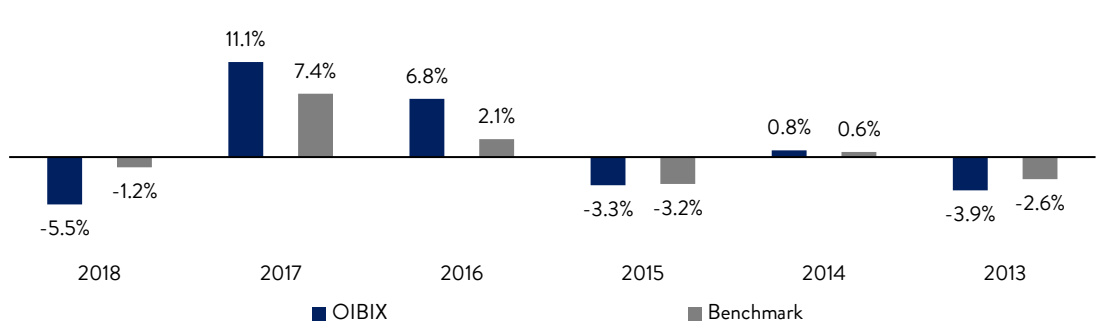
Trailing Performance



Fund Characteristics

	OIBIX	+/- Category
% Assets in Top 10 Holdings	12.81%	-23.18%
Average Eff Duration	3.85	-0.96
Average Eff Maturity	12.69	5.73
Average Credit Quality	BB	BBB (Cat Avg.)
Average Coupon	6.46%	2.25%

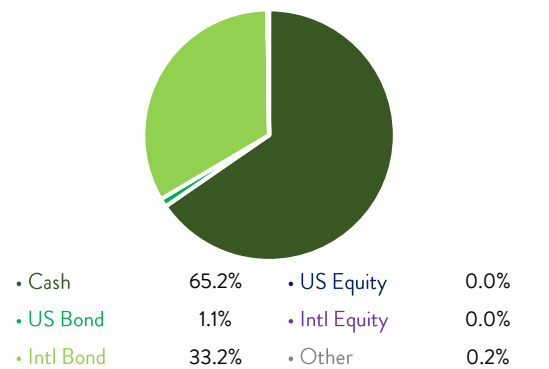
Annual Performance



Sector Allocations

	OIBIX	Category	+/- Category
Government	26.9%	47.6%	-20.6%
Municipal	0.0%	0.0%	0.0%
Bank Loan	0.0%	0.5%	-0.5%
Convertible	0.3%	0.7%	-0.4%
Corporate Bond	4.9%	14.5%	-9.6%
Preferred Stock	0.0%	0.0%	0.0%
Agency MBS	2.0%	3.7%	-1.7%
Non-Agency RMBS	0.0%	0.8%	-0.8%
Commercial MBS	0.0%	0.6%	-0.6%
Asset-Backed	0.0%	2.4%	-2.3%
Cash & Equivalents	9.7%	15.0%	-5.4%
Other	56.2%	14.2%	42.0%

Asset Allocation



Morningstar Style Box

	Low IR Sens	Mod IR Sens	Ext IR Sens
High Qual			
Med Qual			
Low Qual			

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• OIBIX	-2.68%	5.20%	4.74%	1.92%	2.52%	2.78%
• Benchmark	0.71%	6.32%	7.60%	1.59%	1.99%	2.34%
+/- Benchmark	-3.40%	-1.12%	-2.86%	0.33%	0.52%	0.44%
Peer Group Rank	94	61	66	37	14	41

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• OIBIX	-2.68%	4.36%	3.58%	-0.44%
• Benchmark	0.72%	3.29%	2.20%	1.20%
+/- Benchmark	-3.40%	1.07%	1.38%	-1.64%

Annual Performance	2018	2017	2016	2015	2014	2013
• OIBIX	-5.53%	11.12%	6.79%	-3.31%	0.77%	-3.88%
• Benchmark	-1.20%	7.39%	2.09%	-3.15%	0.59%	-2.60%
+/- Benchmark	-4.33%	3.73%	4.71%	-0.16%	0.19%	-1.28%
Peer Group Rank	86	17	8	14	49	64

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• OIBIX	-0.79%	-6.84%	2.66%	1.35%
• Benchmark	-0.92%	-2.78%	1.36%	1.08%
+/- Benchmark	0.13%	-4.05%	1.30%	0.27%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• OIBIX	2.52%	2.61%	2.25%	1.78%	2.04%	2.41%
• Benchmark	1.99%	1.20%	1.04%	1.08%	0.75%	1.50%
+/- Benchmark	0.52%	1.41%	1.21%	0.70%	1.29%	0.91%
Peer Group Rank	14	4	8	12	12	10

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• OIBIX	2.55%	3.04%	3.76%	-4.13%
• Benchmark	1.76%	2.60%	1.76%	-7.07%
+/- Benchmark	0.78%	0.44%	2.00%	2.94%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.46	0.00	0.85	0.00	0.42	0.00
Beta	0.79	1.00	0.76	1.00	1.08	1.00
Standard Deviation	6.78	4.67	6.04	4.48	6.99	4.83
Sharpe Ratio	0.08	0.02	0.27	0.24	0.35	0.39
Information Ratio	0.06	-	0.10	-	0.09	-
Treynor Ratio	0.39	-0.03	1.96	0.97	2.08	1.79
Upside Capture Ratio	73.84	100.00	73.07	100.00	99.42	100.00
Downside Capture Ratio	60.84	100.00	52.85	100.00	91.22	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• OIBIX	3.59%	3.20%	4.20%	-0.85%
• Benchmark	0.82%	2.89%	5.90%	-0.92%
+/- Benchmark	2.77%	0.31%	-1.70%	0.08%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• OIBIX	-1.49%	-1.78%	0.78%	-0.69%
• Benchmark	0.85%	-1.18%	-1.92%	-1.04%
+/- Benchmark	-2.34%	-0.60%	2.70%	0.34%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Invesco Oppenheimer International Bond Fund - Class R6

Release Date
09-30-19

Category
World Bond

Investment Objective & Strategy

From the investment's prospectus

The investment seeks total return.

The fund invests mainly in debt securities of foreign government and corporate issuers. Under normal market conditions, it invests at least 80% of its net assets (plus borrowings for investment purposes) in debt securities, and in derivatives and other instruments that have economic characteristics similar to such securities. The fund typically invests in at least three countries other than the United States. It invests in debt securities of issuers in both developed and emerging markets throughout the world. It is non-diversified.

Past name(s) : Oppenheimer International Bond I.

Volatility and Risk

Volatility as of 09-30-19



Risk Measures as of 09-30-19	Port Avg	Rel BC Aggr	Rel Cat
3-Yr Std Dev	6.78	2.02	1.32
3-Yr Beta	0.30	—	0.39

Principal Risks

Emerging Markets, Foreign Securities, Loss of Money, Not FDIC Insured, Country or Region, Nondiversification, Market/Market Volatility, High-Yield Securities, Underlying Fund/Fund of Funds, Derivatives, Fixed-Income Securities, Sovereign Debt, Regulation/Government Intervention, Small Cap, Micro-Cap

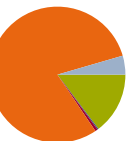
Important Information

Morningstar Investment Profiles must be accompanied by Morningstar Disclosure and Glossary.

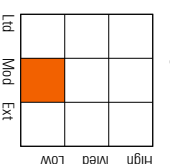
Funds or their affiliates may pay compensation to Voya® affiliates offering a fund. Such compensation may be paid out of distribution, service and/or 12b-1 fees that are deducted from the fund's assets, and/or may be paid directly by the fund's affiliates. Any fees deducted from fund assets are discussed in the fund's prospectus and disclosed in the fund fact sheet. Because these fees are paid on an on-going basis, over time these fees will increase the cost of your investment and may cost you more than paying other types of sales charges. If offered through a retirement program, additional fees and expenses may be charged under that program. NOT A DEPOSIT. NOT FDIC INSURED. NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY. NOT GUARANTEED BY THE INSTITUTION. MAY GO DOWN IN VALUE.

Portfolio Analysis

Composition as of 07-31-19



U.S. Stocks	0.3
Non-U.S. Stocks	0.6
Bonds	79.9
Cash	14.7
Other	4.5



Morningstar Fixed Income Style Box™ as of 09-30-19

Avg Eff Duration	3.85
Avg Eff Maturity	12.69

Top 10 Holdings as of 07-31-19

Invesco Oppenheimer Instl Govt MMFInvl	08-02-19	5.04	% Assets
United Kingdom of Great Britain	3.25% 01-22-44	2.91	
Mexico (United Mexican States)	8% 12-07-23	2.69	
Secretaria Tesoro Nacional	10% 01-01-27	2.16	
Greece (Republic of)	3.9% 01-30-33	2.11	
India (Republic of)	8.24% 02-15-27	1.96	
Mexico (United Mexican States)	5% 12-11-19	1.66	
Russian Federation	7% 01-25-23	1.61	
India (Republic of)	8.4% 07-28-24	1.53	
Mexico (United Mexican States)	8.5% 05-31-29	1.52	

Morningstar F-I Sectors as of 07-31-19

Government	66.42	% Fund
Corporate	14.62	
Securitized	3.93	
Municipal	0.00	
Cash/Cash Equivalents	12.63	
Other	2.39	

Credit Analysis: % Bonds as of 09-30-19

AAA	18	BB	18
AA	6	B	14
A	12	Below B	3
BBB	27	Not Rated	1

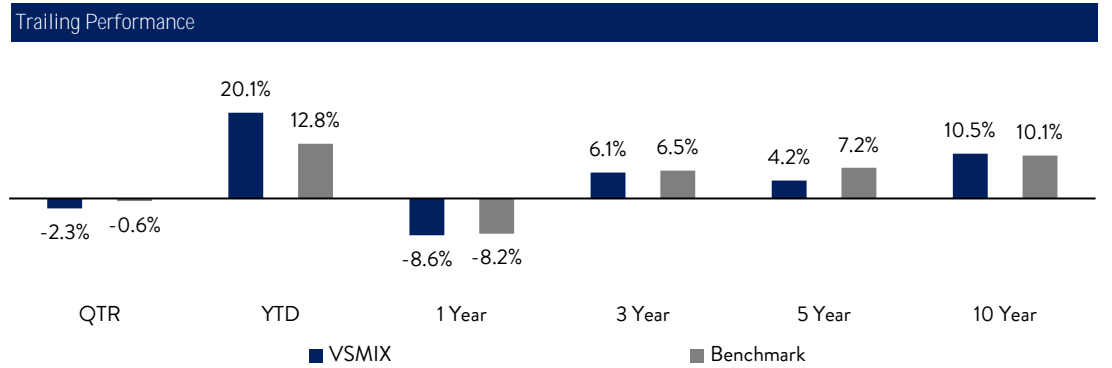
Operations

Gross Prosp Exp Ratio	0.57% of fund assets
Net Prosp Exp Ratio	0.56% of fund assets
Management Fee	0.53%
12b-1 Fee	—
Other Fee	0.01%
Miscellaneous Fees(s)	0.03%
Fund Inception Date	01-27-12
Total Fund Assets (\$mil)	3,715.2
Annual Turnover Ratio %	115.00
Fund Family Name	Invesco

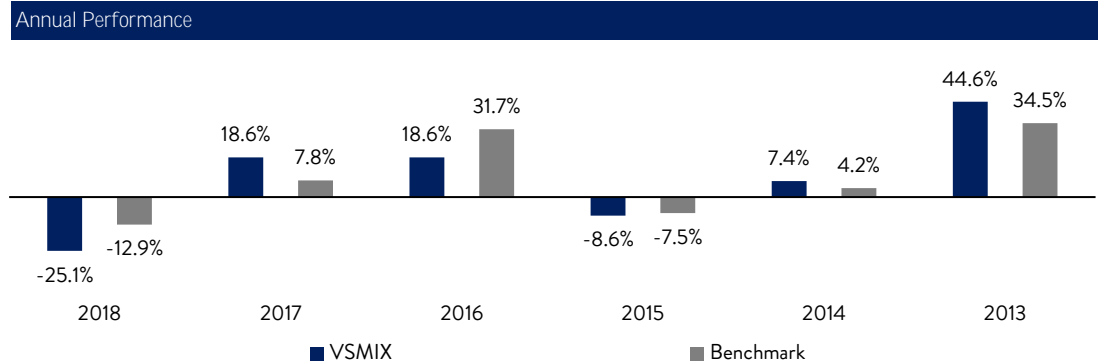
Notes

Other Expenses and Acquired Fund Fees and Expenses are based on estimated amounts for the current fiscal year. Invesco Advisers, Inc. (Invesco or the Adviser) has contractually agreed to waive advisory fees and/or reimburse expenses to the extent necessary to limit Total Annual Fund Operating Expenses After Fee Waiver and/or Expense Reimbursement (excluding Acquired Fund Fees and Expenses and certain items discussed in the statement of additional information (SAI)) of Class R6 shares to 0.62% of the Fund's average daily net assets (the expense limits) through at least May 28, 2021. Invesco Advisers has also contractually agreed to waive a portion of the Acquiring Fund's management fee in an amount equal to the net management fee that Invesco Advisers earns on the Fund's investments in certain affiliated funds, which will have the effect of reducing the Acquired Fund Fees and Expenses through at least May 28, 2021. During their terms, the fee waiver agreements cannot be terminated or amended to increase the expense limits or reduce the advisory fee waiver without approval of the Board of Trustees.

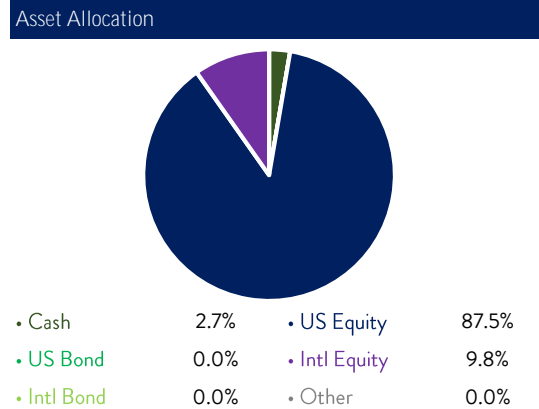
Product Details	
Name	Invesco Small CapValue Y
Ticker	VSMIX
Expense Ratio	0.870%
Morningstar Category	US Fund Small Value
Benchmark	Russell 2000 Value TR USD
Inception Date	8/12/2005
Longest Tenured Manager	Jonathan Edwards;Jonathan Mueller;
Longest Manager Tenure	9.42 Years
Fund Size	\$1,368,856,712



Fund Characteristics	VSMIX	+/- Category
% Assets in Top 10 Holdings	31.01%	10.77%
Average Market Cap (mil)	\$3,182	\$477
P/E Ratio (TTM)	13.09	-2.28
P/B Ratio (TTM)	1.47	0.00
Est. Dividend Yield	1.31%	-1.11%



Sector Allocations	VSMIX	Category	+/- Category
Materials	18.5%	7.5%	11.0%
Communication Services	0.0%	0.5%	-0.5%
Consumer Discretionary	16.4%	13.6%	2.8%
Consumer Staples	1.5%	3.7%	-2.3%
Healthcare	6.8%	3.3%	3.5%
Industrials	25.7%	15.6%	10.1%
Real Estate	0.0%	9.6%	-9.6%
Technology	9.1%	11.1%	-1.9%
Energy	7.2%	4.6%	2.5%
Financial Services	14.8%	26.4%	-11.6%
Utilities	0.0%	4.0%	-4.0%
Other	0.0%	0.0%	0.0%



Invesco Small CapValue Y

VSMIX

Fund Fact Sheet

Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VSMIX	-2.34%	20.08%	-8.64%	6.07%	4.22%	10.50%
• Benchmark	-0.57%	12.82%	-8.24%	6.54%	7.17%	10.06%
+/- Benchmark	-1.77%	7.27%	-0.40%	-0.47%	-2.95%	0.44%
Peer Group Rank	84	5	47	36	73	25

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VSMIX	-2.34%	2.83%	19.58%	-23.92%
• Benchmark	-0.57%	1.38%	11.93%	-18.67%
+/- Benchmark	-1.77%	1.46%	7.65%	-5.26%

Annual Performance	2018	2017	2016	2015	2014	2013
• VSMIX	-25.11%	18.58%	18.61%	-8.64%	7.43%	44.55%
• Benchmark	-12.86%	7.84%	31.74%	-7.47%	4.22%	34.52%
+/- Benchmark	-12.25%	10.74%	-13.13%	-1.17%	3.21%	10.03%
Peer Group Rank	99	2	88	77	8	4

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VSMIX	-0.31%	1.40%	-2.62%	6.35%
• Benchmark	1.60%	8.30%	-2.64%	2.05%
+/- Benchmark	-1.91%	-6.90%	0.01%	4.31%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VSMIX	4.22%	3.21%	3.44%	0.67%	8.59%	10.47%
• Benchmark	7.17%	5.39%	5.59%	3.61%	9.91%	11.18%
+/- Benchmark	-2.95%	-2.18%	-2.15%	-2.94%	-1.32%	-0.71%
Peer Group Rank	73	69	72	83	60	52

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VSMIX	6.29%	0.10%	4.80%	11.90%
• Benchmark	5.11%	0.67%	-0.13%	14.07%
+/- Benchmark	1.18%	-0.57%	4.93%	-2.17%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.89	0.00	-3.53	0.00	-0.41	0.00
Beta	1.24	1.00	1.24	1.00	1.14	1.00
Standard Deviation	23.06	17.67	21.42	16.08	20.83	17.07
Sharpe Ratio	0.30	0.35	0.25	0.45	0.56	0.62
Information Ratio	-0.06	-	-0.34	-	0.06	-
Treynor Ratio	3.59	4.92	2.58	6.15	8.70	9.51
Upside Capture Ratio	113.94	100.00	106.50	100.00	110.09	100.00
Downside Capture Ratio	119.84	100.00	123.86	100.00	112.51	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VSMIX	12.25%	-5.12%	-0.48%	1.54%
• Benchmark	8.87%	4.31%	1.70%	2.88%
+/- Benchmark	3.39%	-9.43%	-2.18%	-1.33%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VSMIX	-13.98%	-0.42%	5.04%	6.42%
• Benchmark	-10.73%	-1.20%	1.98%	9.40%
+/- Benchmark	-3.24%	0.77%	3.06%	-2.97%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Invesco Small Cap Value Y

Ticker VSMWX **Yield** 0.0% **Total Assets** \$1,311 mil **Mistar Category** Small Value

Benchmark 1: Russell 2000 Value TR USD
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 09-05-19

Historical Profile
 Return Average
 Risk High
 Rating ★★
 Below Avg

Investment Style
 Equity

Performance Quartile
 (within Category)

Morningstar Pillars

Process **Positive**

Performance **Neutral**

People **Neutral**

Parent **Neutral**

Price **Positive**

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Pillar Spectrum

Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	5.04	-0.42	-13.98	1.54	-8.64
2016	-0.48	-5.12	12.25	11.90	18.61
2017	4.80	0.10	6.29	6.35	18.58
2018	-2.62	1.40	-0.31	-23.92	-25.11
2019	19.58	2.83	-2.34	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	4.40	High	High	★★★
3 Yr	7.94	+Avg	High	★★★
5 Yr	4.22	Avg	High	★★
10 Yr	11.11	Avg	High	★★
Incept	8.55	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 63

Share change since 06-30-19	AECOM	Energizer Holdings Inc	Owens-Corning Inc	Carpenter Technology Corp	Sealed Air Corp	Flex Ltd	LKQ Corp	Groyn Holdings Inc	MGIC Investment Corp	CNO Financial Group Inc	Huntsman Corp	Brookdale Senior Living I	ASCO Corp	First Horizon National Co	Parsley Energy Inc A	Mylan NV	WESCO International Inc	Delphi Technologies PLC W	Kulicke & Soffa Industrie	Dana Inc
1.424	1.367	1.501	7.93	67.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Trailing

	Total Return	+/- Benchmark	+/- Benchmark	%Rank Cat	%Rank Growth of \$10,000
3 Mo	-0.14	-1.81	-2.57	66	9,986
6 Mo	-4.35	-3.82	-8.50	80	9,565
1 Yr	4.40	1.18	-9.92	31	10,440
3 Yr-Avg	7.94	-0.66	-6.97	30	12,576
5 Yr-Avg	4.22	-2.02	-6.56	54	12,296
10 Yr-Avg	11.11	0.03	-2.59	34	28,679
15 Yr-Avg	—	—	—	—	—

Tax Analysis

	Tax Adj Return	%Rank Cat	Tax-Cost Rat	%Rank Cat	Growth of \$10,000
3 Yr (estimated)	4.68	51	3.02	66	89
5 Yr (estimated)	1.08	73	3.01	88	88
10 Yr (estimated)	8.77	51	2.11	89	89

Potential Capital Gain Exposure: 22% of assets

Morningstar's Take by Nicholas Goralka 09-05-19

Invesco Small Cap Value's bias toward deeply discounted companies can cause wild performance swings in any given year, but disciplined execution and a thoughtful process give it a chance to outperform over a full market cycle. The strategy earns a Morningstar Analyst Rating of Bronze.

While the team has effectively navigated a manager change, its inexperienced analyst bench fails to stand out compared with competitors. Former lead manager Canon Coleman left this strategy in June 2018, giving Jonathan Edwards the reins. Edwards and comanager Jonathan Mueller have helped run this strategy since June 2010, offering ideological stability. Ricardo Sutton offers strong experience as an analyst, but he's joined only by two recent business school graduates. Concerningly, the small team's coverage stretches across market caps to support the all-cap version of this strategy. Invesco Value Opportunities VOAX.

Edwards and Mueller have continued using Coleman's aggressive approach. They focus on stocks they think are trading at steep enough discounts to

support 50% appreciation within three years. They try to mitigate the inherent volatility of deep-value investing by relying on conservative estimates and emphasizing cash generation, staying away from highly leveraged companies. They maintain a database of about 650 small-cap stocks' estimated intrinsic values, intending to differentiate between structural problems and short-term noise when they decrease in price.

The strategy's portfolio is consistently overweight undervalued companies compared with its Russell 2000 Value Index benchmark per Morningstar's risk model. The strategy's multiyear outlook often leads to owning out-of-favor stocks for long stretches. For example, the team bought Energizer Holdings ENR as it traded down on the back of several acquisitions, saying future synergies can make up for recent price weakness. While this patience has paid off in the long run, it also generates volatility and poor performance over shorter time periods. Investors need a high risk tolerance to succeed here.

Other Measures

	Standard Index	Best Fit Index
Alpha	-13.2	2.3
Beta	1.67	1.23
R-Squared	78	94
Standard Deviation	22.87	7.94
Mean	7.84	0.37
Sharpe Ratio	—	—

Minimum Purchase: \$1000 Add: \$50 IRA: \$250
 Min Auto Inv Plan: \$50 Add: \$50
 Sales Fees: No-load
 Management Fee: 0.67% mx/0.62% mn.
 Actual Fees: Mgr 0.64% Dist: —
 Expense Projections: 3Yr: \$278 5Yr: \$482 10Yr: \$1073
 Income Distribution: Annual

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of Stocks	% of Assets
Large	Giant	0.0	Cyclical	49.70	0.90
Mid	Large	4.5	Basic/Mat	18.47	5.19
Small	Mid	45.1	Cnsm/Cyc	16.41	1.64
Micro	Small	45.6	Finan/Svcs	14.82	0.54
Avg \$mil:	Micro	4.9	Finan/Svcs	14.82	0.54
	Real Est	0.00	Real Est	0.00	0.00
	Sensitive	41.99	Sensitive	41.99	1.39
	Comm/Svcs	0.00	Comm/Svcs	0.00	0.00
	Energy	7.17	Energy	7.17	1.32
	Industri	25.69	Industri	25.69	1.87
	Technology	9.13	Technology	9.13	1.10
	Defensive	8.31	Defensive	8.31	0.58
	Cnsm/Def	1.48	Cnsm/Def	1.48	0.52
	Hlthcare	6.83	Hlthcare	6.83	1.31
	Utilities	0.00	Utilities	0.00	0.00

Address: Airo Sector Funds
 Houston, TX 77046
 800-959-4246
 www.invesco.com

Web Address: www.invesco.com

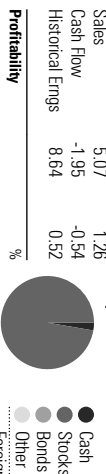
Inception: 08-12-05

Advisor: Invesco Advisers, Inc.

Subadvisor: None

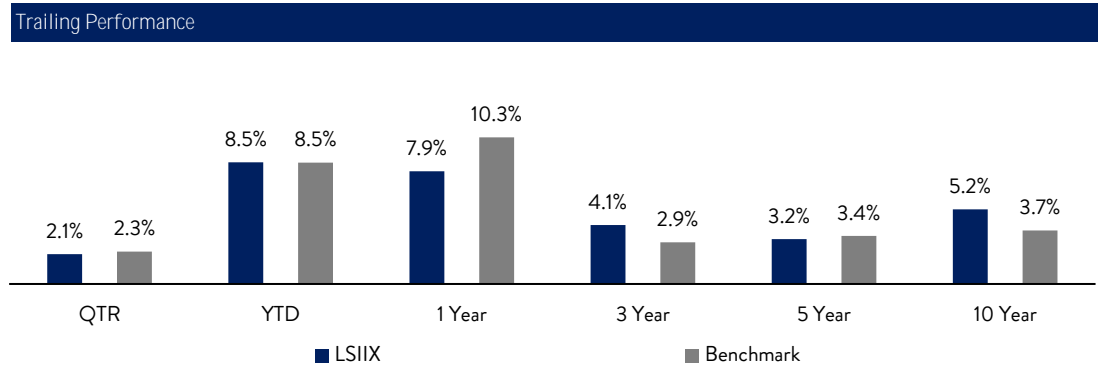
Composition - Net

	Cash	Stocks	Bonds	Other	Foreign
% of Stocks	2.7	97.3	0.0	0.0	10.0

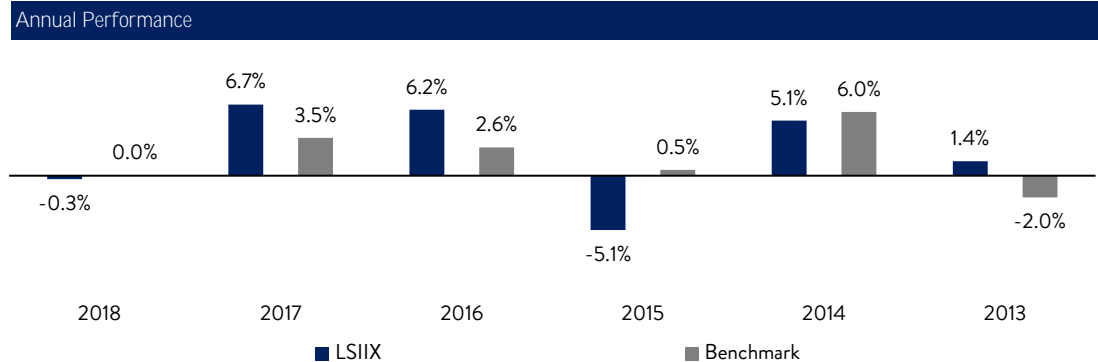


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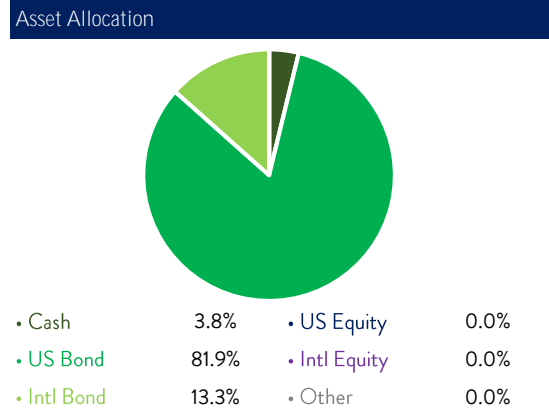
Product Details	
Name	Loomis Sayles Investment Grade Bond Y
Ticker	LSIIX
Expense Ratio	0.510%
Morningstar Category	US Fund Intermediate Core-Plus Bond
Benchmark	BBgBarc US Agg Bond TR USD
Inception Date	12/31/1996
Longest Tenured Manager	Matthew J. Eagan; Elaine M. Stokes;
Longest Manager Tenure	13.17 Years
Fund Size	\$5,572,695,067



Fund Characteristics	LSIIX	+/- Category
% Assets in Top 10 Holdings	20.97%	-22.33%
Average Eff Duration	3.14	-2.28
Average Eff Maturity	4.60	-2.97
Average Credit Quality	BB	BBB (Cat Avg.)
Average Coupon	3.98%	0.26%



Sector Allocations	LSIIX	Category	+/- Category
Government	17.2%	27.7%	-10.5%
Municipal	0.2%	0.4%	-0.2%
Bank Loan	0.0%	0.4%	-0.4%
Convertible	0.7%	0.7%	0.0%
Corporate Bond	54.0%	26.1%	27.9%
Preferred Stock	0.3%	0.1%	0.2%
Agency MBS	0.0%	27.4%	-27.4%
Non-Agency RMBS	1.0%	1.1%	0.0%
Commercial MBS	0.6%	1.7%	-1.1%
Asset-Backed	22.2%	8.7%	13.5%
Cash & Equivalents	3.8%	5.4%	-1.6%
Other	0.0%	0.3%	-0.3%



Morningstar Style Box

	Low IR Sens	Mod IR Sens	Ext IR Sens
High Qual			
Med Qual			
Low Qual			

Loomis Sayles Investment Grade Bond Y

LSIIX

Fund Fact Sheet

Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• LSIIX	2.10%	8.54%	7.90%	4.14%	3.16%	5.24%
• Benchmark	2.27%	8.52%	10.30%	2.92%	3.38%	3.75%
+/- Benchmark	-0.17%	0.02%	-2.40%	1.22%	-0.22%	1.49%
Peer Group Rank	47	62	87	7	60	11

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• LSIIX	2.10%	2.86%	3.35%	-0.59%
• Benchmark	2.27%	3.08%	2.94%	1.64%
+/- Benchmark	-0.17%	-0.22%	0.41%	-2.22%

Annual Performance	2018	2017	2016	2015	2014	2013
• LSIIX	-0.32%	6.66%	6.16%	-5.08%	5.14%	1.36%
• Benchmark	0.01%	3.54%	2.65%	0.55%	5.97%	-2.02%
+/- Benchmark	-0.33%	3.12%	3.51%	-5.63%	-0.82%	3.38%
Peer Group Rank	30	3	5	98	64	8

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• LSIIX	0.96%	-0.74%	0.07%	0.16%
• Benchmark	0.02%	-0.16%	-1.46%	0.39%
+/- Benchmark	0.94%	-0.58%	1.53%	-0.23%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• LSIIX	3.16%	2.30%	2.39%	2.41%	2.85%	3.04%
• Benchmark	3.38%	2.95%	2.74%	2.52%	2.16%	2.27%
+/- Benchmark	-0.22%	-0.65%	-0.35%	-0.11%	0.69%	0.77%
Peer Group Rank	60	81	68	53	27	23

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• LSIIX	1.69%	2.14%	2.52%	-2.12%
• Benchmark	0.85%	1.45%	0.82%	-2.98%
+/- Benchmark	0.85%	0.70%	1.70%	0.86%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	1.68	0.00	0.83	0.00	2.36	0.00
Beta	0.61	1.00	0.56	1.00	0.72	1.00
Standard Deviation	2.87	3.35	3.58	3.08	4.41	2.95
Sharpe Ratio	0.88	0.41	0.61	0.77	1.06	1.08
Information Ratio	0.51	-	-0.07	-	0.38	-
Treynor Ratio	4.11	1.31	3.78	2.35	6.48	3.20
Upside Capture Ratio	83.84	100.00	74.89	100.00	111.96	100.00
Downside Capture Ratio	28.82	100.00	50.32	100.00	69.99	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• LSIIX	2.25%	2.43%	3.56%	-0.19%
• Benchmark	0.46%	2.21%	3.03%	-0.57%
+/- Benchmark	1.79%	0.21%	0.53%	0.38%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• LSIIX	-2.71%	-1.69%	-0.57%	0.46%
• Benchmark	1.23%	-1.68%	1.61%	1.79%
+/- Benchmark	-3.94%	-0.01%	-2.18%	-1.34%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Loomis Sayles Investment Grade Bond Y

Tricker Yield 3.2% **SEC Yield** 2.60% **Total Assets** \$5,594 mil
LSIX

Mstar Category
 Intermediate Core-Plus Bond

Benchmark 1: BBgBnc US Universal TR USD
Benchmark 2: BBgBnc US Agg Bond TR USD
Morningstar Analyst Rating 03-21-19



Morningstar Pillars

Process **Positive**
 Performance **Neutral**
 People **Positive**
 Parent **Neutral**
 Price **Neutral**

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

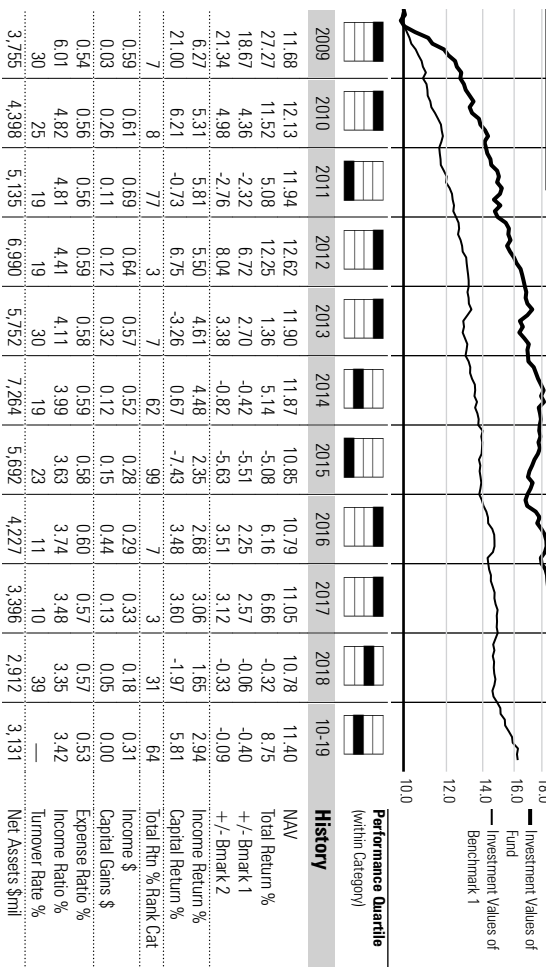
Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative
 Pillar Spectrum Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	-0.57	-1.69	-2.71	-0.19	-5.08
2016	3.56	2.43	2.25	-2.12	6.16
2017	2.52	2.14	1.69	0.16	6.66
2018	0.07	-0.74	0.96	-0.59	-0.32
2019	3.35	2.86	2.10	—	—

Historical Profile
 Return Above Avg
 Risk Above Avg
 Rating *****
 Above Avg



Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	9.36	High	-Avg	*****
3 Yr	4.46	High	-Avg	*****
5 Yr	3.08	Avg	High	****
10 Yr	5.18	+Avg	High	*****
Incept	7.03	—	—	—

Other Measures	Standard Index	Best Fit Index
Alpha	1.8	0.9
Beta	0.60	0.58
R-Squared	49	67
Standard Deviation	2.80	4.46
Mean	4.46	0.99
Sharpe Ratio	—	—

Portfolio Analysis 09-30-19

Total Fixed Income: 378	Date of Maturity	Amount \$000	Value \$000	Assets %
United States Treasury	05-15-29	294,065	301,664	5.40
United States Treasury	08-15-48	210,910	250,818	4.49
United States Treasury	02-15-49	113,970	135,887	2.43
United States Treasury	08-15-29	88,910	88,500	1.58
Textron Inc. 5.95%	09-21-21	78,795	83,532	1.50
JPMorgan Chase & Co. 4	12-15-26	70,245	76,647	1.37
AT&T Inc. 4.3%	02-15-30	61,415	67,574	1.21
Alcoa/Alcoa S.A. 6.75	03-01-41	47,920	56,556	1.01
Chevron Corporation 2.1	05-16-21	55,470	55,684	1.00
Krediantstar Fur Wiede	04-20-20	55,000	54,855	0.98
Jefferies Group LLC 5.1	01-20-23	50,270	54,097	0.97
Shell International Fin	05-10-21	52,303	52,508	0.94
Bank of America Corpora	12-20-28	49,304	51,493	0.92
United States Treasury	05-15-49	42,000	48,984	0.88
Pepco Inc 2%	04-15-21	45,980	46,123	0.83
National Life Insurance	09-15-39	26,914	25,632	0.82
AllV Financial Inc. 4.6	03-30-25	39,613	42,633	0.76
Sunoco Logistics Partne	10-01-27	40,610	42,038	0.75
Energy Transfer Operati	04-15-29	36,405	41,091	0.74
Fan Engine Securizati	10-15-43	43,019	40,868	0.73

Morningstar's Take by Sarah Bush 03-21-19

Despite the departure of a veteran manager and a change to its investment universe, Loomis Sayles Investment Grade Bond still holds plenty of appeal. The remaining team's strength and a thoughtful approach to credit continue to support its Morningstar Analyst Rating of Gold.

In late 2018, Loomis Sayles announced several changes to this fund, starting with the departure of bond fund legend and longtime manager Dan Fuss. Fuss remains at Loomis as a portfolio manager on Loomis Sayles Bond LSRBX, among others. At the same time, the fund's investment mandate was narrowed to focus primarily on corporate bonds. The fund will no longer hold exposure to non-U.S.-dollar-denominated debt, which accounted for as much as a third of the portfolio in the past, or equities, which occasionally popped up in this portfolio. As of February 2019, the transformation was well underway. A mix of investment-grade (55%) and high-yield corporate bonds (5%) dominated the portfolio with allocations to asset-backed securities (17%) and a mix of U.S. Treasuries, cash, and cash equivalents (16%) rounding out the portfolio.

Following Fuss' departure, the team remains strong. Elaine Stokes and Matt Egan, who both count more than 20 years at Loomis Sayles, started as comanagers on this fund in 2006 and have long been involved in day-to-day management of the portfolio. Firm veteran Brian Kennedy joined the pair in 2013. The three portfolio managers draw on a deep and experienced team of 39 credit analysts as well as a dedicated mortgage and structured finance group. The adjusted mandate plays to Loomis' strength in corporate research, and the fund should continue to benefit from the team's value-driven, often contrarian approach to investing. For example, after trading relatively lightly in energy-related names, it bought the debt of companies that it viewed as survivors as oil prices plunged in late 2014 and into early 2016. These holdings helped fuel strong returns later in 2016 and into 2017.

Overall, this fund remains an impressive choice.

Address: Loomis Sayles Funds II (Natrix)
 Kansas City, MO 64121-9579
800-225-5478
NGAM/Natrix.com
Web Address: 12-31-96
Inception: Loomis Sayles & Company LP
Advisor: None
Subadvisor: None

Minimum Purchase: \$100000 **Add:** \$50 **IRA:** —
Min Auto Inv Plan: \$100000 **Add:** \$50
Sales Fees: No-load
Management Fee: 0.40% mx/0.38% mn.
Actual Fees: Mgr'd 0.40% Dist 0.00%
Expense Projections: 3Yr:\$171 5Yr:\$307 10Yr:\$703
Income Distribution: None

Current Investment Style

Duration	Int	Med	Ext
Quality	High	Med	Low

1 figure provided by fund

Avg Eff Duration: 3.1
Avg Credit Quality: 4.6 Yrs
Avg Wld Coupon: BB
Avg Wld Price: 3.98%
106.78% of par

Composition - Net

Composition	% of Bonds
Cash	0.1
Stocks	55.1
Other	34.8

Special Securities

Restricted/Illegible	Secs
Emerging-Markets Secs	0.7
Options/Futures/Warrants	0.9

Credit Analysis

Credit	% bonds 09-30-19
AAA	14
AA	0
A	34
BBB	29

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Asset Class: **Asset Allocation**
Category: **Lifestyle**

FUND FACTS

Inception Date: **October 1, 2004**

Investment advisory fee for period ended
September 30, 2019: **0.13%**

12b-1 fee: **0.00%**

Other expenses: **0.12%**

Total fund annual expenses without
waivers or reductions for period ended
September 30, 2019: **0.25%**

Total waivers, recoupments, and
reductions: **0.00%**

Net fund annual expenses after waivers
or reductions for period ended
September 30, 2019: **0.25%**

Turnover rate: **15%**

If offered through a retirement program,
additional fees and expenses may be
charged under that program.

Important Information

Category is interpreted by Voya® using
Fund Company and/or Morningstar
category information.

Investment advisory fee reflects a
weighted blend of fees charged by the
underlying investment options within the
Lifestyle Portfolio, based upon the
percentage allocations designated by
San Bernardino and detailed within the
Strategy section.

This Portfolio is not a registered
investment company, and interests in the
Portfolio have not been registered with
the Securities and Exchange
Commission. It is only available to
participants in the San Bernardino
qualified retirement program. Only
eligible participants in the plan may
invest in the Portfolio.

**You can obtain copies of free
prospectuses for the underlying
funds which contain additional
information on the charges and
expenses for the funds at any time by
calling your local Voya
representative. Other fees and
expenses may be charged under your
retirement program. More**

**Information is included in the
enrollment material.**

Investment Objective

The investment objective of the
Moderate Allocation Portfolio is to
provide long-term total return through a
combination of capital growth and
income. Sixty percent (60%) of the total
fund assets are allocated to equities and
forty percent (40%) are allocated to fixed
income securities. It falls in the middle
of the three Lifestyle Funds in terms of
its potential for investment return as well
as the potential risk it assumes. It is
most suitable for participants who are
able to remain invested for more than
five, but less than ten years, or who are
comfortable with the higher short-term
fluctuations that are characteristic of
investing at least half of their portfolio in
equity markets.

Strategy

The strategy for the Moderate Allocation
Portfolio is to invest in a combination of
active and passive investments in the
following proportions:

---20% in the San Bernardino Stable
Value Option where stability of principal
is the primary objective. StabilizerSM
guarantees a minimum rate of interest
for the life of the contract, and may credit
a higher interest rate from time to time.
The current rate is subject to change, but
will never fall below the guaranteed
minimum.

---7% in the Loomis Sayles Investment
Grade Bond – Class Y, which seeks high
total investment return through a
combination of current income and
capital appreciation.

---24% in the Vanguard® Total
International Stock Market Index Fund –
Institutional Shares, which seeks to track
the performance of a benchmark index
that measures the investment return of
stocks issued by companies located in
developed and emerging markets,
excluding the United States.

---36% in the Vanguard® Total Stock
Market Index Fund - Institutional Shares,
which seeks to track the performance of
a benchmark index that measures the
investment return of the overall stock
market.

---6% in Pioneer Global High Yield Fund
- Class Y Shares, which seeks to
maximize total return through a
combination of income and capital
appreciation.

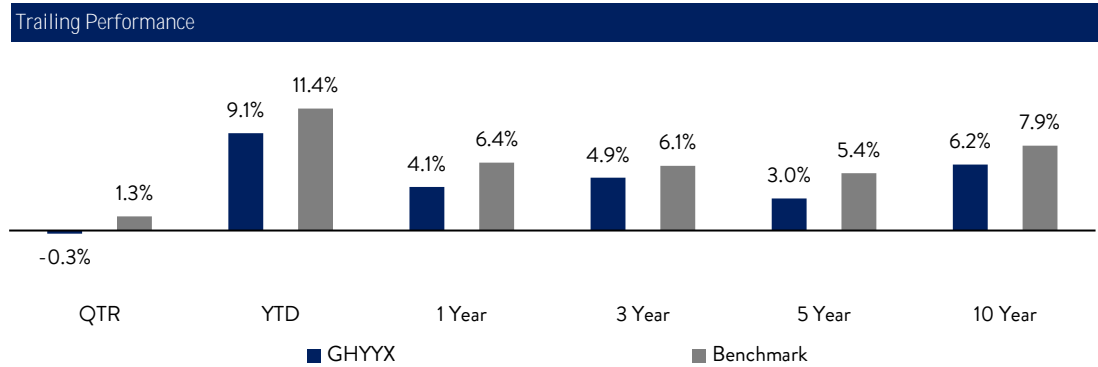
---7% in Oppenheimer International
Bond Fund - Class I, which seeks total
return.

Each sub-fund description contains more
detailed information regarding the sub-
funds' Investment Advisers, Portfolio
Managers, Investment Objectives,
Strategies and Principal Risks, and must
accompany this Lifestyle Portfolio
description.

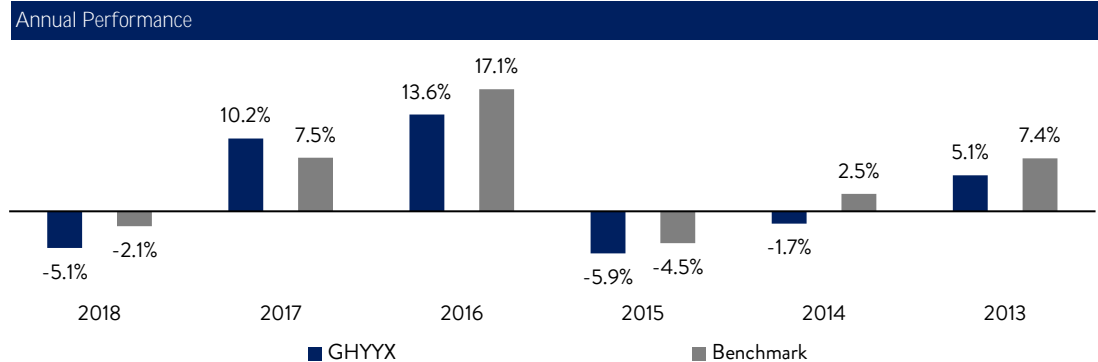
Principal Risks

All equity (both U.S. and International)
and fixed income investments exhibit
certain risk characteristics that include
the potential for loss of principal value.
Generally, the probability of loss of
principal is greater with investment funds
that also provide the greatest potential
for investment return. International
stocks do carry additional risks that
relate to currency and political
uncertainty. The risks of Lifestyle
Portfolios are based on the proportionate
risk characteristics of the underlying sub-
funds described above.

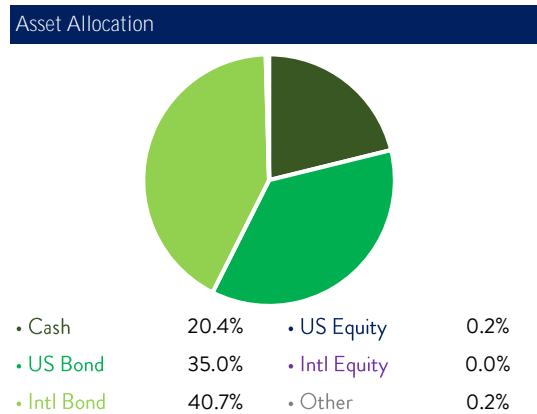
Product Details	
Name	Pioneer Global High Yield Y
Ticker	GHYYX
Expense Ratio	0.920%
Morningstar Category	US Fund High Yield Bond
Benchmark	BBgBarc US Corporate High Yield TR USD
Inception Date	12/28/2005
Longest Tenured Manager	Andrew Feltus
Longest Manager Tenure	18.25 Years
Fund Size	\$308,978,219



Fund Characteristics	GHYYX	+/- Category
% Assets in Top 10 Holdings	8.23%	-59.08%
Average Eff Duration	3.05	0.22
Average Eff Maturity	4.37	-0.28
Average Credit Quality	B	B (Cat Avg.)
Average Coupon	6.41%	-0.16%



Sector Allocations	GHYYX	Category	+/- Category
Government	7.8%	1.9%	6.0%
Municipal	0.0%	0.0%	0.0%
Bank Loan	2.9%	4.3%	-1.4%
Convertible	3.1%	1.0%	2.1%
Corporate Bond	64.4%	82.4%	-18.0%
Preferred Stock	0.4%	0.2%	0.3%
Agency MBS	0.0%	0.3%	-0.3%
Non-Agency RMBS	0.0%	0.2%	-0.2%
Commercial MBS	0.4%	0.1%	0.2%
Asset-Backed	0.1%	0.8%	-0.7%
Cash & Equivalents	21.0%	5.3%	15.6%
Other	0.0%	3.6%	-3.6%



Morningstar Style Box

	Low IR Sens	Mod IR Sens	Ext IR Sens
High Qual			
Med Qual			
Low Qual			

Pioneer Global High Yield Y
GHYYX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• GHYYX	-0.28%	9.11%	4.08%	4.94%	3.01%	6.17%
• Benchmark	1.33%	11.41%	6.36%	6.07%	5.37%	7.94%
+/- Benchmark	-1.62%	-2.30%	-2.28%	-1.13%	-2.37%	-1.77%
Peer Group Rank	94	73	78	61	91	83

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• GHYYX	-0.28%	3.13%	6.10%	-4.61%
• Benchmark	1.33%	2.50%	7.26%	-4.53%
+/- Benchmark	-1.62%	0.63%	-1.16%	-0.08%

Annual Performance	2018	2017	2016	2015	2014	2013
• GHYYX	-5.13%	10.21%	13.57%	-5.92%	-1.72%	5.07%
• Benchmark	-2.08%	7.50%	17.13%	-4.47%	2.45%	7.44%
+/- Benchmark	-3.05%	2.71%	-3.56%	-1.45%	-4.17%	-2.38%
Peer Group Rank	92	3	51	82	96	88

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• GHYYX	1.98%	-2.33%	-0.15%	1.11%
• Benchmark	2.40%	1.03%	-0.86%	0.47%
+/- Benchmark	-0.43%	-3.36%	0.71%	0.64%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• GHYYX	3.01%	2.55%	2.56%	1.88%	3.38%	3.31%
• Benchmark	5.37%	4.70%	4.68%	3.83%	5.54%	5.51%
+/- Benchmark	-2.37%	-2.14%	-2.12%	-1.95%	-2.16%	-2.20%
Peer Group Rank	91	89	88	86	86	89

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• GHYYX	2.83%	2.86%	3.06%	1.29%
• Benchmark	1.98%	2.17%	2.70%	1.75%
+/- Benchmark	0.85%	0.69%	0.36%	-0.46%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.81	0.00	-2.14	0.00	-2.03	0.00
Beta	0.94	1.00	0.97	1.00	1.06	1.00
Standard Deviation	4.48	4.09	5.69	5.34	6.63	5.86
Sharpe Ratio	0.74	1.07	0.37	0.82	0.85	1.24
Information Ratio	-0.49	-	-1.03	-	-0.74	-
Treynor Ratio	3.52	4.45	2.04	4.35	5.32	7.39
Upside Capture Ratio	85.86	100.00	83.17	100.00	94.27	100.00
Downside Capture Ratio	94.70	100.00	112.30	100.00	119.44	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• GHYYX	5.24%	4.00%	2.44%	-2.41%
• Benchmark	5.55%	5.52%	3.35%	-2.07%
+/- Benchmark	-0.31%	-1.52%	-0.92%	-0.34%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• GHYYX	-6.61%	1.60%	1.60%	-4.85%
• Benchmark	-4.86%	0.00%	2.52%	-1.00%
+/- Benchmark	-1.75%	1.60%	-0.93%	-3.85%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Pioneer Global High Yield Fund - Class Y Shares

Release Date
09-30-19

Category
High Yield Bond

Investment Objective & Strategy

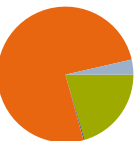
From the investment's prospectus

The investment seeks to maximize total return through a combination of income and capital appreciation.

Normally, the fund invests at least 80% of its total assets in below investment grade (high yield) debt securities and preferred stocks of U.S. and non-U.S. issuers, including governmental and corporate issuers in emerging markets. Debt securities rated below investment grade are commonly referred to as "junk bonds" and are considered speculative.

Portfolio Analysis

Composition as of 08-31-19



- U.S. Stocks
- Non-U.S. Stocks
- Bonds
- Cash
- Other

Morningstar Fixed Income Style Box™ as of 07-31-19		Avg Eff Duration	3.18
		Avg Eff Maturity	4.59
		High	Med
		Low	
Ltd	Mod		
Ext			

Top 10 Holdings as of 08-31-19

Security	% Assets
Sprint Corporation 7.25% 09-15-21	1.00
Nationstar Mortgage LLC 6.5% 06-01-22	0.99
Bausch Health Companies Inc 4.5% 05-15-23	0.94
Milnerva Luxembourg S.A. 5.88% 01-19-28	0.91
Platin 1426 GmbH 5.38% 06-15-23	0.79
Hidroviass International Finance S 5.95% 01-24-25	0.75
Melinvest B.V. 7.75% 04-23-23	0.75
Belden Inc. 3.88% 03-15-28	0.74
Financiera Independencia, S.A. de C. 8% 07-19-24	0.69
JBS USA Lux S A & JBS USA	0.66
Finance 6.75% 02-15-28	

Morningstar F-I Sectors as of 08-31-19

Sector	% Fund
Government	7.81
Corporate	70.73
Securitized	0.49
Municipal	0.00
Cash/Cash Equivalents	20.97
Other	0.00

Credit Analysis: % Bonds as of 07-31-19		% Fund
AAA	5	26
AA	0	50
A	0	9
BBB	3	7
		Not Rated

Volatility and Risk			
Volatility as of 09-30-19			
Investment			
Low	Moderate	High	
Category			

Risk Measures as of 09-30-19	Port Avg	Rel Bc Aggr	Rel Cat
3 Yr Std Dev	4.48	1.34	1.12
3 Yr Beta	-0.02	—	-0.25

Principal Risks

Credit and Counterparty, Extension, Prepayment (Call), Currency, Foreign Securities, Loss of Money, Not FDIC Insured, Interest Rate, Market/Market Volatility, Bank Loans, Convertible Securities, Equity Securities, High-Yield Securities, Industry and Sector Investing, Inverse Floaters, Mortgage-Backed and Asset-Backed Securities, Municipal Obligations, Leases, and AMT-Subject Bonds, Other, Preferred Stocks, Repurchase Agreements, Restricted/Illiquid Securities, Underlying Fund/Fund of Funds, Warrants, U.S. Government Obligations, Derivatives, Leverage, Pricing, Sovereign Debt, Increase in Expenses, Shareholder Activity, Amortized Cost, Credit Default Swaps, Forwards, Management, Zero-Coupon Bond

Important Information

Morningstar Investment Profiles must be accompanied by Morningstar Disclosure and Glossary.

Funds or their affiliates may pay compensation to Voya® affiliates offering a fund. Such compensation may be paid out of distribution, service and/or 12b-1 fees that are deducted from the fund's assets, and/or may be paid directly by the fund's affiliates. Any fees deducted from fund assets are discussed in the fund's prospectus and disclosed in the fund fact sheet. Because these fees are paid on an on-going basis, over time these fees will increase the cost of your investment and may cost you more than paying other types of sales charges. If offered through a retirement program, additional fees and expenses may be charged under that program. NOT A DEPOSIT. NOT FDIC INSURED. NOT GUARANTEED BY ANY FEDERAL GOVERNMENT AGENCY. NOT GUARANTEED BY THE INSTITUTION. MAY GO DOWN IN VALUE.

Operations

Gross Prosp Exp Ratio	0.92% of fund assets
Net Prosp Exp Ratio	0.92% of fund assets
Management Fee	0.70%
12b-1 Fee	0.00%
Other Fee	0.02%
Miscellaneous Fee(s)	0.20%
Fund Inception Date	12-28-05
Total Fund Assets (\$mil)	310.9
Annual Turnover Ratio %	48.00
Fund Family Name	Pioneer Investments

Notes

Waiver Data	Type	Exp. Date	%

Portfolio Manager(s)
Andrew Felius, CFA, Since 2001.
Kenneth Monaghan, Since 2017.

Advisor
Annund Pioneer Asset Management, Inc.

Subadvisor
—

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San Bernardino Stable Value Option

StabilizerSM is the name for a series of stable value separate accounts marketed to 401, 457 and 403(b) plans. Stabilizer is available through a group annuity contract issued by Voya Retirement Insurance and Annuity Company ("VRIAC"), a member of the Voya[®] family of companies.

Asset Class: **Stability of Principal**

Important Information

Voya Retirement Insurance and Annuity Company

One Orange Way

Windsor, CT 06095-4774

www.voyaretirementplans.com

What is the stable value option?

The stable value investment option of your defined contribution plan seeks to preserve participant account balances and to return steady growth over time without daily fluctuations.

What is Stabilizer?

It is an insurance company participating separate account group annuity contract provided by VRIAC. Subject to certain conditions, the contract generally guarantees the availability of participant account balances in the ordinary course of the plan's operation. The guarantees provided by the contract are based on the claims-paying ability of VRIAC and are supported by its full faith and credit. VRIAC is a leading provider of stable value products and services and a member of the Voya[®] family of companies. The separate account assets are managed by Voya Investment Management Co. LLC. The assets held in the separate account are "insulated" from claims arising out of any other business conducted by VRIAC and can be used only for the benefit of plan participants.

What does it invest in?

The separate account invests in a diversified portfolio of fixed income assets. This diversified separate account portfolio seeks to maintain a high overall credit quality and consists of various publicly traded fixed-income instruments.

Potential Risks

Under some scenarios it is possible for participants to lose money even in a stable value option. Those situations are unlikely and rarely occur, but they can happen. It's important for investors to be aware of these potential risks. Withdrawals resulting from employer-initiated events, such as withdrawals following mass layoffs, employer bankruptcy or full or partial plan termination are not always covered by Stabilizer's guarantees and may be restricted or subject to market value adjustment. Your stable value account balance is not guaranteed by the Federal Deposit Insurance Corporation (FDIC), by any other government agency or by your plan.

What is the objective?

Stability of principal is the primary objective of this investment option. While the contract is active, StabilizerSM guarantees a minimum rate of interest and may credit a higher interest rate from period to period. The credited interest rate is subject to change, up or down but will never fall below the guaranteed minimum. Once the rate is credited, the interest becomes part of the principal and may increase through compound interest.

How is the rate of interest stated?

Participant balances are credited interest daily. This rate is net of all expenses and will apply to all new contributions and existing account balances for the specified period.

The crediting rate is announced in advance of the upcoming crediting rate period. The crediting rate periods are quarterly, semi-annually or annually.

For information on your current rate, please check your Voya quarterly participant statement.

How does it benefit me?

The stable value investment option is intended to help insulate against the daily fluctuations in market value. Many participants find this stability an attractive feature. An announced rate of interest is another feature of stable value investment options that many participants like.

Are there any limitations on contributions, withdrawals, or transfers from my plan's stable value option?

Voya generally does not limit contributions or withdrawals as a result of retirement, death, disability, unforeseen hardship, separation from service, or attainment of age 65 (consult your own plan for limitations), however sometimes there are restrictions on participant transfers. Participant transfers between the stable value option and funds with similar investment objectives (referred to as competing funds) may be subject to an industry standard 90 day "equity wash" provision.

What are the fees?

Total Annual fees are 0.44%.

This portfolio is not a registered investment under the 1940 Act and has not been registered with the Securities and Exchange Commission.

Top Ten Credit Exposures (as of 09/30/2019)

JPMorgan Chase & Co	0.70
Bank of America Corp	0.60
Wells Fargo & Co	0.57
Energy Transfer LP	0.44
Comcast Corp	0.43
AT&T Inc	0.39
Marathon Petroleum Corp	0.39
Citigroup Inc	0.39
CVS Health Corp	0.36
Goldman Sachs Group Inc/The	0.36

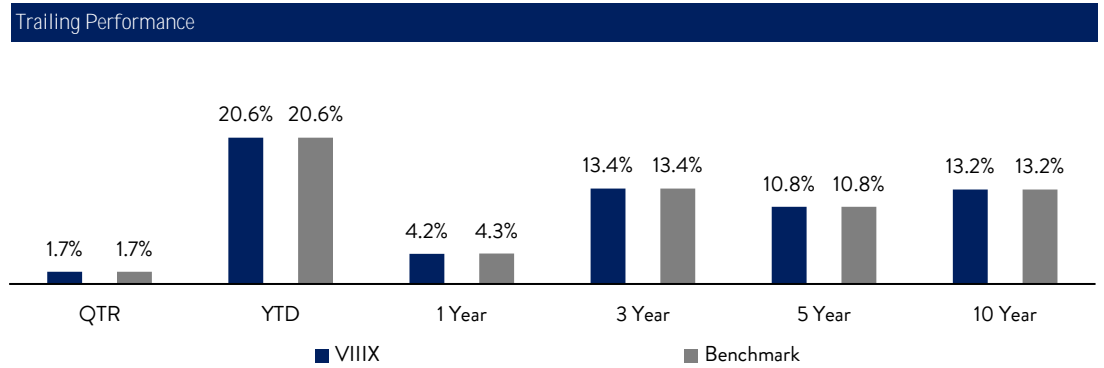
Sector Holdings (as of 09/30/2019)

Agency Mortgages	42.9
Asset Backed Securities	5.8
Commercial Mortgage Backed Securities	4.0
Emerging Markets	1.4
Government Related	0.1
HY Corporates	1.0
IG Corporates	24.6
Non-Agency RMBS and SF CRT	6.0
Other	0.0
US Treasury & Cash	14.2

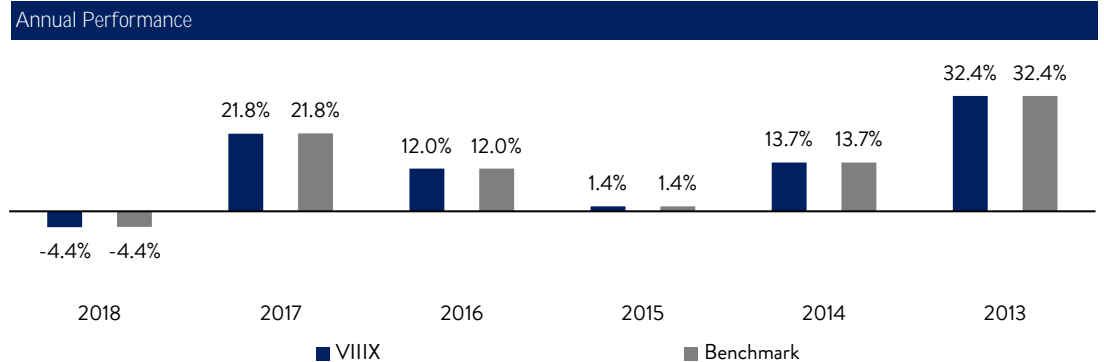
Statistical Data (as of 09/30/2019)

Portfolio Duration (years)	3.71
Yield to Maturity	2.50%
Average Life (years)	4.951

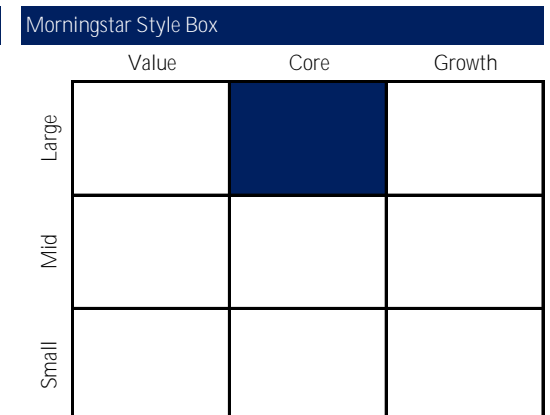
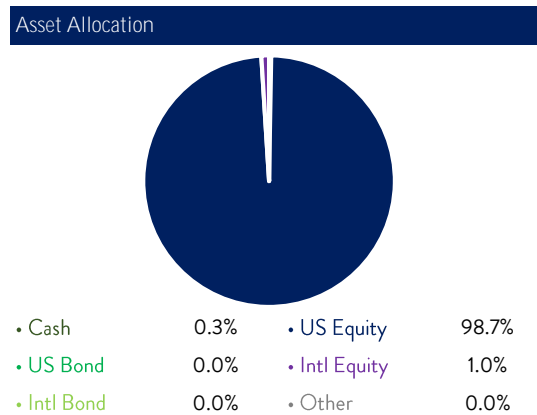
Product Details	
Name	Vanguard Institutional Index Instl PI
Ticker	VIII X
Expense Ratio	0.020%
Morningstar Category	US Fund Large Blend
Benchmark	S&P 500 TR USD
Inception Date	7/7/1997
Longest Tenured Manager	Donald M. Butler
Longest Manager Tenure	18.92 Years
Fund Size	\$230,793,418,035



Fund Characteristics	VIII X	+/- Category
% Assets in Top 10 Holdings	21.54%	-26.32%
Average Market Cap (mil)	\$111,224	-\$67,588
P/E Ratio (TTM)	20.32	-0.57
P/B Ratio (TTM)	3.18	-0.29
Est. Dividend Yield	2.00%	0.01%



Sector Allocations	VIII X	Category	+/- Category
Materials	2.4%	2.7%	-0.3%
Communication Services	3.4%	2.8%	0.6%
Consumer Discretionary	11.8%	11.9%	-0.2%
Consumer Staples	8.1%	8.2%	-0.1%
Healthcare	13.5%	13.8%	-0.2%
Industrials	10.4%	11.2%	-0.8%
Real Estate	3.2%	3.2%	0.0%
Technology	23.3%	22.1%	1.2%
Energy	4.5%	4.4%	0.1%
Financial Services	15.7%	16.6%	-0.9%
Utilities	3.6%	2.9%	0.7%
Other	0.0%	0.0%	0.0%



Vanguard Institutional Index Instl PI
VIIIIX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VIIIIX	1.70%	20.55%	4.24%	13.38%	10.83%	13.24%
• Benchmark	1.70%	20.55%	4.25%	13.39%	10.84%	13.24%
+/- Benchmark	0.00%	0.00%	-0.01%	-0.02%	-0.01%	0.00%
Peer Group Rank	38	31	32	16	11	7

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VIIIIX	1.70%	4.30%	13.65%	-13.53%
• Benchmark	1.70%	4.30%	13.65%	-13.52%
+/- Benchmark	0.00%	0.00%	0.01%	-0.01%

Annual Performance	2018	2017	2016	2015	2014	2013
• VIIIIX	-4.41%	21.82%	11.95%	1.39%	13.68%	32.37%
• Benchmark	-4.38%	21.83%	11.96%	1.38%	13.69%	32.39%
+/- Benchmark	-0.02%	-0.02%	-0.01%	0.01%	-0.01%	-0.02%
Peer Group Rank	23	30	29	23	19	46

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VIIIIX	7.71%	3.43%	-0.77%	6.64%
• Benchmark	7.71%	3.43%	-0.76%	6.64%
+/- Benchmark	-0.01%	0.00%	-0.01%	0.00%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VIIIIX	10.83%	10.70%	10.90%	8.48%	13.94%	13.41%
• Benchmark	10.84%	10.71%	10.91%	8.49%	13.95%	13.42%
+/- Benchmark	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
Peer Group Rank	11	9	8	8	8	11

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VIIIIX	4.48%	3.08%	6.06%	3.82%
• Benchmark	4.48%	3.09%	6.07%	3.82%
+/- Benchmark	0.00%	-0.01%	0.00%	0.00%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.01	0.00	-0.01	0.00	0.00	0.00
Beta	1.00	1.00	1.00	1.00	1.00	1.00
Standard Deviation	12.18	12.18	11.93	11.93	12.55	12.55
Sharpe Ratio	0.96	0.96	0.84	0.84	1.01	1.01
Information Ratio	-1.53	-	-0.75	-	-0.26	-
Treynor Ratio	11.76	11.78	9.80	9.81	12.69	12.69
Upside Capture Ratio	99.96	100.00	99.97	100.00	99.99	100.00
Downside Capture Ratio	100.03	100.00	100.02	100.00	100.01	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VIIIIX	3.85%	2.45%	1.34%	7.05%
• Benchmark	3.85%	2.46%	1.35%	7.04%
+/- Benchmark	0.00%	0.00%	0.00%	0.01%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VIIIIX	-6.44%	0.28%	0.95%	4.93%
• Benchmark	-6.44%	0.28%	0.95%	4.93%
+/- Benchmark	0.00%	0.00%	0.00%	0.00%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Institutional Index Instl PI

Ticker VIXX **Yield** 1.9% **Total Assets** \$230,793 mil **Master Category** Large Blend

Benchmark 1: Russell 1000 TR USD
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 03-08-19



Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Negative	Neutral	Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.95	0.28	-6.44	7.05	1.39
2016	1.34	2.45	3.85	3.82	11.95
2017	6.06	3.08	4.48	6.64	21.82
2018	-0.77	3.43	7.71	-13.53	-4.41
2019	13.65	4.30	1.70	—	—

Trailing

	Total Return ¹	+/- Benchmark ²	%Rank Cat	Growth of \$10,000 ³
3 Mo	2.42	0.43	26	10,242
6 Mo	4.15	0.37	30	10,415
1 Yr	14.32	0.17	29	11,432
3 Yr-Avg	14.89	0.16	17	15,166
5 Yr-Avg	10.77	0.22	12	16,676
10 Yr-Avg	13.69	-0.03	8	36,084
15 Yr-Avg	9.07	-0.14	18	36,793

Tax Analysis Tax Adv Ratio: 14.21 %Rank Cat: 11 Tax-Cost Rat: 0.60 %Rank Cat: 22
3 Yr (estimated): 10.08 7 0.62 19
5 Yr (estimated): 13.07 5 0.54 15
10 Yr (estimated): 13.07 5 0.54 15

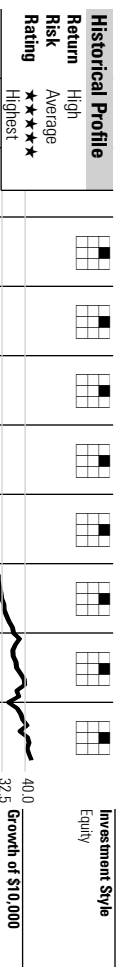
Potential Capital Gain Exposure: 44% of assets

Morningstar's Take by Adam McCullough 03-08-19

Vanguard Institutional Index is a compelling option for Vanguard to U.S. large-cap stocks. This fund gains a leg up over most of its Morningstar Category peers by efficiently tracking a broadly diversified and representative benchmark at a low cost. It earns a Morningstar Analyst Rating of Gold.

This strategy tracks the S&P 500, a market-cap-weighted index that includes large-cap U.S. stocks, representing about 80% of the U.S. market by market capitalization. Market-cap-weighting pulls the portfolio toward the largest U.S. stocks and accurately reflects the composition of the market. A committee selects the index's holdings, which offers more flexibility than indexes that adhere to rigid rules but also reduces transparency. However, the S&P 500's performance has been, and should continue to be, highly correlated with large-cap indexes that follow mechanical rules.

By using market cap to weight its holdings, the fund relies on the cumulative knowledge aggregated in stock prices to size its positions. While the market has done a good job valuing stocks over the long haul, it has gone through episodes of mania and panic. But this risk



Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
Return	101.98	115.01	115.05	130.53	169.28	188.68	186.63	203.84	243.48	227.57	275.20	NAV
Risk	26.66	15.07	2.12	16.00	32.37	13.68	11.39	11.95	21.82	4.41	23.16	Total Return %
Rating	1-77	-1.02	0.62	-0.42	-0.75	0.44	0.47	-0.10	0.13	0.38	0.07	+/- Benchmark 1
	0.20	0.01	0.01	0.00	-0.02	-0.01	0.01	-0.01	-0.02	-0.02	0.00	+/- Benchmark 2
	2.73	2.12	2.09	2.50	2.44	2.13	2.46	2.30	2.21	2.02	1.79	Income Return %
	23.93	12.95	0.03	13.50	29.93	11.55	-1.07	9.65	19.60	-6.43	21.37	Capital Return %
	52	28	17	34	41	18	20	26	28	25	27	Capital Return %
	2.23	2.15	2.39	2.86	3.16	3.59	4.61	4.26	4.48	4.88	4.05	Income \$
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.70	0.73	Capital Gains \$
	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	Expense Ratio %
	2.59	2.08	2.07	2.29	2.10	2.03	2.45	2.21	1.98	2.05	2.02	Income Ratio %
	11	4	5	5	5	4	8	5	5	6	—	Turnover Rate %
	24.76/7	33.64/3	35.14/1	49.28/6	74.91/5	85.61/1	90.04/2	91.48/1	91.56/7	95.70/7	117.65/5	Net Assets \$/mil

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	14.32	+Avg	Avg	★★★★
3 Yr	14.89	+Avg	Avg	★★★★
5 Yr	10.77	+Avg	Avg	★★★★
10 Yr	13.69	High	Avg	★★★★★
Incept	7.59	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 506

Company	Share change since 08-31-19	Yield %	% Assets
Microsoft Corp	42.51	—	4.29
Apple Inc	59.14	—	3.84
Amazon.com Inc	18.29	—	2.91
Facebook Inc A	46.20	—	1.73
Berkshire Hathaway Inc B	4.11	—	1.65
JPMorgan Chase & Co	31.35	—	1.52
Alphabet Inc Class C	21.68	—	1.49
Alphabet Inc A	42.01	—	1.12
Johnson & Johnson	4.49	—	1.38
Procter & Gamble Co	36.67	—	1.26
Exxon Mobil Corp	2.84	—	1.21
AT&T Inc	36.13	—	1.20
The Home Depot Inc	42.01	—	1.03
Verizon Communications In	38.90	—	1.03
Bank of America Corporat	11.87	—	1.01
Mastercard Inc A	28.86	—	0.99
The Walt Disney Co	47.43	—	0.98
Inel Corp	19.29	—	0.95
Intel Corp	22.47	—	0.92
Chevron Corp	10.04	—	0.91

is worth the cost advantage gained from market-cap-weighting, and the fund's broad reach helps to diversify firm-specific risk. Market-cap-weighted index funds are cheaper to run than most actively managed funds because they require fewer investment personnel. And low portfolio turnover translates to low transaction costs and a smaller likelihood of taxable capital gains distributions.

During the past decade through February 2019, the strategy outpaced the large-blend category average by 1.4 percentage points annually with less risk. Because this fund remains fully invested, it suffered a larger drawdown than the category average during the financial crisis. But its smaller cash drag paid off during the market recovery and more than made up for its larger drawdown. Much of the fund's relative outperformance can be attributed to its persistent low-cost advantage.

Address: Vanguard Institutional Index Funds

Valley Forge PA 19482

888-809-8102

Web Address: www.vanguard.com

Inception: 07-07-97

Advisor: Vanguard Group Inc

Shareclass: None

Minimum Purchase: \$1000000 Add: \$1 IRA: —

Mfn Auto Inv Plan: No-load Add: —

Sales Fees: 0.02%

Management Fee: Mgt:0.02% Dist:—

Expense Projections: 3Yr:\$6 5Yr:\$11 10Yr:\$26

Income Distribution: Quarterly

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of Stocks	Rank 1
Large	Giant	55.6	Cyclical	33.06	1.03
Mid	Large	34.1	Basic/Mat	2.40	0.99
Small	Mid	10.3	Cnsm/Cyc	11.77	1.17
Micro	Small	0.0	Finan/Svs	15.67	1.01
	Micro	0.0	Real Est	3.22	0.76
	Avg \$/mil:	111,224	Sensitive	41.88	0.96
	% Rel Category	0.99	Cnsm/Svs	3.41	0.34
			Energy	4.53	1.10
			Industri	10.40	1.03
			Technol	23.34	1.21
			Defensive	25.27	1.04
			Cnsm/Def	8.13	1.13
			Hltcare	13.55	0.98
			Utilities	3.59	1.08

Value Measures

Measure	Value	Rel Category
Price/Earnings	18.18	1.04
Price/Book	3.14	1.05
Price/Sales	2.14	1.08
Price/Cash Flow	9.42	1.01
Dividend Yield %	2.00	0.99
Growth Measures	% Rel Category	
Long-Term Engns	9.61	0.99
Book Value	4.48	1.11
Sales	7.05	0.99
Cash Flow	13.32	1.05
Historical Engns	14.42	0.94

Profitability

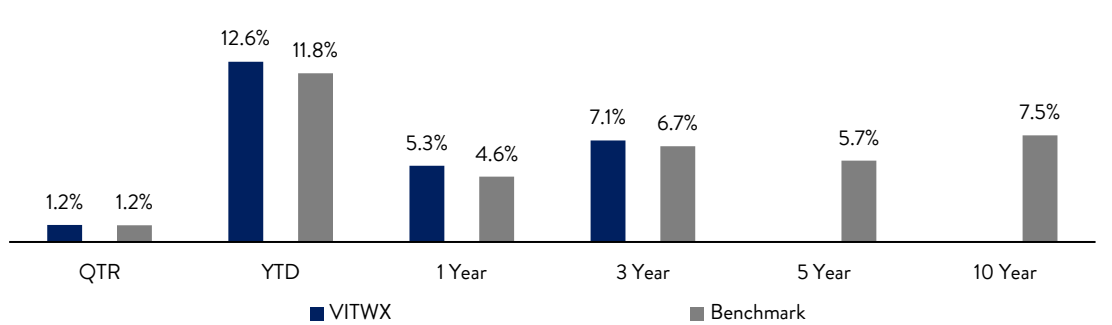
Measure	Value	%
Return on Equity	26.31	—
Return on Assets	9.06	—
Net Margin	17.27	—



Product Details

Name	Vanguard Instl Trgt Retire 2020 Instl
Ticker	VITWX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2020
Benchmark	S&P Target Date 2020 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$23,957,190,484

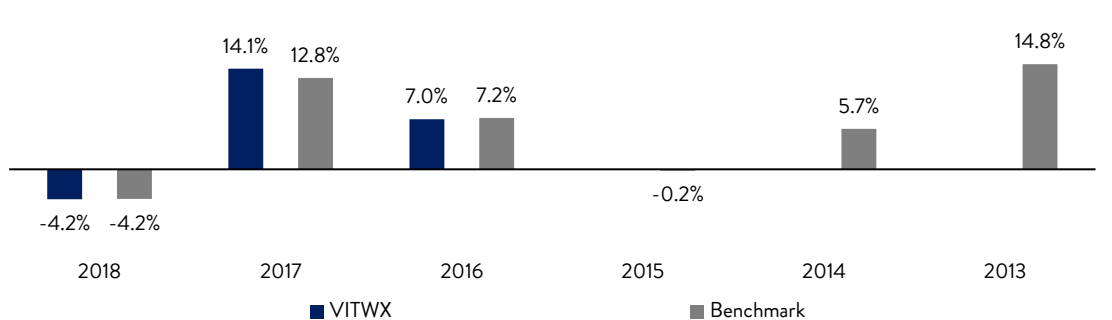
Trailing Performance



Fund Characteristics

	VITWX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,454	-\$7,205
P/E Ratio (TTM)	17.60	-0.80
P/B Ratio (TTM)	2.17	-0.18
Est. Dividend Yield	2.52%	0.12%

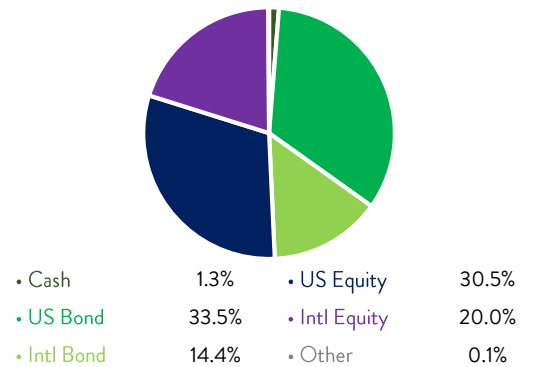
Annual Performance



Sector Allocations

	VITWX	Category	+/- Category
Materials	4.8%	4.1%	0.8%
Communication Services	3.4%	3.0%	0.4%
Consumer Discretionary	12.0%	11.8%	0.2%
Consumer Staples	8.4%	7.7%	0.7%
Healthcare	11.7%	11.8%	-0.2%
Industrials	11.2%	10.9%	0.3%
Real Estate	4.4%	6.4%	-2.0%
Technology	18.7%	19.2%	-0.6%
Energy	5.0%	4.6%	0.4%
Financial Services	17.0%	17.1%	-0.1%
Utilities	3.4%	3.3%	0.1%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2020 Instl
VITWX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VITWX	1.20%	12.65%	5.34%	7.12%	-	-
• Benchmark	1.17%	11.83%	4.57%	6.71%	5.70%	7.49%
+/- Benchmark	0.03%	0.81%	0.76%	0.41%	-	-
Peer Group Rank	35	20	30	11	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VITWX	1.20%	3.22%	7.85%	-6.49%
• Benchmark	1.17%	2.88%	7.45%	-6.49%
+/- Benchmark	0.03%	0.34%	0.40%	0.00%

Annual Performance	2018	2017	2016	2015	2014	2013
• VITWX	-4.21%	14.13%	7.04%	-	-	-
• Benchmark	-4.16%	12.80%	7.22%	-0.19%	5.67%	14.76%
+/- Benchmark	-0.05%	1.33%	-0.18%	-	-	-
Peer Group Rank	42	13	28	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VITWX	2.40%	0.63%	-0.58%	3.40%
• Benchmark	2.33%	1.09%	-0.92%	3.20%
+/- Benchmark	0.06%	-0.47%	0.35%	0.20%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VITWX	-	-	-	-	-	-
• Benchmark	5.70%	5.15%	5.27%	4.10%	6.49%	6.93%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VITWX	3.16%	2.77%	4.12%	-0.19%
• Benchmark	2.81%	2.55%	3.68%	0.51%
+/- Benchmark	0.35%	0.22%	0.45%	-0.70%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.26	0.00	-	0.00	-	0.00
Beta	1.03	1.00	-	1.00	-	1.00
Standard Deviation	6.10	5.91	-	6.21	-	7.90
Sharpe Ratio	0.89	0.86	-	0.76	-	0.89
Information Ratio	0.66	-	-	-	-	-
Treynor Ratio	5.36	5.10	-	4.67	-	6.94
Upside Capture Ratio	103.30	100.00	-	100.00	-	100.00
Downside Capture Ratio	99.92	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VITWX	3.31%	2.00%	1.77%	2.72%
• Benchmark	2.79%	1.98%	1.77%	2.65%
+/- Benchmark	0.53%	0.01%	0.01%	0.07%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VITWX	-4.85%	-	-	-
• Benchmark	-4.47%	-0.54%	2.34%	1.96%
+/- Benchmark	-0.38%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2020 Instl

Ticker VITWX **Yield** 2.2% **Total Assets** \$23,957 mil **Investment Style** Equity

Investment Category Target-Date 2020

Benchmark 1: Morningstar Lifetime Mod 2020 TR USD
Benchmark 2: Morningstar Mod 1gt Risk TR USD

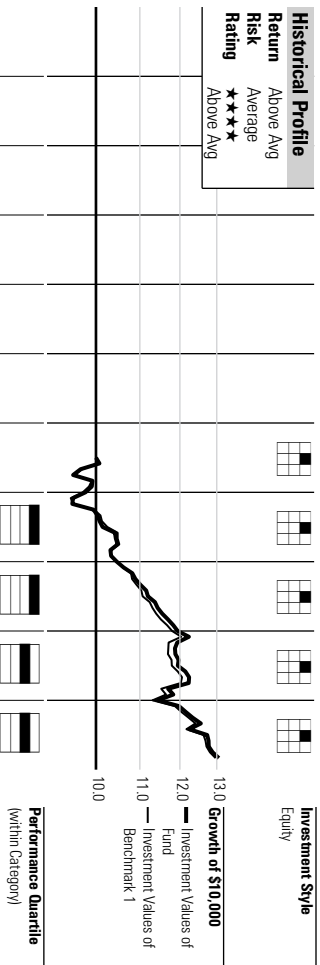
Morningstar Analyst Rating 04-25-19

Gold

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg

Morningstar Pillars

Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive



Performance Quartile
 (within Category)

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative
 Pillar Spectrum
 Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	-4.85	2.72	—
2016	1.77	2.00	3.31	-0.19	7.04
2017	4.12	2.77	3.16	3.40	14.13
2018	-0.58	0.63	2.40	-6.49	-4.21
2019	7.85	3.22	1.20	—	—

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
NAV	19.19	20.14	22.53	21.03	24.01	24.01	24.01	24.01	24.01	24.01	24.01	24.01
Total Return %	—	—	—	—	—	—	—	—	—	—	—	—
+/- Benchmark 1	—	—	—	—	—	—	—	—	—	—	—	—
+/- Benchmark 2	—	—	—	—	—	—	—	—	—	—	—	—
Income Return %	—	—	—	—	—	—	—	—	—	—	—	—
Capital Return %	—	—	—	—	—	—	—	—	—	—	—	—
Total Rtn % Rank Cat	—	—	—	—	—	—	—	—	—	—	—	—
Income \$	—	—	—	—	—	—	—	—	—	—	—	—
Capital Gains \$	—	—	—	—	—	—	—	—	—	—	—	—
Expense Ratio %	—	—	—	—	—	—	—	—	—	—	—	—
Income Ratio %	—	—	—	—	—	—	—	—	—	—	—	—
Turnover Rate %	—	—	—	—	—	—	—	—	—	—	—	—
Net Assets \$ mil	7,469	12,611	19,210	20,892	23,957	23,957	23,957	23,957	23,957	23,957	23,957	23,957

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	11.65	—	—	—
3 Yr	8.17	+ Avg	—	★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	6.09	—	—	—

Other Measures

	Standard Index	Best Fit Index
Alpha	0.4	0.1
Beta	0.89	0.91
R-Squared	99	99
Standard Deviation	5.98	8.17
Mean	8.17	1.06
Sharpe Ratio	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19

- ⊖ Vanguard Total Stock Mark
- ⊕ Vanguard Total Bond Marke
- ⊕ Vanguard Total Intl Stock
- ⊕ Vanguard Total Intl Bond
- ⊕ Vanguard Short-Term Intl-P
- ⊕ Cnt Market Liquidity Rate

Value Measures	Price/Earnings	Price/Book	Price/Sales	Price/Cash Flow	Dividend Yield %	Val Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	1 figure provided by fund as of 09-30-19
16.26	0.99	0.95	1.49	0.98	0.99	—	—	—	—	—	6.3
2.08	0.95	0.95	0.95	0.98	0.99	—	—	—	—	—	8.0 Yrs
1.49	0.95	0.95	0.95	0.98	0.99	—	—	—	—	—	AA
7.65	0.98	0.98	0.98	0.98	0.99	—	—	—	—	—	2.57%

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

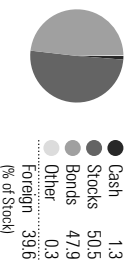
The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Address: Vanguard OneStar Funds
 Minimum Purchase: \$100,000.00 Add: \$1 IRA: —

Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None



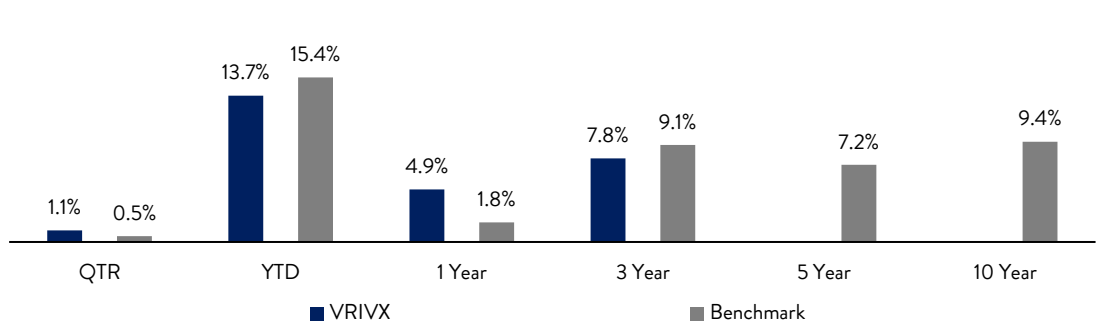
Fixed-Income Style

Style	Blend	Duration: Moderate	Quality: High
Equity Style	—	—	—
Value Measures	16.26	0.99	0.95
Price/Earnings	2.08	0.95	0.95
Price/Book	1.49	0.95	0.98
Price/Sales	7.65	0.98	0.98
Price/Cash Flow	2.52	0.99	0.99
Dividend Yield %	0.99	0.99	0.99

Product Details

Name	Vanguard Instl Trgt Retire 2025 Instl
Ticker	VRIVX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2025
Benchmark	S&P Target Date 2045 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$33,412,261,353

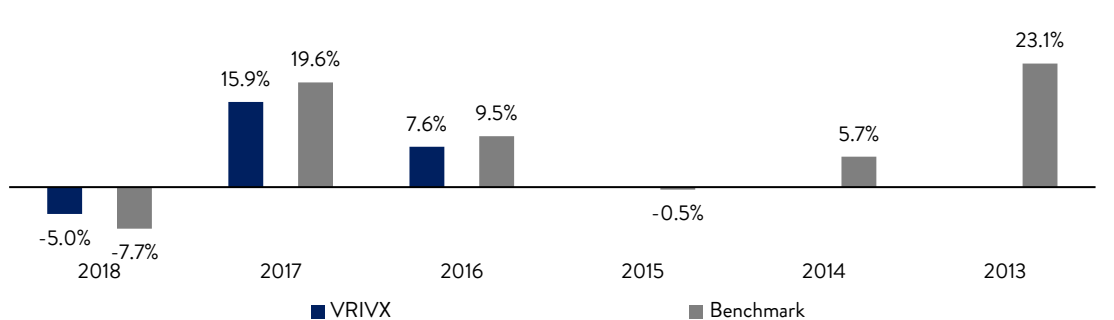
Trailing Performance



Fund Characteristics

	VRIVX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,478	-\$5,294
P/E Ratio (TTM)	17.60	-0.60
P/B Ratio (TTM)	2.17	-0.13
Est. Dividend Yield	2.52%	0.09%

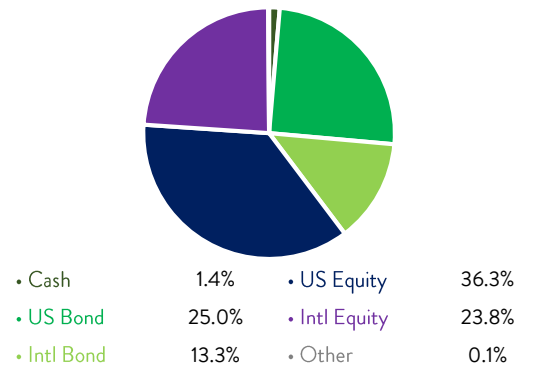
Annual Performance



Sector Allocations

Sector	VRIVX	Category	+/- Category
Materials	4.8%	4.2%	0.6%
Communication Services	3.4%	3.0%	0.3%
Consumer Discretionary	12.0%	11.9%	0.1%
Consumer Staples	8.4%	7.9%	0.5%
Healthcare	11.7%	11.9%	-0.2%
Industrials	11.2%	10.8%	0.4%
Real Estate	4.4%	5.8%	-1.4%
Technology	18.7%	19.2%	-0.5%
Energy	5.0%	4.7%	0.3%
Financial Services	17.0%	17.2%	-0.2%
Utilities	3.4%	3.2%	0.1%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2025 Instl
VRIVX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VRIVX	1.09%	13.70%	4.91%	7.83%	-	-
• Benchmark	0.53%	15.39%	1.83%	9.07%	7.21%	9.38%
+/- Benchmark	0.56%	-1.69%	3.08%	-1.24%	-	-
Peer Group Rank	33	18	28	11	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VRIVX	1.09%	3.39%	8.79%	-7.73%
• Benchmark	0.53%	3.32%	11.10%	-11.75%
+/- Benchmark	0.56%	0.07%	-2.31%	4.03%

Annual Performance	2018	2017	2016	2015	2014	2013
• VRIVX	-5.02%	15.94%	7.56%	-	-	-
• Benchmark	-7.74%	19.56%	9.54%	-0.46%	5.67%	23.14%
+/- Benchmark	2.72%	-3.62%	-1.98%	-	-	-
Peer Group Rank	39	21	20	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VRIVX	2.80%	0.70%	-0.57%	3.81%
• Benchmark	3.81%	1.66%	-0.94%	5.20%
+/- Benchmark	-1.02%	-0.95%	0.37%	-1.39%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VRIVX	-	-	-	-	-	-
• Benchmark	7.21%	6.61%	6.81%	4.91%	9.05%	9.59%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VRIVX	3.55%	3.09%	4.62%	0.15%
• Benchmark	4.35%	3.45%	5.28%	1.95%
+/- Benchmark	-0.80%	-0.36%	-0.66%	-1.80%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.93	0.00	-	0.00	-	0.00
Beta	0.69	1.00	-	1.00	-	1.00
Standard Deviation	7.12	10.12	-	9.98	-	11.58
Sharpe Ratio	0.87	0.75	-	0.65	-	0.79
Information Ratio	-0.37	-	-	-	-	-
Treynor Ratio	8.97	7.46	-	6.18	-	8.84
Upside Capture Ratio	74.79	100.00	-	100.00	-	100.00
Downside Capture Ratio	64.54	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VRIVX	3.70%	1.96%	1.57%	3.13%
• Benchmark	4.04%	2.00%	1.25%	4.10%
+/- Benchmark	-0.34%	-0.04%	0.32%	-0.97%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VRIVX	-5.62%	-	-	-
• Benchmark	-6.93%	-0.12%	2.85%	2.05%
+/- Benchmark	1.31%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2025 Instl

Ticker VHWX **Yield** 2.2% **Total Assets** \$33,412 mil **Investment Style** Equity

Investment Category Target-Date 2025

Benchmark 1: Morningstar Lifetime Mod 2025 TR USD
Benchmark 2: Morningstar Mod Trgt Risk TR USD

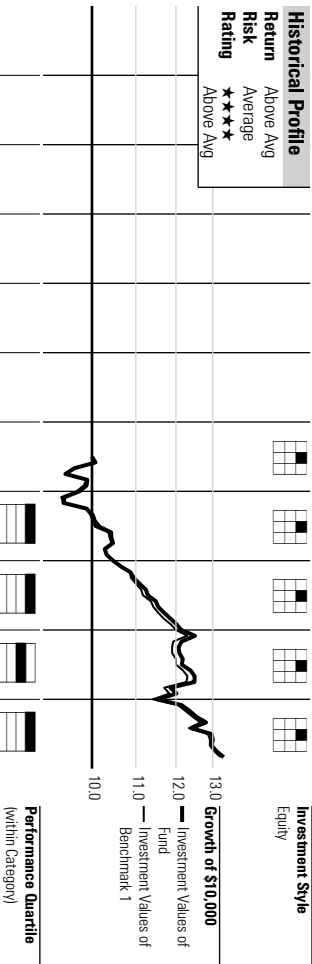
Morningstar Analyst Rating 04-25-19

Gold

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg

Morningstar Pillars

Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive



Performance Quartile
 (within Category)

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative
 + Positive - Negative ● Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	-5.62	3.13	—
2016	1.57	1.96	3.70	0.15	7.56
2017	4.62	3.09	3.55	3.81	15.94
2018	-0.57	0.70	2.80	-7.73	-5.02
2019	8.79	3.39	1.09	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	%Rank Cat	Growth of \$10,000
3 Mo	2.39	0.05	0.12	20	10,239
6 Mo	3.91	-0.57	0.11	29	10,391
1 Yr	12.25	-0.21	-0.21	16	11,225
3 Yr-Avg	9.00	0.31	0.45	15	12,952
5 Yr-Avg	—	—	—	—	—
10 Yr-Avg	—	—	—	—	—
15 Yr-Avg	—	—	—	—	—

Tax Analysis Tax Adj Retn% %Rank Cat Tax-Cost Rat %Rank Cat
 3 Yr (estimated) 8.17 9 0.76 11
 5 Yr (estimated) — — — —
 10 Yr (estimated) — — — —
 Potential Capital Gain Exposure: 11% of assets

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
NAV	19.07	20.11	22.86	21.17	24.45	24.45	19.07	20.11	22.86	21.17	24.45	24.45
Total Return %	—	—	—	-5.02	15.49	15.49	7.56	7.56	15.94	-5.02	15.49	15.49
+/- Benchmark 1	—	—	—	-0.12	-0.33	-0.33	-0.83	-0.83	1.40	-0.12	-0.33	-0.33
+/- Benchmark 2	—	—	—	-0.27	0.51	0.51	-1.01	-1.01	1.28	-0.27	0.51	0.51
Income Return %	—	—	—	2.30	0.00	0.00	2.06	2.06	2.25	2.30	0.00	0.00
Capital Return %	—	—	—	-7.33	15.49	15.49	5.50	5.50	13.69	-7.33	15.49	15.49
Total Rtn % Rank Cat	—	—	—	38	21	21	—	—	23	38	21	21
Income \$	—	—	—	0.53	0.00	0.00	0.17	0.39	0.45	0.53	0.00	0.00
Capital Gains \$	—	—	—	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00
Expense Ratio %	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	—
Income Ratio %	—	—	—	2.29	2.78	2.78	2.52	2.30	2.27	2.29	—	—
Turnover Rate %	—	—	—	9	—	—	1	4	4	9	—	—
Net Assets \$mil	8,291	14,873	23,876	26,713	33,412	33,412	8,291	14,873	23,876	26,713	33,412	33,412

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.25	—	0.2	0.92
3 Yr	9.00	+ Avg	1.04	0.92
5 Yr	—	—	99	99
10 Yr	—	—	99	99
Incept	6.51	—	1.03	99

Other Measures

	Standard Index	Best Fit Index
Alpha	0.2	0.1
Beta	1.04	0.92
R-Squared	99	99
Standard Deviation	7.00	9.00
Mean	9.00	1.03
Sharpe Ratio	1.03	—

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Stock Mark	—	—	36.65
⊕ Vanguard Total Bond Marke	—	—	27.21
⊕ Vanguard Total Intl Stock	—	—	24.39
⊕ Vanguard Total Intl Bond	—	—	11.72
⊕ Cnt Market Liquidity Rate	—	—	0.03

Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets
—	—	—	—

Equity Style

Blend	Size	Large-Cap	Value	Mid	Small
—	—	—	—	—	—

Value Measures

	Value Measure	Rel Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	Price/Cash Flow	Dividend Yield %
16.27	Price/Earnings	0.98	0.98	5.01	1.04	1.04	4.84	1.04
2.08	Price/Book	0.94	0.94	5.01	1.04	1.04	4.84	1.04
1.49	Price/Sales	0.94	0.94	5.01	1.04	1.04	4.84	1.04
7.65	Price/Cash Flow	0.98	0.98	5.01	1.04	1.04	4.84	1.04
2.52	Dividend Yield %	1.01	1.01	5.01	1.04	1.04	4.84	1.04

Growth Measures

	Long-Term Emgs	Book Value	Sales	Cash Flow	Historical Emgs	Market Cap %
9.02	9.02	4.34	4.17	7.89	9.40	9.40
0.99	0.99	-0.66	-2.38	1.55	0.85	0.85
0.99	0.99	-0.66	-2.38	1.55	0.85	0.85
0.99	0.99	-0.66	-2.38	1.55	0.85	0.85

Market Cap %

	Large	Mid	Small	Micro	Avg
45.4	45.4	30.4	18.0	18.0	18.0
0.8	0.8	43.478	—	—	—

Composition - Net

	Cash	Stocks	Bonds	Other	Foreign
1.4	1.4	60.1	38.3	0.3	39.6
0.3	0.3	3.9	0.3	0.3	0.3



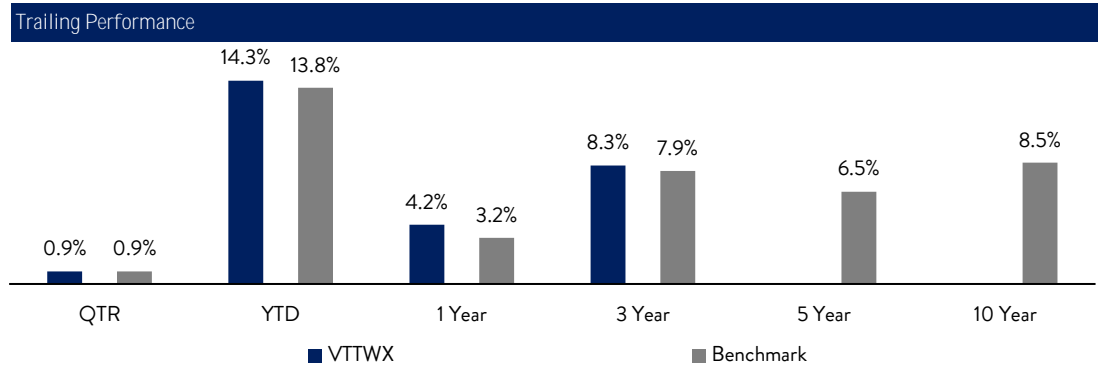
	Defensive	Cosm/Def	Hlthcare	Utilities
23.50	23.50	8.43	11.68	1.10
1.01	1.01	1.10	1.10	0.82

Address: Vanguard OneStar Funds Minimum Purchase: \$100,000.00 Add: \$1 IRA: —

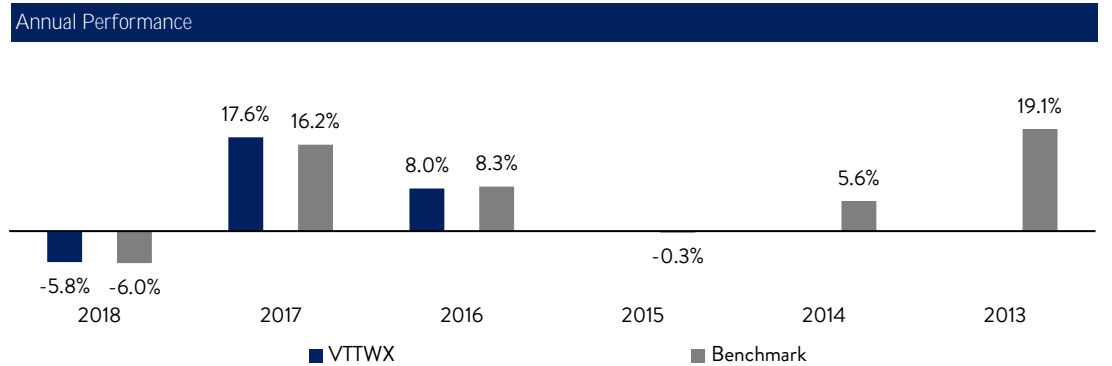
Valley Forge, PA 19482 Mtn Auto Inv Plan: — Add: —
 800-662-7447 No-load
 www.vanguard.com Management Fee: 0.00%
 06-26-15 Mgr: 0.00% Dist: —
 Vanguard Group Inc Expense Projections: 3Yr-\$29 5Yr-\$51 10Yr-\$115
 None Income Distribution: Annually

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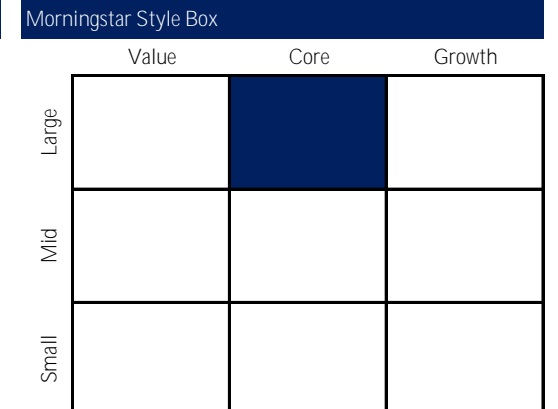
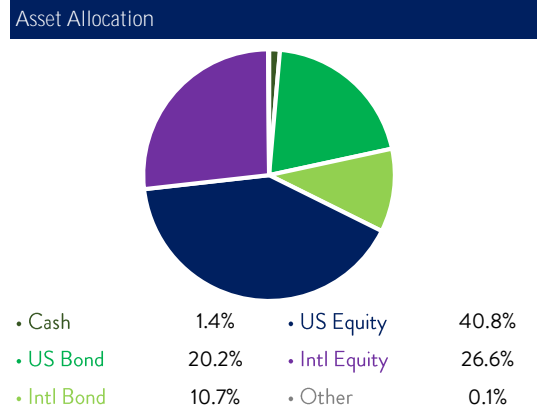
Product Details	
Name	Vanguard Instl Trgt Retire 2030 Instl
Ticker	VTTWX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2030
Benchmark	S&P Target Date 2030 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$31,391,524,143



Fund Characteristics	VTTWX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,528	-\$2,418
P/E Ratio (TTM)	17.61	-0.49
P/B Ratio (TTM)	2.17	-0.10
Est. Dividend Yield	2.52%	0.08%



Sector Allocations	VTTWX	Category	+/- Category
Materials	4.8%	4.4%	0.5%
Communication Services	3.4%	3.0%	0.3%
Consumer Discretionary	12.0%	11.9%	0.1%
Consumer Staples	8.4%	7.9%	0.6%
Healthcare	11.7%	11.8%	-0.1%
Industrials	11.2%	10.9%	0.3%
Real Estate	4.4%	5.9%	-1.5%
Technology	18.7%	19.0%	-0.3%
Energy	5.0%	4.8%	0.2%
Financial Services	17.0%	17.3%	-0.2%
Utilities	3.4%	3.3%	0.1%
Other	0.0%	0.0%	0.0%



Vanguard Instl Trgt Retire 2030 Instl
VTTWX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VTTWX	0.87%	14.27%	4.15%	8.32%	-	-
• Benchmark	0.88%	13.77%	3.23%	7.93%	6.48%	8.51%
+/- Benchmark	-0.01%	0.50%	0.92%	0.38%	-	-
Peer Group Rank	37	36	35	23	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VTTWX	0.87%	3.39%	9.56%	-8.85%
• Benchmark	0.88%	3.09%	9.39%	-9.26%
+/- Benchmark	-0.01%	0.30%	0.17%	0.41%

Annual Performance	2018	2017	2016	2015	2014	2013
• VTTWX	-5.82%	17.57%	7.97%	-	-	-
• Benchmark	-5.99%	16.19%	8.35%	-0.30%	5.64%	19.14%
+/- Benchmark	0.18%	1.38%	-0.37%	-	-	-
Peer Group Rank	35	33	29	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VTTWX	3.11%	0.78%	-0.56%	4.25%
• Benchmark	3.15%	1.40%	-0.95%	4.24%
+/- Benchmark	-0.04%	-0.62%	0.38%	0.02%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VTTWX	-	-	-	-	-	-
• Benchmark	6.48%	5.89%	6.05%	4.50%	7.78%	8.26%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VTTWX	3.86%	3.32%	5.09%	0.44%
• Benchmark	3.60%	3.01%	4.45%	1.19%
+/- Benchmark	0.26%	0.32%	0.64%	-0.75%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.45	0.00	-	0.00	-	0.00
Beta	0.98	1.00	-	1.00	-	1.00
Standard Deviation	7.98	8.07	-	8.12	-	9.90
Sharpe Ratio	0.84	0.79	-	0.69	-	0.82
Information Ratio	0.51	-	-	-	-	-
Treynor Ratio	6.81	6.32	-	5.45	-	7.96
Upside Capture Ratio	100.12	100.00	-	100.00	-	100.00
Downside Capture Ratio	95.46	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VTTWX	4.09%	1.88%	1.37%	3.53%
• Benchmark	3.39%	2.02%	1.52%	3.38%
+/- Benchmark	0.70%	-0.14%	-0.15%	0.15%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VTTWX	-6.44%	-	-	-
• Benchmark	-5.68%	-0.32%	2.58%	1.96%
+/- Benchmark	-0.76%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2030 Instl

Ticker VITWXX **Yield** 2.1% **Total Assets** \$31,392 mil **Investment Style** Equity

Investment Category Target-Date 2030

Benchmark 1: Morningstar Lifetime Mod 2030 TR USD
Benchmark 2: Morningstar Mod Trg Risk TR USD

Morningstar Analyst Rating 04-25-19

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg

Performance Quartile
 (within Category)

Morningstar Pillars

Process **+** Positive

Performance **+** Positive

People **+** Positive

Parent **+** Positive

Price **+** Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Pillar Spectrum

Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	-6.44	3.53	7.97
2016	1.37	1.88	4.09	0.44	7.78
2017	5.09	3.32	3.86	4.25	17.57
2018	-0.56	0.78	3.11	-8.85	-5.82
2019	9.56	3.39	0.87	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	% Rank Cat	Growth of \$10,000
3 Mo	2.45	0.04	0.18	22	10,245
6 Mo	3.69	-0.57	-0.11	30	10,369
1 Yr	12.29	-0.33	-0.16	30	11,229
3 Yr-Avg	9.62	0.00	1.06	26	13,172
5 Yr-Avg	—	—	—	—	—
10 Yr-Avg	—	—	—	—	—
15 Yr-Avg	—	—	—	—	—

Tax Analysis Tax Adj Rtn% % Rank Cat Tax-Cost Rat % Rank Cat

3 Yr (estimated) 8.81 12 0.74 11

5 Yr (estimated) — — — —

10 Yr (estimated) — — — —

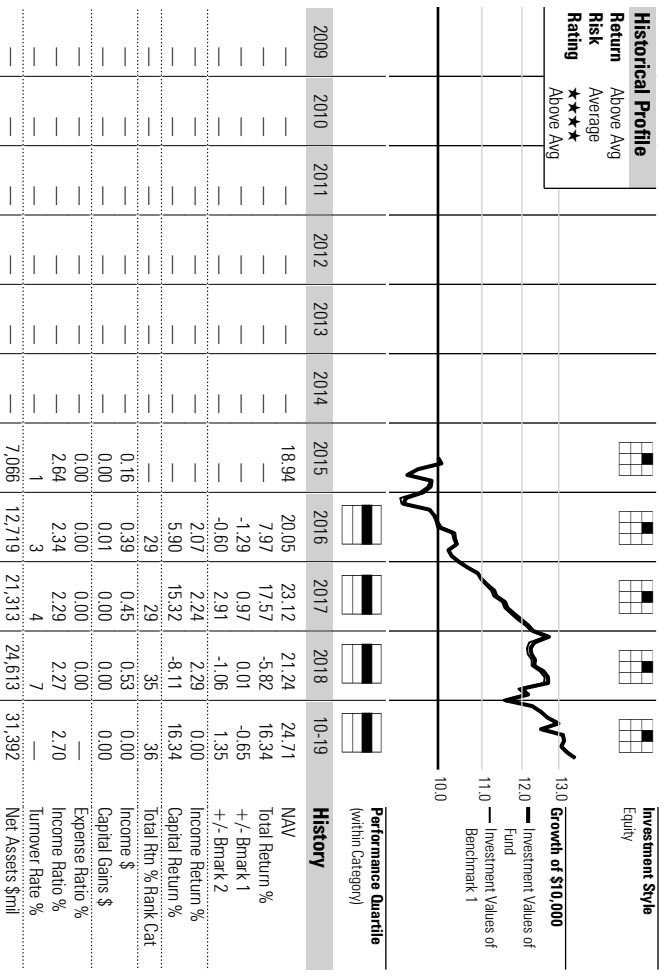
Potential Capital Gain Exposure: 12% of assets

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class offers a 0.09%, which was 0.41 percentage points now cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path



Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.29	—	—	—
3 Yr	9.62	+ Avg	—	Avg ★★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	6.75	—	—	—

Other Measures

	Standard Index	Best Fit Index
Alpha	-0.1	-0.1
Beta	1.17	1.17
R-Squared	99	99
Standard Deviation	7.87	7.87
Mean	9.62	9.62
Sharpe Ratio	1.00	1.00

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19

- ⊖ Vanguard Total Stock Mark
- ⊕ Vanguard Total Intl Stock
- ⊕ Vanguard Total Bond Marke
- ⊕ Vanguard Total Intl Bond Bid
- ⊕ Cnt Market Liquidity Rate

Total Fixed Income: 0	Date of Maturity	Amount 000	Value \$000	% Assets
—	—	—	—	—

Equity Style

Blend Large-Cap

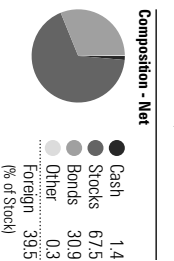
Value Measures

Price/Earnings	Price/Book	Price/Sales	Price/Cash Flow	Dividend Yield %	Rel Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon
16.27	2.08	1.49	7.66	2.52	0.99	3.82	5.01	1.23	17.02

Fixed-Income Style

Duration: Moderate Quality: Medium

Weightings	% of Stocks	Rel Benchmark 1
Long-Term Emgs	9.02	0.90
Book Value	4.34	-0.57
Sales	4.18	4.83
Cash Flow	7.90	11.98
Historical Emgs	9.40	17.02
Market Cap %	—	—
Giant	45.4	38.26
Large	30.4	3.35
Mid	18.0	5.01
Avg	43.528	11.23
Small	0.8	1.23
Micro	0.8	0.99
Technology	—	1.25
CommSvs	—	3.26
Energy	—	5.01
Industri	—	11.23
Healthcare	—	18.67
Defensive	—	23.49
CosmDf	—	8.42
Hlticare	—	11.68
Utilities	—	1.68
Other	—	3.39



Address: Vanguard OneStar Funds **Minimum Purchase:** \$1000000 **Add: \$1** **IRA:** —

Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None

Mn Auto Inv Plan: — **Add:** —
Sales Fees: No-load
Management Fee: 0.00%
Actual Fees: Mgt:0.00% Dist:—
Expense Projections: 3Yr:\$29 5Yr:\$51 10Yr:\$115
Income Distribution: Annually

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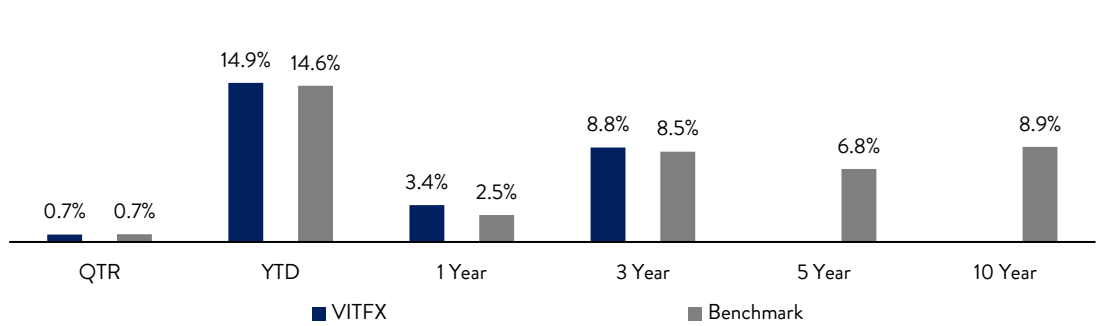
Vanguard Instl Trgt Retire 2035 Instl
VITFX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	Vanguard Instl Trgt Retire 2035 Instl
Ticker	VITFX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2035
Benchmark	S&P Target Date 2035 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$28,662,142,893

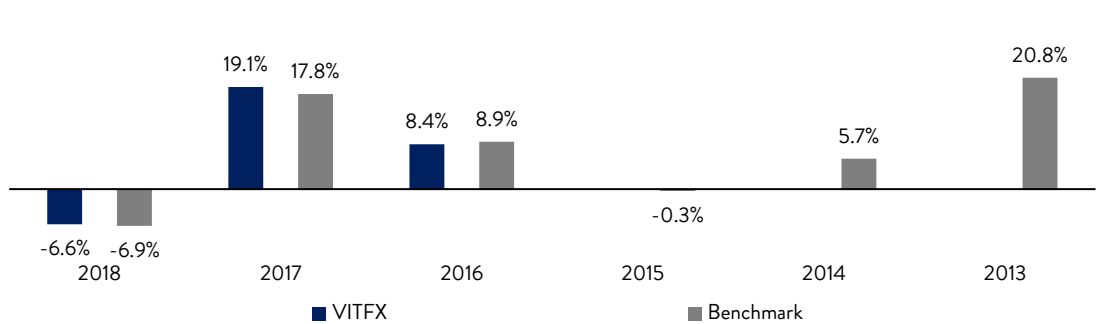
Trailing Performance



Fund Characteristics

	VITFX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,491	-\$815
P/E Ratio (TTM)	17.61	0.33
P/B Ratio (TTM)	2.17	0.01
Est. Dividend Yield	2.52%	-0.04%

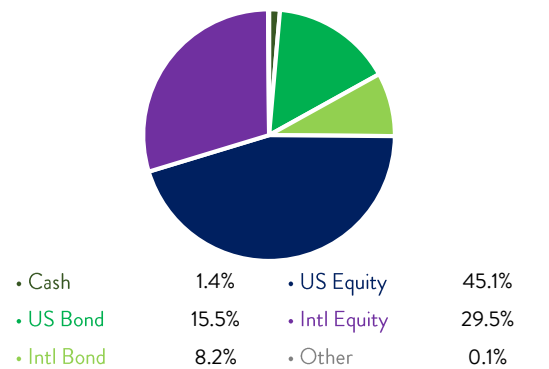
Annual Performance



Sector Allocations

	VITFX	Category	+/- Category
Materials	4.8%	4.4%	0.4%
Communication Services	3.4%	3.1%	0.3%
Consumer Discretionary	12.0%	11.9%	0.0%
Consumer Staples	8.4%	7.7%	0.7%
Healthcare	11.7%	11.7%	0.0%
Industrials	11.2%	10.9%	0.3%
Real Estate	4.4%	6.0%	-1.6%
Technology	18.7%	18.9%	-0.3%
Energy	5.0%	4.9%	0.1%
Financial Services	17.0%	17.3%	-0.3%
Utilities	3.4%	3.1%	0.3%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2035 Instl
VITFX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VITFX	0.70%	14.88%	3.45%	8.84%	-	-
• Benchmark	0.73%	14.60%	2.52%	8.46%	6.82%	8.91%
+/- Benchmark	-0.03%	0.28%	0.93%	0.38%	-	-
Peer Group Rank	33	41	31	25	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VITFX	0.70%	3.45%	10.28%	-9.95%
• Benchmark	0.73%	3.18%	10.27%	-10.55%
+/- Benchmark	-0.03%	0.27%	0.01%	0.59%

Annual Performance	2018	2017	2016	2015	2014	2013
• VITFX	-6.56%	19.14%	8.39%	-	-	-
• Benchmark	-6.88%	17.78%	8.85%	-0.35%	5.69%	20.84%
+/- Benchmark	0.32%	1.36%	-0.46%	-	-	-
Peer Group Rank	29	38	25	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VITFX	3.46%	0.86%	-0.56%	4.60%
• Benchmark	3.52%	1.52%	-0.94%	4.71%
+/- Benchmark	-0.06%	-0.66%	0.39%	-0.11%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VITFX	-	-	-	-	-	-
• Benchmark	6.82%	6.23%	6.41%	4.69%	8.39%	8.88%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VITFX	4.21%	3.55%	5.55%	0.83%
• Benchmark	3.97%	3.22%	4.81%	1.52%
+/- Benchmark	0.23%	0.33%	0.74%	-0.68%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.55	0.00	-	0.00	-	0.00
Beta	0.97	1.00	-	1.00	-	1.00
Standard Deviation	8.85	9.10	-	9.01	-	10.68
Sharpe Ratio	0.82	0.76	-	0.67	-	0.80
Information Ratio	0.46	-	-	-	-	-
Treynor Ratio	7.46	6.85	-	5.80	-	8.36
Upside Capture Ratio	99.17	100.00	-	100.00	-	100.00
Downside Capture Ratio	94.28	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VITFX	4.39%	1.84%	1.12%	3.90%
• Benchmark	3.66%	2.02%	1.39%	3.70%
+/- Benchmark	0.72%	-0.18%	-0.28%	0.20%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VITFX	-7.16%	-	-	-
• Benchmark	-6.20%	-0.23%	2.69%	2.01%
+/- Benchmark	-0.96%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2035 Instl

Ticker VITFX **Yield** 2.1% **Total Assets** \$28,662 mil **Master Category** Target-Date 2035

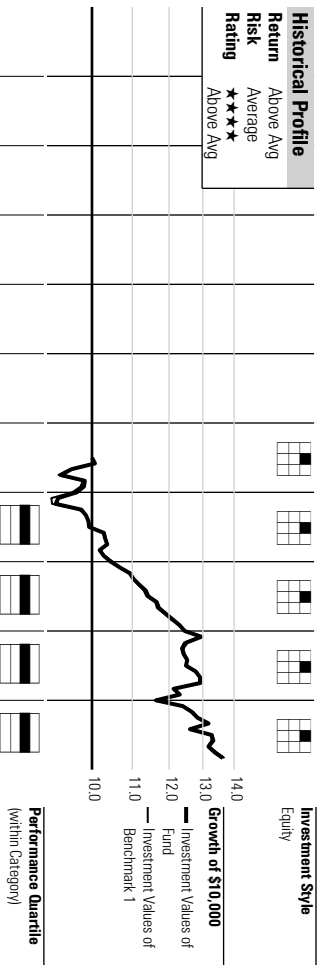
Benchmark 1: Morningstar Lifetime Mod 2035 TR USD
Benchmark 2: Morningstar Mod Trg Risk TR USD

Historical Profile
 Return Above Avg
 Risk *****
 Rating Above Avg

Investment Style
 Equity

Morningstar Pillars

Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive



Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Performance Quartile
 (within Category)

Analyst Rating Spectrum
 Gold Silver Bronze Neutral Negative
 Pillar Spectrum
 Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	-7.16	3.90	—
2016	1.12	1.84	4.39	0.83	8.39
2017	5.55	3.55	4.21	4.60	19.14
2018	-0.56	0.86	3.46	-9.95	-6.56
2019	10.28	3.45	0.70	—	—

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
18.82	20.00	23.37	21.30	24.95	21.30	24.95	18.82	20.00	23.37	21.30	24.95	NAV
—	—	—	—	—	—	—	—	—	—	—	—	Total Return %
—	—	—	—	—	—	—	—	—	—	—	—	+/− Benchmark 1
—	—	—	—	—	—	—	—	—	—	—	—	+/− Benchmark 2
—	—	—	—	—	—	—	—	—	—	—	—	Income Return %
—	—	—	—	—	—	—	—	—	—	—	—	Capital Return %
—	—	—	—	—	—	—	—	—	—	—	—	Capital Gains \$
—	—	—	—	—	—	—	—	—	—	—	—	Income \$
—	—	—	—	—	—	—	—	—	—	—	—	Expense Ratio %
—	—	—	—	—	—	—	—	—	—	—	—	Income Ratio %
—	—	—	—	—	—	—	—	—	—	—	—	Turnover Rate %
—	—	—	—	—	—	—	—	—	—	—	—	Net Assets \$ mil

Portfolio Analysis 09-30-19

Total Stocks: 0
 Share change since 08-31-19
 ⊖ Vanguard Total Stock Mark
 ⊕ Vanguard Total Intl Stock
 ⊕ Vanguard Bond Marke
 ⊕ Vanguard Total Intl Bond
 ⊕ Cnt Market Liquidity Rate

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	% Rank Cat	Growth of \$10,000
3 Yr	2.46	0.04	0.20	28	10,246
6 Mo	3.44	-0.42	-0.36	33	10,344
1 Yr	12.33	-0.77	-0.12	39	11,233
3 Yr-Avg	10.21	-0.19	1.66	28	13,386
5 Yr-Avg	—	—	—	—	—
10 Yr-Avg	—	—	—	—	—
15 Yr-Avg	—	—	—	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.33	—	—	—
3 Yr	10.21	+ Avg	—	★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	6.99	—	—	—

Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets
—	—	—	—

Tax Analysis Tax Adj Rtn% % Rank Cat Tax-Cost Rat % Rank Cat
 3 Yr (estimated) 9.41 11 0.72 6
 5 Yr (estimated) — — — —
 10 Yr (estimated) — — — —
 Potential Capital Gain Exposure: 14% of assets

Other Measures

	Standard Index	Best Fit Index
Alpha	-0.3	0.1
Beta	1.30	0.97
R-Squared	99	99
Standard Deviation	8.75	10.21
Mean	10.21	0.97
Sharpe Ratio	0.97	—

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.00% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Address: Vanguard Investor Funds **Minimum Purchase:** \$1000000 **Add: \$1** **IRA:** —

Valley Forge, PA 19482 **Mfn Auto Inv Plan:** — **Add:** —
800-662-7447 **Sales Fees:** No-load **Management Fee:** 0.00%
www.vanguard.com **Expense Projections:** 3Yr-\$29 5Yr-\$51 10Yr-\$115
06-26-15 **Advisor:** Vanguard Group Inc **Income Distribution:** Annually
None **Shareholder:** None

Equity Style

Style:	Blend	Size:	Large-Cap
Value Measures	16.27	Price/Earnings	2.08
Price/Book	1.49	Price/Sales	0.95
Price/Cash Flow	7.65	Price/Cash Flow	0.99
Dividend Yield %	2.52	Dividend Yield %	1.03

Fixed-Income Style

Duration:	Moderate	Quality:	Medium
Avg Eff Duration ¹	8.75	Avg Eff Maturity	5.01
Avg Credit Quality	A	Avg Wtd Coupon	2.93%

Market Cap %

Market Cap %	45.4	Small	5.4	Micro	0.8	Large	18.0	Avg	43.491
--------------	------	-------	-----	-------	-----	-------	------	-----	--------

Rad Category

Rad Category	%	Rad Category	%
Long-Term Emrgs	9.02	0.98	0.98
Book Value	4.34	-0.68	0.98
Sales	4.17	8.80	0.99
Cash Flow	7.89	1.21	0.99
Historical Emrgs	9.40	0.85	0.99

Composition - Net

Composition - Net	1.4	Cash	74.7	Stocks	23.7	Bonds	0.2	Other	39.5
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Sector Weightings

Sector	% of Stocks	Rad	Benchmark 1
Basic/Chem	4.84	0.99	0.99
Cosm/Cyc	11.98	1.08	0.99
Finan Svcs	17.03	0.99	0.99
Real Est	4.41	0.48	0.48
Sensitive	38.25	1.11	1.11
Comm Svcs	3.35	1.00	1.00
Energy	5.01	1.00	1.00
Industri	11.23	0.99	0.99
Technology	18.66	1.25	1.25
Defensive	23.50	1.02	1.02
Cosm/Def	8.43	1.00	1.00
Hlthcare	11.68	1.11	1.11
Utilities	3.39	0.82	0.82



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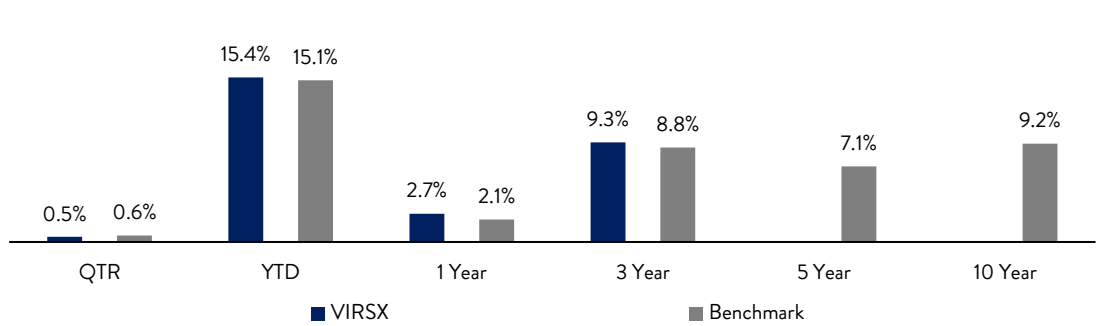
Vanguard Instl Trgt Retire 2040 Instl
VIRSX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	Vanguard Instl Trgt Retire 2040 Instl
Ticker	VIRSX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2040
Benchmark	S&P Target Date 2040 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$25,104,344,177

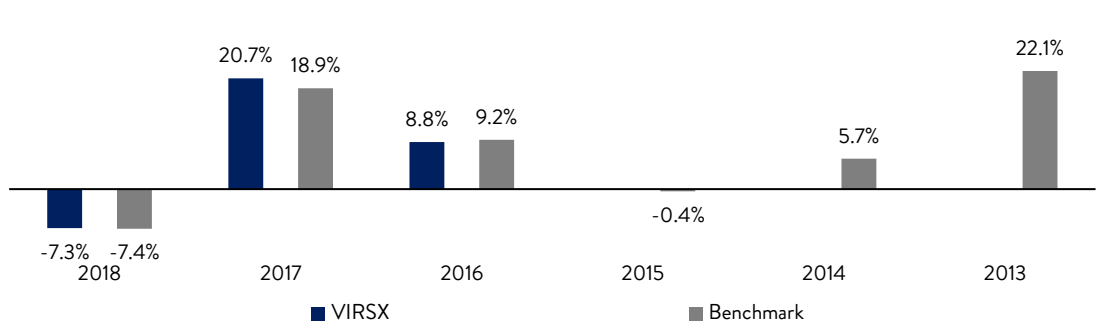
Trailing Performance



Fund Characteristics

	VIRSX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,497	-\$162
P/E Ratio (TTM)	17.61	-0.40
P/B Ratio (TTM)	2.17	-0.08
Est. Dividend Yield	2.52%	0.06%

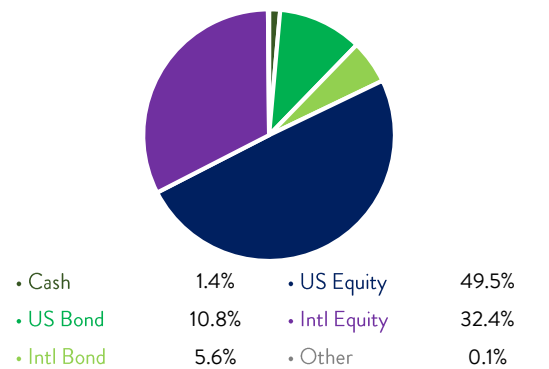
Annual Performance



Sector Allocations

	VIRSX	Category	+/- Category
Materials	4.8%	4.4%	0.5%
Communication Services	3.4%	3.0%	0.4%
Consumer Discretionary	12.0%	11.9%	0.1%
Consumer Staples	8.4%	7.8%	0.6%
Healthcare	11.7%	11.6%	0.0%
Industrials	11.2%	10.9%	0.3%
Real Estate	4.4%	6.5%	-2.0%
Technology	18.7%	18.9%	-0.2%
Energy	5.0%	4.7%	0.3%
Financial Services	17.0%	17.1%	-0.1%
Utilities	3.4%	3.2%	0.2%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2040 Instl
VIRSX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VIRSX	0.49%	15.40%	2.65%	9.32%	-	-
• Benchmark	0.60%	15.13%	2.09%	8.84%	7.06%	9.19%
+/- Benchmark	-0.11%	0.27%	0.57%	0.48%	-	-
Peer Group Rank	39	41	39	16	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VIRSX	0.49%	3.46%	11.00%	-11.04%
• Benchmark	0.60%	3.27%	10.82%	-11.33%
+/- Benchmark	-0.11%	0.19%	0.17%	0.29%

Annual Performance	2018	2017	2016	2015	2014	2013
• VIRSX	-7.31%	20.73%	8.81%	-	-	-
• Benchmark	-7.41%	18.87%	9.23%	-0.40%	5.69%	22.10%
+/- Benchmark	0.09%	1.87%	-0.42%	-	-	-
Peer Group Rank	30	29	20	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VIRSX	3.80%	0.94%	-0.55%	4.99%
• Benchmark	3.72%	1.64%	-0.94%	5.03%
+/- Benchmark	0.08%	-0.70%	0.39%	-0.04%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VIRSX	-	-	-	-	-	-
• Benchmark	7.06%	6.47%	6.66%	4.82%	8.79%	9.30%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VIRSX	4.51%	3.78%	6.02%	1.17%
• Benchmark	4.21%	3.36%	5.07%	1.75%
+/- Benchmark	0.30%	0.42%	0.95%	-0.57%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.48	0.00	-	0.00	-	0.00
Beta	0.99	1.00	-	1.00	-	1.00
Standard Deviation	9.74	9.76	-	9.60	-	11.23
Sharpe Ratio	0.80	0.75	-	0.65	-	0.79
Information Ratio	0.58	-	-	-	-	-
Treynor Ratio	7.75	7.22	-	6.04	-	8.65
Upside Capture Ratio	101.50	100.00	-	100.00	-	100.00
Downside Capture Ratio	98.05	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VIRSX	4.74%	1.80%	0.86%	4.25%
• Benchmark	3.87%	2.01%	1.32%	3.92%
+/- Benchmark	0.88%	-0.21%	-0.46%	0.33%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VIRSX	-7.94%	-	-	-
• Benchmark	-6.60%	-0.17%	2.78%	2.04%
+/- Benchmark	-1.35%	-	-	-

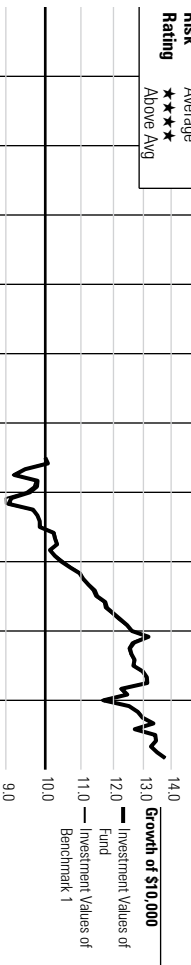
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Vanguard Instl Trgt Retire 2040 Instl

Ticker VHSX **Yield** 2.1% **Total Assets** \$25,104 mil **Investment Style** Equity
Investment Category Target-Date 2040

Benchmark 1: Morningstar Lifetime Mod 2040 TR USD
Benchmark 2: Morningstar Mod Trgt Risk TR USD
Morningstar Analyst Rating 04-25-19

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg



Morningstar Pillars
 Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive

Performance Quartile
 (within Category)

Morningstar Analyst Rating
 Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum
 ★ Gold ★ Silver ★ Bronze ★ Neutral ★ Negative
Pillar Spectrum
 + Positive - Negative ● Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.86	1.80	-7.94	4.25	—
2016	0.86	1.80	-7.94	4.25	8.81
2017	6.02	3.78	4.51	4.99	20.73
2018	-0.55	0.94	3.80	-11.04	-7.31
2019	11.00	3.46	0.49	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.39	Rtn vs Cat	★★★★★
3 Yr	10.82	+ Avg	★★★★★
5 Yr	—	—	—
10 Yr	—	—	—
Incept	7.20	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19
 ⊕ Vanguard Total Stock Mark
 ⊕ Vanguard Total Intl Stock
 ⊕ Vanguard Total Bond Marke
 ⊕ Vanguard Total Intl Bd
 ⊕ Cnt Market Liquidity Rate

Value	Date of Maturity	Amount 000	YTD Ret %	% Assets	
5,176		9,709	16,669	19,332	25,104

Tax Analysis
 3 Yr (estimated) 10.04 9 0.70 8
 5 Yr (estimated) — — — — —
 10 Yr (estimated) — — — — —
 Potential Capital Gain Exposure: 15% of assets

Other Measures

Alpha	Beta	R-Squared	Standard Deviation	Mean	Sharpe Ratio
-0.6	1.42	98	9.64	10.82	0.94
-0.1	1.07	99			

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Address: Vanguard OneStar Funds **Minimum Purchase:** \$1000000 **Add: \$1** **IRA:** —

Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None

MN Auto Inv Plan: — **Add:** —
Sales Fees: No-load
Management Fee: 0.00%
Actual Fees: Mgt:0.00% Dist:—
Expense Projections: 3Yr:\$29 5Yr:\$51 10Yr:\$115
Income Distribution: Annually

Equity Style

Blend
 Size: Large-Cap

Value Measures

Price/Earnings	Price/Book	Price/Sales	Price/Cash Flow	Dividend Yield %
16.27	2.08	1.49	7.65	2.52
0.99	0.66	0.96	0.99	1.01

Fixed-Income Style

Duration: Moderate
 Quality: Medium

Value Measures

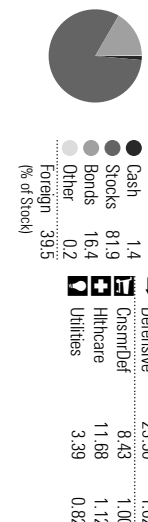
Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon
6.9	8.8 Yrs	A	2.93%

Growth Measures

Long-Term Emgs	Book Value	Sales	Cash Flow	Historical Emgs
9.02	4.34	4.18	7.89	9.40
0.98	-0.60	6.12	1.11	0.86

Market Cap %

Category	Value	% of Assets
Large	30.4	0.8
Mid	18.0	43.497
Small	45.4	5.4
Micro	3.0	0.8
Avg	18.0	43.497



Sector Weightings

Sector	% of Stocks	Rat
Stocks	38.26	0.90
Cyclical	4.84	0.98
BasicMat	11.98	1.07
Cosm/Cyc	17.03	0.98
FinanSvcs	4.41	0.49
Real Est	38.25	1.11
Sensitive	3.35	1.03
CommSvs	5.01	0.99
Energy	11.23	0.99
Industri	18.66	1.25
Technology	23.50	1.02
Defensive	8.43	1.00
Cosm/Def	11.68	1.12
Hlthcare	11.68	1.12
Utilities	3.39	0.82

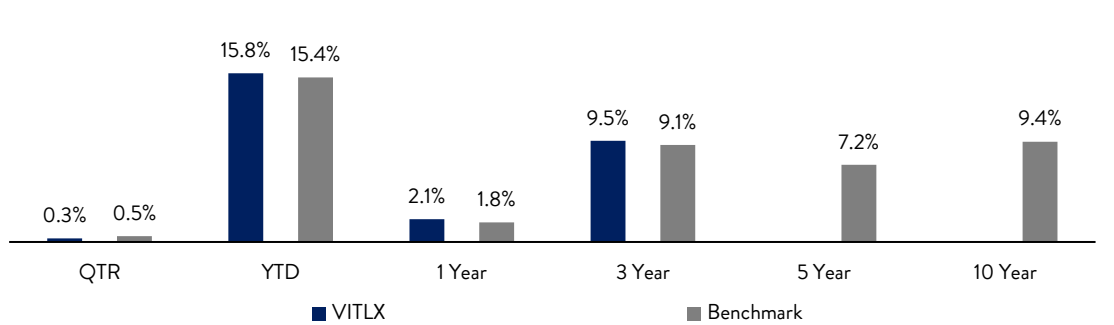
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Product Details

Name	Vanguard Instl Trgt Retire 2045 Instl
Ticker	VITLX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2045
Benchmark	S&P Target Date 2045 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$21,325,292,019

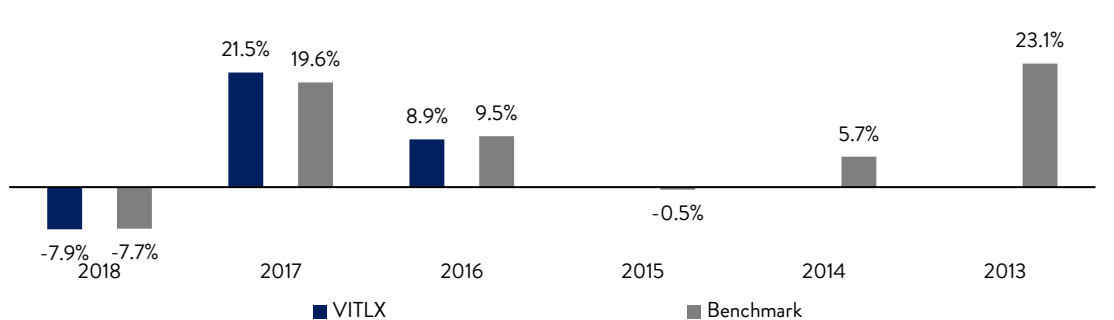
Trailing Performance



Fund Characteristics

	VITLX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,451	-\$4,127
P/E Ratio (TTM)	17.60	-0.50
P/B Ratio (TTM)	2.17	-0.09
Est. Dividend Yield	2.52%	0.07%

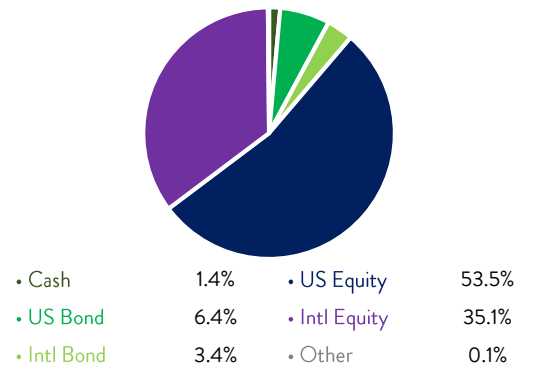
Annual Performance



Sector Allocations

	VITLX	Category	+/- Category
Materials	4.8%	4.3%	0.5%
Communication Services	3.4%	2.8%	0.6%
Consumer Discretionary	12.0%	11.8%	0.1%
Consumer Staples	8.4%	7.9%	0.6%
Healthcare	11.7%	11.9%	-0.2%
Industrials	11.2%	10.8%	0.5%
Real Estate	4.4%	6.3%	-1.9%
Technology	18.7%	19.2%	-0.5%
Energy	5.0%	4.7%	0.4%
Financial Services	17.0%	17.1%	-0.1%
Utilities	3.4%	3.3%	0.1%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VITLX	0.32%	15.79%	2.13%	9.47%	-	-
• Benchmark	0.53%	15.39%	1.83%	9.07%	7.21%	9.38%
+/- Benchmark	-0.21%	0.40%	0.30%	0.40%	-	-
Peer Group Rank	44	42	44	19	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VITLX	0.32%	3.48%	11.54%	-11.80%
• Benchmark	0.53%	3.32%	11.10%	-11.75%
+/- Benchmark	-0.21%	0.16%	0.44%	-0.04%

Annual Performance	2018	2017	2016	2015	2014	2013
• VITLX	-7.87%	21.47%	8.94%	-	-	-
• Benchmark	-7.74%	19.56%	9.54%	-0.46%	5.67%	23.14%
+/- Benchmark	-0.12%	1.90%	-0.59%	-	-	-
Peer Group Rank	37	24	24	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VITLX	4.02%	0.97%	-0.55%	5.24%
• Benchmark	3.81%	1.66%	-0.94%	5.20%
+/- Benchmark	0.21%	-0.69%	0.39%	0.03%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VITLX	-	-	-	-	-	-
• Benchmark	7.21%	6.61%	6.81%	4.91%	9.05%	9.59%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VITLX	4.68%	3.82%	6.21%	1.25%
• Benchmark	4.35%	3.45%	5.28%	1.95%
+/- Benchmark	0.33%	0.37%	0.92%	-0.70%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.26	0.00	-	0.00	-	0.00
Beta	1.02	1.00	-	1.00	-	1.00
Standard Deviation	10.33	10.12	-	9.98	-	11.58
Sharpe Ratio	0.77	0.75	-	0.65	-	0.79
Information Ratio	0.48	-	-	-	-	-
Treynor Ratio	7.72	7.46	-	6.18	-	8.84
Upside Capture Ratio	102.45	100.00	-	100.00	-	100.00
Downside Capture Ratio	100.75	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VITLX	4.85%	1.80%	0.80%	4.31%
• Benchmark	4.04%	2.00%	1.25%	4.10%
+/- Benchmark	0.81%	-0.19%	-0.45%	0.21%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VITLX	-7.99%	-	-	-
• Benchmark	-6.93%	-0.12%	2.85%	2.05%
+/- Benchmark	-1.07%	-	-	-

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Vanguard Instl Trgt Retire 2045 Instl

Ticker VINTX **Yield** 2.0% **Total Assets** \$21.325 mil **Master Category** Target-Date 2045

Benchmark 1: Morningstar Lifetime Mod 2045 TR USD
Benchmark 2: Morningstar Mod Tgt Risk TR USD

Historical Profile
 Return Above Avg
 Risk ****
 Rating Above Avg



Morningstar Analyst Rating 04-25-19

Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Negative	Neutral	Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.80	—	-7.99	4.31	8.94
2016	0.80	1.80	4.85	1.25	8.94
2017	6.21	3.82	4.68	5.24	21.47
2018	-0.55	0.97	4.02	-11.80	-7.87
2019	11.54	3.48	0.32	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	%Rank Cat	Growth of \$10,000
3 Mo	2.51	0.12	0.24	23	10,251
6 Mo	3.00	-0.28	-0.80	36	10,300
1 Yr	12.43	-0.02	38	11,243	—
3 Yr-Avg	11.04	0.07	2.49	24	13,692
5 Yr-Avg	—	—	—	—	—
10 Yr-Avg	—	—	—	—	—
15 Yr-Avg	—	—	—	—	—

Tax Analysis

	Tax Adv Ratio	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	10.29	9	0.68	5
5 Yr (estimated)	—	—	—	—
10 Yr (estimated)	—	—	—	—

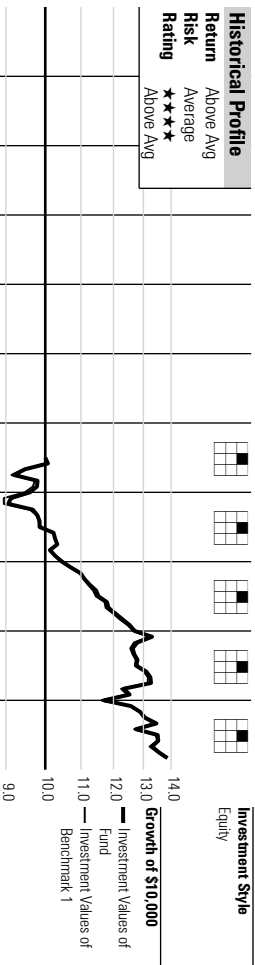
Potential Capital Gain Exposure: 15% of assets

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class offers a 0.09%, which was 0.41 percentage points now cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
NAV	18.69	19.97	23.80	21.41	25.37	25.37	18.50	18.50	18.50	18.50	18.50	25.37
Total Return %	—	—	—	—	—	—	8.94	21.47	-7.87	0.30	-0.34	18.50
+/- Benchmark 1	—	—	—	—	—	—	-1.90	0.94	0.30	-3.11	-0.34	18.50
+/- Benchmark 2	—	—	—	—	—	—	0.37	6.81	3.51	-3.11	3.51	18.50
Income Return %	—	—	—	—	—	—	2.08	2.27	2.15	-10.02	0.00	18.50
Capital Return %	—	—	—	—	—	—	6.86	19.19	4.0	0.00	39	18.50
Total Rtn % Rank Cat	—	—	—	—	—	—	26	23	40	0.00	0.00	39
Income \$	—	—	—	—	—	—	0.16	0.39	0.45	0.51	0.00	0.00
Capital Gains \$	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Expense Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Income Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Turnover Rate %	—	—	—	—	—	—	2.79	2.42	2.33	2.23	2.46	2.46
Net Assets \$ mil	3,959	7,789	13,580	16,107	21,325	21,325	16,107	16,107	16,107	16,107	21,325	21,325

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.43	—	—	—
3 Yr	11.04	+ Avg	—	Avg ****
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	7.36	—	—	—

Other Measures

	Standard Index	Best Fit Index
Alpha	-0.9	-0.4
Beta	1.51	1.14
R-Squared	98	100
Standard Deviation	10.24	11.04
Mean	11.04	0.91
Sharpe Ratio	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19

- ⊕ Vanguard Total Stock Mark
- ⊕ Vanguard Total Intl Stock
- ⊕ Vanguard Total Bond Marke
- ⊕ Vanguard Total Intl Bond
- ⊕ Cnt Market Liquidity Rate

	Date of Maturity	Amount 000	Value \$000	% Assets
Total Fixed Income: 0				

Equity Style

Value Measures	Rel Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	Price/Cash Flow	Dividend Yield %
Price/Earnings	16.26	0.98	0.98	0.95	0.99	7.65	1.03
Price/Book	2.08	0.95	0.95	0.96	0.96	7.65	1.03
Price/Sales	1.49	0.96	0.96	0.99	0.99	7.65	1.03
Price/Cash Flow	1.49	0.96	0.96	0.99	0.99	7.65	1.03
Dividend Yield %	2.52	1.03	1.03	1.03	1.03	7.65	1.03

Market Cap %

Market Cap %	Rel Category
Large	45.4
Mid	30.4
Small	18.0
Micro	4.4
Avg	43.451

Fixed-Income Style

Duration	Quality	Medium
Short	—	—
Moderate	—	—
Long	—	—

Value Measures

Value Measure	Rel Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	Price/Cash Flow	Dividend Yield %
Price/Earnings	16.26	0.98	0.98	0.95	0.99	7.65	1.03
Price/Book	2.08	0.95	0.95	0.96	0.96	7.65	1.03
Price/Sales	1.49	0.96	0.96	0.99	0.99	7.65	1.03
Price/Cash Flow	1.49	0.96	0.96	0.99	0.99	7.65	1.03
Dividend Yield %	2.52	1.03	1.03	1.03	1.03	7.65	1.03

Market Cap %

Market Cap %	Rel Category
Large	45.4
Mid	30.4
Small	18.0
Micro	4.4
Avg	43.451

Composition - Net

Composition	Net
Cash	1.4
Stocks	88.6
Bonds	9.8
Other	0.2
Foreign	39.6

Sector Weights

Sector	% of Stocks	Rel Benchmark 1
Basic/Chem	4.84	0.96
Cosm/Cyc	11.98	1.07
Finan/Svcs	17.03	0.98
Healthcare	4.41	0.49
Industri	38.24	1.11
Technology	3.35	1.03
Comm/Svs	5.01	0.99
Energy	11.23	0.99
Defensive	18.65	1.25
Cosm/Def	23.49	1.03
Hltcare	8.43	1.00
Utilities	11.67	1.13
Other	3.39	0.83

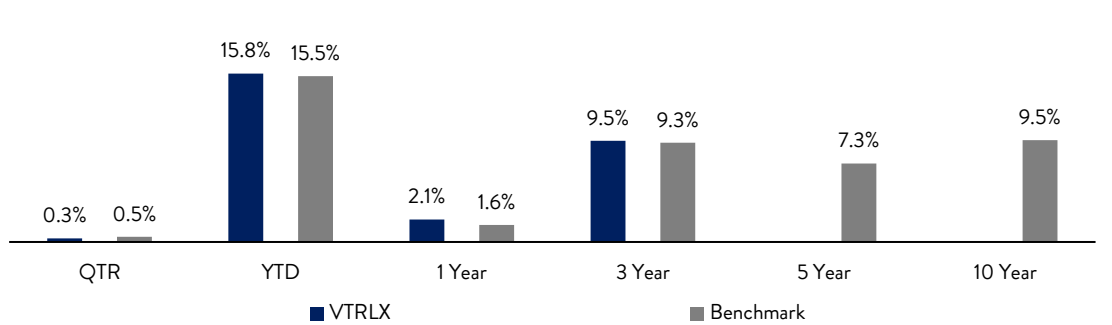
Address: Vanguard OneStar Funds
 Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
Web Address: www.vanguard.com
Inception: 06-26-15
Advisor: Vanguard Group Inc
Subadvisor: None

Minimum Purchase: \$1000000 **Add: \$1** **IRA:** —
Mn Auto Inv Plan: — **Add:** —
Sales Fees: No-load
Management Fee: 0.00%
Actual Fees: Mgt:0.00% Dist:—
Expense Projections: 3Yr:\$29 5Yr:\$51 10Yr:\$115
Income Distribution: Annually

Product Details

Name	Vanguard Instl Trgt Retire 2050 Instl
Ticker	VTRLX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2050
Benchmark	S&P Target Date 2050 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$15,977,909,980

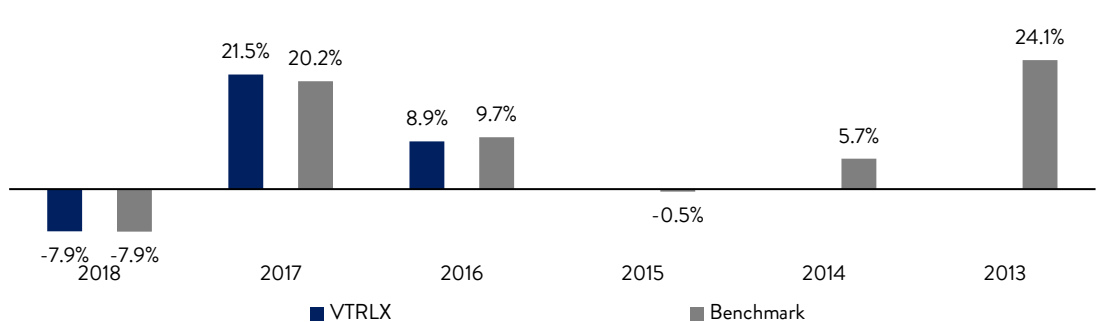
Trailing Performance



Fund Characteristics

	VTRLX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,447	-\$1,322
P/E Ratio (TTM)	17.60	-0.64
P/B Ratio (TTM)	2.17	-0.10
Est. Dividend Yield	2.52%	0.09%

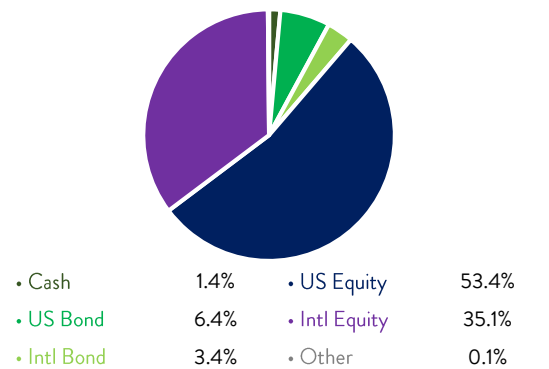
Annual Performance



Sector Allocations

	VTRLX	Category	+/- Category
Materials	4.8%	4.4%	0.4%
Communication Services	3.4%	2.8%	0.6%
Consumer Discretionary	12.0%	11.8%	0.2%
Consumer Staples	8.4%	7.8%	0.7%
Healthcare	11.7%	12.0%	-0.3%
Industrials	11.2%	10.8%	0.5%
Real Estate	4.4%	6.3%	-1.9%
Technology	18.7%	19.2%	-0.6%
Energy	5.0%	4.9%	0.1%
Financial Services	17.0%	16.7%	0.3%
Utilities	3.4%	3.3%	0.1%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2050 Instl

VTRLX

Fund Fact Sheet

Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VTRLX	0.32%	15.76%	2.11%	9.47%	-	-
• Benchmark	0.47%	15.51%	1.59%	9.29%	7.34%	9.54%
+/- Benchmark	-0.15%	0.25%	0.52%	0.18%	-	-
Peer Group Rank	39	44	39	24	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VTRLX	0.32%	3.47%	11.52%	-11.79%
• Benchmark	0.47%	3.32%	11.28%	-12.05%
+/- Benchmark	-0.15%	0.16%	0.24%	0.26%

Annual Performance	2018	2017	2016	2015	2014	2013
• VTRLX	-7.87%	21.47%	8.95%	-	-	-
• Benchmark	-7.94%	20.18%	9.74%	-0.47%	5.69%	24.13%
+/- Benchmark	0.07%	1.29%	-0.79%	-	-	-
Peer Group Rank	31	29	28	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VTRLX	4.01%	0.97%	-0.55%	5.20%
• Benchmark	3.87%	1.72%	-0.94%	5.34%
+/- Benchmark	0.14%	-0.75%	0.39%	-0.14%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VTRLX	-	-	-	-	-	-
• Benchmark	7.34%	6.73%	6.96%	5.01%	9.29%	9.89%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VTRLX	4.67%	3.86%	6.21%	1.26%
• Benchmark	4.43%	3.54%	5.51%	2.14%
+/- Benchmark	0.24%	0.33%	0.69%	-0.88%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.23	0.00	-	0.00	-	0.00
Beta	0.99	1.00	-	1.00	-	1.00
Standard Deviation	10.33	10.38	-	10.30	-	11.82
Sharpe Ratio	0.77	0.75	-	0.64	-	0.79
Information Ratio	0.21	-	-	-	-	-
Treynor Ratio	7.92	7.67	-	6.32	-	8.99
Upside Capture Ratio	99.73	100.00	-	100.00	-	100.00
Downside Capture Ratio	97.85	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VTRLX	4.79%	1.80%	0.86%	4.30%
• Benchmark	4.17%	1.94%	1.18%	4.32%
+/- Benchmark	0.62%	-0.13%	-0.32%	-0.01%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VTRLX	-7.99%	-	-	-
• Benchmark	-7.22%	-0.07%	2.91%	2.09%
+/- Benchmark	-0.77%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2050 Instl

Ticker VTRIX **Yield** 2.0% **Total Assets** \$15.978 mil **Master Category** Target-Date 2050

Benchmark 1: Morningstar Lifetime Mod 2050 TR USD
Benchmark 2: Morningstar Mod Tgt Risk TR USD

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg



Morningstar Pillars

- Process: Positive
- Performance: Positive
- People: Positive
- Parent: Positive
- Price: Positive

Investment Style
 Equity

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Performance Quartile
 (within Category)

Analyst Rating Spectrum
 ★ Gold ★ Silver ★ Bronze Neutral Negative
 Pillar Spectrum
 ⊕ Positive ⊖ Negative ⊙ Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.86	—	-7.99	4.30	8.95
2016	0.86	1.80	4.79	1.26	8.95
2017	6.21	3.86	4.67	5.20	21.47
2018	-0.55	0.97	4.01	-11.79	-7.87
2019	11.52	3.47	0.32	—	—

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
NAV	—	—	—	—	—	—	18.69	19.98	23.82	21.44	25.41	25.41
Total Return %	—	—	—	—	—	—	8.95	21.47	-7.87	18.52	18.52	18.52
+/- Bmark 1	—	—	—	—	—	—	-1.94	0.69	0.54	-0.32	-0.32	-0.32
+/- Bmark 2	—	—	—	—	—	—	0.38	6.81	-3.11	3.53	3.53	3.53
Income Return %	—	—	—	—	—	—	2.03	2.23	2.11	0.00	0.00	0.00
Capital Return %	—	—	—	—	—	—	6.92	19.24	-9.98	18.52	18.52	18.52
Total Rtn % Rank Cat	—	—	—	—	—	—	28	33	34	43	43	43
Income \$	—	—	—	—	—	—	0.16	0.38	0.45	0.50	0.00	0.00
Capital Gains \$	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Expense Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Income Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Turnover Rate %	—	—	—	—	—	—	2.81	2.43	2.34	2.24	2.47	2.47
Net Assets \$ mil	—	—	—	—	—	—	2,267	4,938	9,087	11,623	15,978	15,978

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.45	—	—	—
3 Yr	11.03	+ Avg	—	Avg ★★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	7.36	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19

- ⊕ Vanguard Total Stock Mark
- ⊕ Vanguard Total Intl Stock
- ⊕ Vanguard Bond Marke
- ⊕ Vanguard Total Intl Bd
- ⊕ Cnt Market Liquidity Rate

Value	Date of Maturity	Amount 000	YTD Ret %	% Assets
—	—	—	—	53.95
—	—	—	—	36.00
—	—	—	—	7.01
—	—	—	—	2.98
—	—	—	—	0.07

Tax Analysis Tax Adj Rtn% %Rank Cat Tax-Cost Rat %Rank Cat
 3 Yr (estimated) 10.29 11 0.66 9
 5 Yr (estimated) — — — —
 10 Yr (estimated) — — — —
 Potential Capital Gain Exposure: 14% of assets

Other Measures

Alpha	Beta	R-Squared	Standard Deviation	Sharpe Ratio
-0.9	1.51	98	10.24	11.03
-0.4	1.14	100	0.91	0.91

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

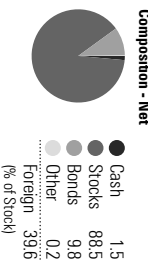
The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Address: Vanguard Chester Funds **Minimum Purchase:** \$1000000 **Add: \$1** **IRA:** —

Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None



Composition - Net

Category	Value	% of Assets
Cash	1.5	1.03
Stocks	88.5	1.00
Bonds	9.8	1.14
Other	0.2	0.83
Foreign	39.6	—

Equity Style

Blend Large-Cap

Value Measures

Price/Earnings	Price/Book	Price/Sales	Price/Cash Flow	Dividend Yield %
16.26	2.08	1.49	7.65	2.52
0.99	0.96	0.97	0.99	1.02

Fixed-Income Style

Duration: Moderate Quality: Medium

Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon
6.9	8.8 Yrs	A	2.93%

Market Cap %

Market Cap %	Value	% of Assets
Large	30.4	0.8
Mid	18.0	43.447
Small	45.4	5.4
Micro	3.4	0.8

Rad Category

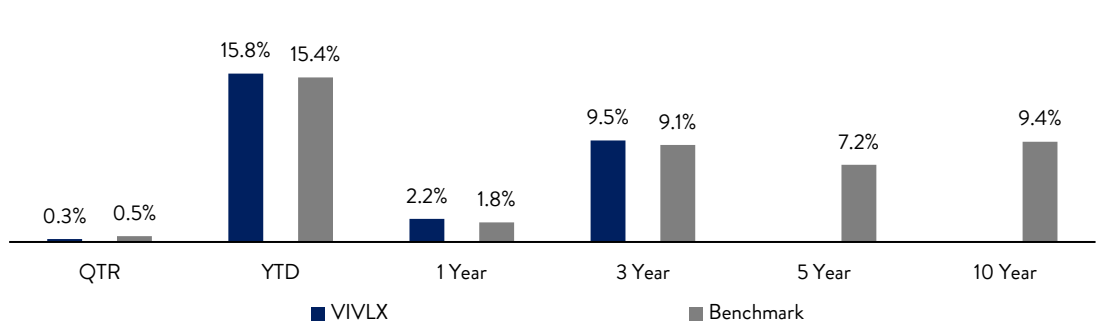
Rad Category	Value	% of Assets
Sensitive	38.24	1.11
ConsSvs	3.35	1.03
Energy	5.01	0.99
Industri	11.23	0.99
Technology	18.65	1.26
Defensive	23.49	1.03
Cosm/Def	8.43	1.00
Hlthcare	11.67	1.14
Utilities	3.39	0.83

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Product Details

Name	Vanguard Instl Trgt Retire 2055 Instl
Ticker	VIVLX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2055
Benchmark	S&P Target Date 2045 TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$8,136,019,920

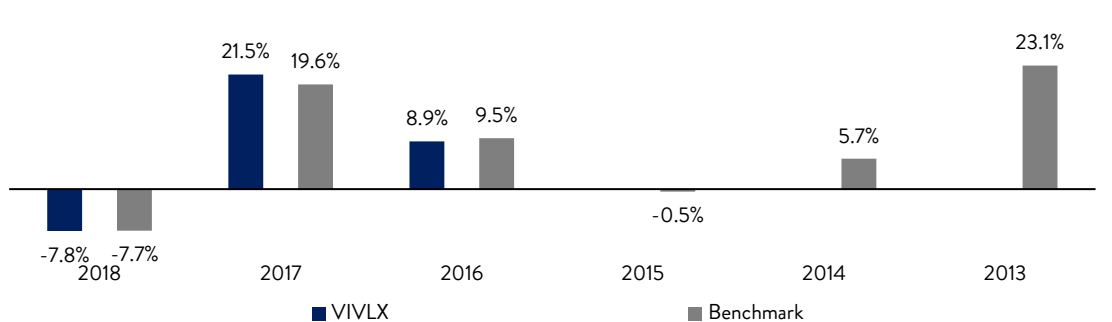
Trailing Performance



Fund Characteristics

	VIVLX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,492	-\$3,437
P/E Ratio (TTM)	17.61	-0.38
P/B Ratio (TTM)	2.17	-0.07
Est. Dividend Yield	2.52%	0.06%

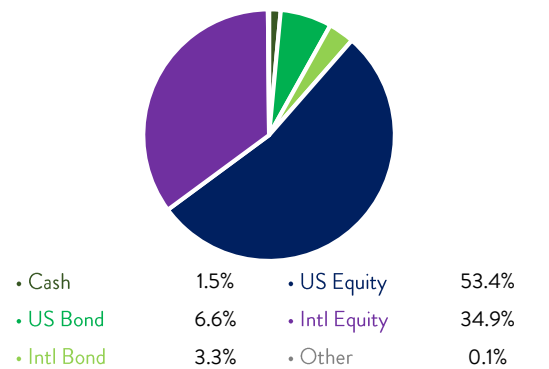
Annual Performance



Sector Allocations

	VIVLX	Category	+/- Category
Materials	4.8%	4.4%	0.4%
Communication Services	3.4%	2.8%	0.5%
Consumer Discretionary	12.0%	11.8%	0.2%
Consumer Staples	8.4%	7.9%	0.5%
Healthcare	11.7%	12.0%	-0.3%
Industrials	11.2%	10.7%	0.5%
Real Estate	4.4%	6.0%	-1.6%
Technology	18.7%	19.2%	-0.5%
Energy	5.0%	4.9%	0.1%
Financial Services	17.0%	17.1%	0.0%
Utilities	3.4%	3.2%	0.2%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2055 Instl
VIVLX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VIVLX	0.28%	15.77%	2.16%	9.48%	-	-
• Benchmark	0.53%	15.39%	1.83%	9.07%	7.21%	9.38%
+/- Benchmark	-0.25%	0.38%	0.33%	0.41%	-	-
Peer Group Rank	38	47	35	28	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VIVLX	0.28%	3.50%	11.53%	-11.76%
• Benchmark	0.53%	3.32%	11.10%	-11.75%
+/- Benchmark	-0.25%	0.19%	0.44%	0.00%

Annual Performance	2018	2017	2016	2015	2014	2013
• VIVLX	-7.84%	21.47%	8.94%	-	-	-
• Benchmark	-7.74%	19.56%	9.54%	-0.46%	5.67%	23.14%
+/- Benchmark	-0.09%	1.91%	-0.59%	-	-	-
Peer Group Rank	30	39	26	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VIVLX	4.01%	0.97%	-0.54%	5.17%
• Benchmark	3.81%	1.66%	-0.94%	5.20%
+/- Benchmark	0.20%	-0.69%	0.39%	-0.03%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VIVLX	-	-	-	-	-	-
• Benchmark	7.21%	6.61%	6.81%	4.91%	9.05%	9.59%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VIVLX	4.71%	3.81%	6.25%	1.25%
• Benchmark	4.35%	3.45%	5.28%	1.95%
+/- Benchmark	0.36%	0.36%	0.97%	-0.70%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.28	0.00	-	0.00	-	0.00
Beta	1.02	1.00	-	1.00	-	1.00
Standard Deviation	10.31	10.12	-	9.98	-	11.58
Sharpe Ratio	0.77	0.75	-	0.65	-	0.79
Information Ratio	0.48	-	-	-	-	-
Treynor Ratio	7.75	7.46	-	6.18	-	8.84
Upside Capture Ratio	102.38	100.00	-	100.00	-	100.00
Downside Capture Ratio	100.55	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VIVLX	4.79%	1.80%	0.86%	4.24%
• Benchmark	4.04%	2.00%	1.25%	4.10%
+/- Benchmark	0.76%	-0.19%	-0.40%	0.14%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VIVLX	-7.94%	-	-	-
• Benchmark	-6.93%	-0.12%	2.85%	2.05%
+/- Benchmark	-1.02%	-	-	-

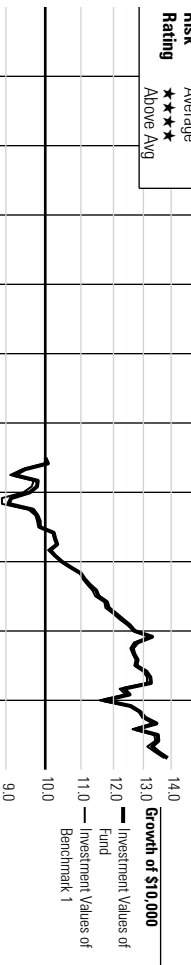
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Vanguard Instl Trgt Retire 2055 Instl

Ticker VVIX
Yield 1.9%
Total Assets \$8,136 mil
Investment Style Equity
Master Category Target-Date 2055

Benchmark 1: Morningstar Lifetime Mod 2055 TR USD
Benchmark 2: Morningstar Mod Tgt Risk TR USD
Morningstar Analyst Rating 04-25-19
Gold

Historical Profile
 Return Above Avg
 Risk Average
 Rating ★★★★★
 Above Avg



Morningstar Pillars
 Process Positive
 Performance Positive
 People Positive
 Parent Positive
 Price Positive

Performance Quartile
 (within Category)

Morningstar Analyst Rating
 Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum
 Gold Silver Bronze Neutral Negative

Pillar Spectrum
 Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.86	—	-7.94	4.24	8.94
2016	0.86	1.80	4.79	1.25	8.94
2017	6.25	3.81	4.71	5.17	21.47
2018	-0.54	0.97	4.01	-11.76	-7.84
2019	11.53	3.50	0.28	—	—

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	10-19	History
NAV	—	—	—	—	—	—	18.69	20.00	23.86	21.50	25.48	25.48
Total Return %	—	—	—	—	—	—	8.94	21.47	-7.84	18.51	18.51	18.51
+/- Benchmark 1	—	—	—	—	—	—	-1.96	0.52	0.73	-0.28	-0.28	-0.28
+/- Benchmark 2	—	—	—	—	—	—	0.37	6.82	-3.08	3.53	3.53	3.53
Income Return %	—	—	—	—	—	—	1.93	2.15	2.04	0.00	0.00	0.00
Capital Return %	—	—	—	—	—	—	7.02	19.33	-9.87	18.51	18.51	18.51
Total Rtn % Rank Cat	—	—	—	—	—	—	—	27	43	32	46	46
Income \$	—	—	—	—	—	—	0.16	0.36	0.43	0.49	0.00	0.00
Capital Gains \$	—	—	—	—	—	—	0.00	0.00	0.01	0.00	0.00	0.00
Expense Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Income Ratio %	—	—	—	—	—	—	3.05	2.47	2.36	2.26	2.48	2.48
Turnover Rate %	—	—	—	—	—	—	1	1	6	5	—	—
Net Assets \$ mil	—	—	—	—	—	—	703	1,814	3,779	5,293	8,136	8,136

Portfolio Analysis 09-30-19

Total Stocks: 0
 Share change since 08-31-19
 ⊕ Vanguard Total Stock Mark
 ⊕ Vanguard Total Intl Stock
 ⊕ Vanguard Bond Market
 ⊕ Vanguard Total Intl Bond
 ⊕ Vanguard Total Bond Bld
 ⊕ Cnt Market Liquidity Rate

YTD Ret %	% Assets
—	53.94
—	35.84
—	7.20
—	2.91
—	0.12

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	% Rank Cat	Growth of \$10,000
3 Mo	2.54	0.15	0.27	21	10,254
6 Mo	3.03	-0.12	-0.77	31	10,303
1 Yr	12.48	-0.17	0.02	39	11,248
3 Yr-Avg	11.04	0.14	2.49	32	13,693
5 Yr-Avg	—	—	—	—	—
10 Yr-Avg	—	—	—	—	—
15 Yr-Avg	—	—	—	—	—

Other Measures

	Standard Index	Best Fit Index
Alpha	-0.9	-0.4
Beta	1.51	1.14
R-Squared	98	100
Standard Deviation	10.23	11.04
Mean	0.92	0.92
Sharpe Ratio	—	—

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.0% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class offers a 0.09%, which was 0.41 percentage points now cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term. The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets
—	—	—	—

Equity Style

Blend	Size	Large-Cap	Value Measures	Price/Earnings	Price/Book	Price/Sales	Price/Cash Flow	Dividend Yield %	Growth Measures	Long-Term Emgs	Book Value	Sales	Cash Flow	Historical Emgs	Market Cap %
—	—	—	—	16.27	2.08	1.49	7.65	2.52	9.02	4.34	4.18	7.89	9.40	45.4	
—	—	—	—	0.98	0.95	0.96	0.99	1.03	0.98	-0.92	1.90	1.02	0.85	5.4	
—	—	—	—	0.98	0.95	0.96	0.99	1.03	0.98	-0.92	1.90	1.02	0.85	5.4	
—	—	—	—	0.98	0.95	0.96	0.99	1.03	0.98	-0.92	1.90	1.02	0.85	5.4	

Fixed-Income Style

Duration	Quality	Medium	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	Price/Cash Flow	Dividend Yield %	Real Est	Sector	Weights	% of Stocks	Rel Benchmark 1
—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—



Composition - Net

	Defensive	Cosm/Def	Hlthcare	Utilities
—	23.50	8.43	11.68	1.15
—	1.04	1.01	1.15	0.84

Address: Vanguard Investor Funds
 Minimum Purchase: \$100,000.00 Add: \$1
 IRA: —

Valley Forge, PA 19482
 800-662-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None

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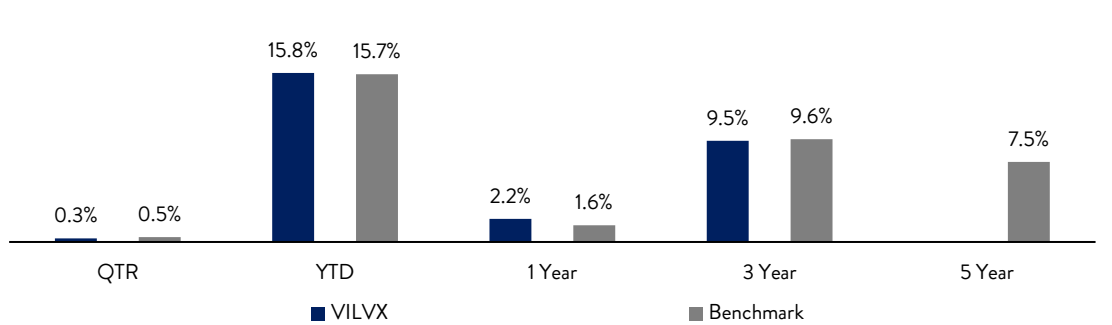
Vanguard Instl Trgt Retire 2060 Instl
VILVX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	Vanguard Instl Trgt Retire 2060 Instl
Ticker	VILVX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2060+
Benchmark	S&P Target Date 2060+ TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$2,657,305,211

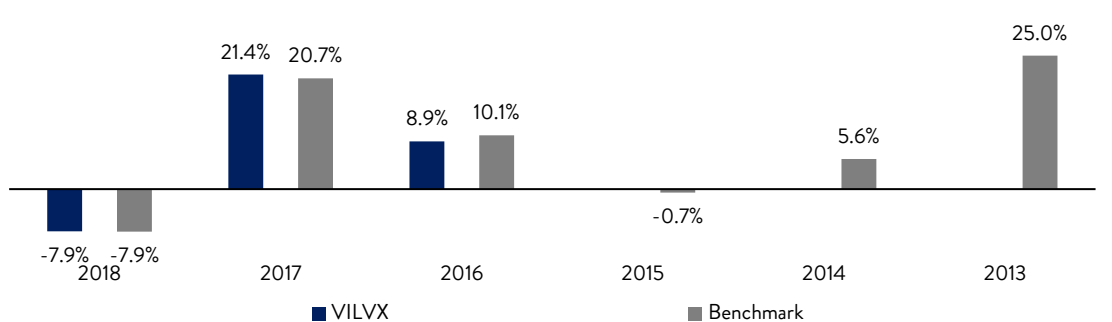
Trailing Performance



Fund Characteristics

	VILVX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,520	-\$2
P/E Ratio (TTM)	17.61	-0.26
P/B Ratio (TTM)	2.17	-0.04
Est. Dividend Yield	2.52%	0.05%

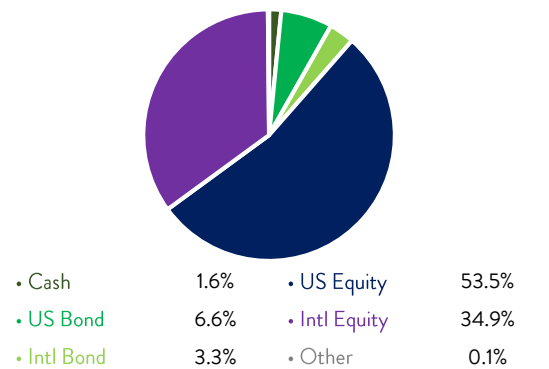
Annual Performance



Sector Allocations

	VILVX	Category	+/- Category
Materials	4.8%	4.6%	0.2%
Communication Services	3.4%	3.0%	0.3%
Consumer Discretionary	12.0%	11.9%	0.1%
Consumer Staples	8.4%	8.0%	0.4%
Healthcare	11.7%	11.8%	-0.2%
Industrials	11.2%	10.9%	0.3%
Real Estate	4.4%	5.5%	-1.1%
Technology	18.7%	18.9%	-0.3%
Energy	5.0%	5.0%	0.0%
Financial Services	17.0%	17.0%	0.0%
Utilities	3.4%	3.2%	0.2%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2060 Instl
VILVX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VILVX	0.32%	15.81%	2.15%	9.46%	-	-
• Benchmark	0.45%	15.69%	1.56%	9.61%	7.49%	-
+/- Benchmark	-0.13%	0.12%	0.59%	-0.15%	-	-
Peer Group Rank	35	55	33	33	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VILVX	0.32%	3.50%	11.53%	-11.80%
• Benchmark	0.45%	3.37%	11.42%	-12.22%
+/- Benchmark	-0.13%	0.14%	0.12%	0.42%

Annual Performance	2018	2017	2016	2015	2014	2013
• VILVX	-7.88%	21.42%	8.94%	-	-	-
• Benchmark	-7.95%	20.75%	10.08%	-0.66%	5.64%	24.96%
+/- Benchmark	0.07%	0.67%	-1.13%	-	-	-
Peer Group Rank	29	39	22	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VILVX	4.05%	0.93%	-0.54%	5.16%
• Benchmark	3.97%	1.77%	-0.90%	5.47%
+/- Benchmark	0.08%	-0.85%	0.36%	-0.31%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VILVX	-	-	-	-	-	-
• Benchmark	7.49%	6.87%	7.10%	5.12%	9.50%	10.13%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VILVX	4.67%	3.86%	6.20%	1.25%
• Benchmark	4.51%	3.59%	5.75%	2.40%
+/- Benchmark	0.16%	0.27%	0.46%	-1.16%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.03	0.00	-	0.00	-	-
Beta	0.98	1.00	-	1.00	-	-
Standard Deviation	10.37	10.56	-	10.55	-	-
Sharpe Ratio	0.77	0.77	-	0.64	-	-
Information Ratio	-0.15	-	-	-	-	-
Treynor Ratio	8.03	7.99	-	6.47	-	-
Upside Capture Ratio	97.55	100.00	-	100.00	-	-
Downside Capture Ratio	96.73	100.00	-	100.00	-	-

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VILVX	4.85%	1.81%	0.80%	4.28%
• Benchmark	4.36%	1.89%	1.09%	4.47%
+/- Benchmark	0.49%	-0.09%	-0.28%	-0.19%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VILVX	-7.99%	-	-	-
• Benchmark	-7.58%	-0.06%	2.94%	2.07%
+/- Benchmark	-0.41%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2060 Instl

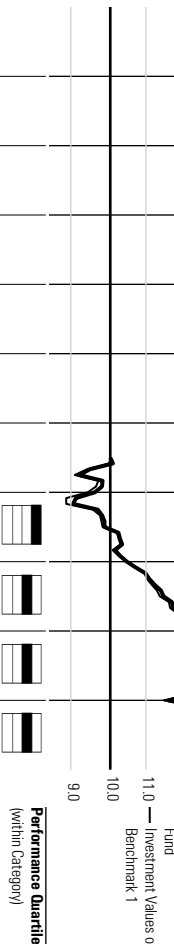
Ticker VLVX **Yield** 1.9% **Total Assets** \$2,657 mil **Master Category** Target-Date 2060+

Benchmark 1: Morningstar Lifetime Mod 2060 TR USD
Benchmark 2: Morningstar Mod Trgt Risk TR USD

Historical Profile
 Return Average
 Risk ★★★
 Rating Neutral

Investment Style
 Equity

Morningstar Pillars
 Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive



Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Performance Quartile
 (within Category)

Analyst Rating Spectrum
 ★ Gold ★ Silver ★ Bronze Neutral Negative
 Pillar Spectrum
 + Positive - Negative ● Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	0.80	—	-7.99	4.28	8.94
2016	0.80	1.81	4.85	1.25	8.94
2017	6.20	3.86	4.67	5.16	21.42
2018	-0.54	0.93	4.05	-11.80	-7.88
2019	11.53	3.50	0.32	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.52	—	—	—
3 Yr	11.02	Avg	Avg	★★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	7.35	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19
 ⊕ Vanguard Total Stock Mark
 ⊕ Vanguard Total Intl Stock
 ⊕ Vanguard Total Bond Marke
 ⊕ Vanguard Total Intl Bond
 ⊕ Cnt Market Liquidity Rate

2015	2016	2017	2018	10-19	History
18.68	19.99	23.86	21.50	25.49	NAV
—	8.94	21.42	-7.88	18.56	Total Return %
—	-1.93	0.36	0.81	-0.15	+/- Bmark 1
—	0.37	6.76	-3.12	3.57	+/- Bmark 2
—	1.92	2.05	2.00	0.00	Income Return %
—	7.02	19.37	-9.88	18.56	Capital Return %
—	20	48	36	48	Total Rtn % Rank Cat
—	0.17	0.36	0.41	0.48	Income \$
0.00	0.00	0.00	0.00	0.00	Capital Gains \$
0.00	0.00	0.00	0.00	0.00	Income Ratio %
2.53	2.45	2.38	2.29	2.51	Expense Ratio %
4	4	7	5	—	Turnover Rate %
157	410	983	1,523	2,657	Net Assets \$ mil

Tax Analysis

	Tax Adj Return%	% Rank Cat	Tax-Cost Rat	% Rank Cat	Growth of \$10,000
3 Yr (estimated)	10.33	18	0.62	11	—
5 Yr (estimated)	—	—	—	—	—
10 Yr (estimated)	—	—	—	—	—

Potential Capital Gain Exposure: 11% of assets

Morningstar's Take by Jason Kephart 04-25-19

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The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

Other Measures

	Standard Index	Best Fit Index
Alpha	-1.0	-0.5
Beta	1.52	1.14
R-Squared	98	100
Standard Deviation	10.28	11.02
Mean	—	0.91
Sharpe Ratio	—	—

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

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Address: Vanguard Investor Funds **Minimum Purchase:** \$100,000 **Add: \$1** **IRA:** —

Valley Forge, PA 19482
 800-667-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None

Mfn Auto Inv Plan: — **Add:** —
Sales Fees: No-load
Management Fee: 0.00%
Actual Fees: Mgt:0.00% Dist:—
Expense Projections: 3Yr:\$29 5Yr:\$51 10Yr:\$115
Income Distribution: Annually

Fixed-Income Style

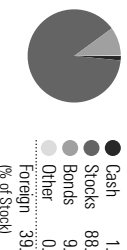
Value Measures	Rel Category	Avg Eff Duration ¹	Avg Eff Maturity	Avg Credit Quality	Avg Wtd Coupon	Price/Cash Flow	Dividend Yield %
Price/Earnings	16.27	0.98	0.98	0.95	0.99	7.66	2.52
Price/Book	2.08	0.95	1.03	0.99	0.96	7.66	1.04
Price/Sales	1.49	0.96	1.03	0.99	0.96	7.66	1.04
Price/Cash Flow	1.49	0.96	1.03	0.99	0.96	7.66	1.04
Dividend Yield %	2.52	1.04	1.04	0.87	0.87	7.66	1.04

Market Cap %

Market Cap %	Rel Category
Large	45.4
Mid	30.4
Small	18.0
Micro	4.4
Avg	43.520

Weightings

Weightings	% of Stocks	Rel Bmark 1
Basic/Alt	4.83	0.92
Cosm/Cyc	11.98	1.06
Finan/Svcs	17.02	0.97
Real Est	4.41	0.48
Sensitive	38.26	1.12
Comm/Svs	3.35	1.04
Energy	5.01	0.99
Industri	11.23	1.00
Technology	18.67	1.27
Defensive	23.50	1.05
Cosm/Def	8.43	1.01
Hlthcare	11.68	1.17
Utilities	3.39	0.85



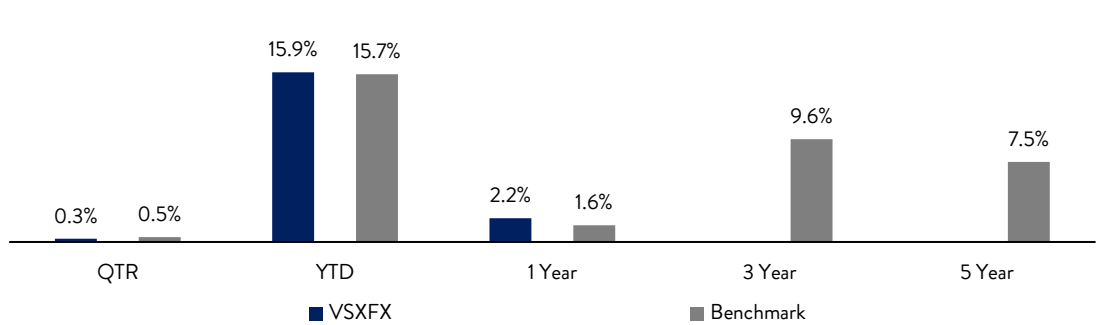
Vanguard Instl Trgt Retire 2065 Instl
VSXFX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	Vanguard Instl Trgt Retire 2065 Instl
Ticker	VSXFX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date 2060+
Benchmark	S&P Target Date 2060+ TR USD
Inception Date	7/12/2017
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	2.33 Years
Fund Size	\$256,637,341

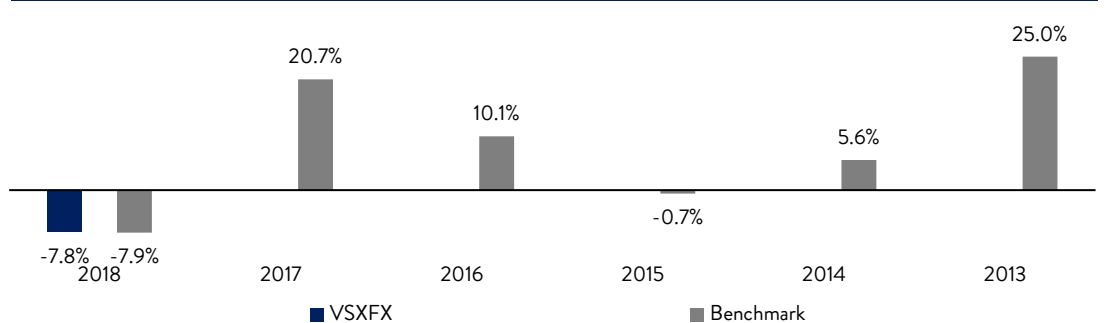
Trailing Performance



Fund Characteristics

	VSXFX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,169	-\$353
P/E Ratio (TTM)	17.53	-0.35
P/B Ratio (TTM)	2.15	-0.06
Est. Dividend Yield	2.55%	0.08%

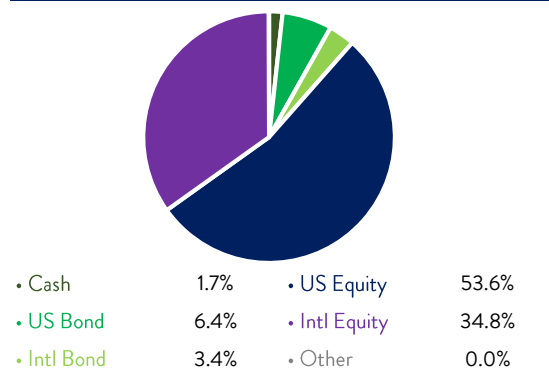
Annual Performance



Sector Allocations

	VSXFX	Category	+/- Category
Materials	4.9%	4.6%	0.2%
Communication Services	3.3%	3.0%	0.3%
Consumer Discretionary	11.8%	11.9%	0.0%
Consumer Staples	8.3%	8.0%	0.3%
Healthcare	11.4%	11.8%	-0.5%
Industrials	11.3%	10.9%	0.4%
Real Estate	4.4%	5.5%	-1.1%
Technology	18.7%	18.9%	-0.3%
Energy	5.1%	5.0%	0.0%
Financial Services	17.4%	17.0%	0.4%
Utilities	3.4%	3.2%	0.2%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire 2065 Instl
VSXFX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VSXFX	0.31%	15.87%	2.22%	-	-	-
• Benchmark	0.45%	15.69%	1.56%	9.61%	7.49%	-
+/- Benchmark	-0.15%	0.18%	0.67%	-	-	-
Peer Group Rank	37	50	31	-	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VSXFX	0.31%	3.56%	11.55%	-11.78%
• Benchmark	0.45%	3.37%	11.42%	-12.22%
+/- Benchmark	-0.15%	0.19%	0.13%	0.44%

Annual Performance	2018	2017	2016	2015	2014	2013
• VSXFX	-7.84%	-	-	-	-	-
• Benchmark	-7.95%	20.75%	10.08%	-0.66%	5.64%	24.96%
+/- Benchmark	0.11%	-	-	-	-	-
Peer Group Rank	26	-	-	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VSXFX	3.94%	0.97%	-0.46%	5.23%
• Benchmark	3.97%	1.77%	-0.90%	5.47%
+/- Benchmark	-0.04%	-0.80%	0.44%	-0.24%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VSXFX	-	-	-	-	-	-
• Benchmark	7.49%	6.87%	7.10%	5.12%	9.50%	10.13%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VSXFX	-	-	-	-
• Benchmark	4.51%	3.59%	5.75%	2.40%
+/- Benchmark	-	-	-	-

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-	0.00	-	0.00	-	-
Beta	-	1.00	-	1.00	-	-
Standard Deviation	-	10.56	-	10.55	-	-
Sharpe Ratio	-	0.77	-	0.64	-	-
Information Ratio	-	-	-	-	-	-
Treynor Ratio	-	7.99	-	6.47	-	-
Upside Capture Ratio	-	100.00	-	100.00	-	-
Downside Capture Ratio	-	100.00	-	100.00	-	-

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VSXFX	-	-	-	-
• Benchmark	4.36%	1.89%	1.09%	4.47%
+/- Benchmark	-	-	-	-

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VSXFX	-	-	-	-
• Benchmark	-7.58%	-0.06%	2.94%	2.07%
+/- Benchmark	-	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire 2065 Instl

Benchmark 1: Morningstar Lifetime Mod 2060 TR USD
Benchmark 2: Morningstar Mod 1gt Risk TR USD

Morningstar Analyst Rating 04-25-19



Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Neutral		

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	—	—	—
2016	—	—	—	—	—
2017	—	—	—	—	5.23
2018	-0.46	0.97	3.94	-11.78	-7.84
2019	11.55	3.56	0.31	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	% Rank Growth of Cat	% Rank \$10,000 Growth of Cat
3 Mo	2.55	0.15	0.28	16	10,255
6 Mo	3.09	-0.02	-0.71	25	10,309
1 Yr	12.58	-0.06	0.13	32	11,258
3 Yr Avg	—	—	—	—	—
5 Yr Avg	—	—	—	—	—
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis

	Tax Adj Return ¹	% Rank Cat	Tax-Cost Rat	% Rank Cat
3 Yr (estimated)	—	—	—	—
5 Yr (estimated)	—	—	—	—
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 2% of assets

Morningstar's Take by Jason Kephart 04-25-19

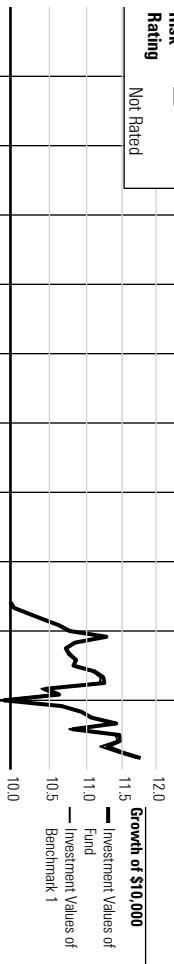
The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 0.20% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue. While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

Historical Profile

Return Risk Rating	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Return	—	—	—	—	—	—	—	—	—	—	—
Risk	—	—	—	—	—	—	—	—	—	—	—
Rating	Not Rated	—	—	—	—	—	—	—	—	—	—



Performance Quartile (within Category)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2009	—	—	—	—	—	—	—	—	—	—	—
2010	—	—	—	—	—	—	—	—	—	—	—
2011	—	—	—	—	—	—	—	—	—	—	—
2012	—	—	—	—	—	—	—	—	—	—	—
2013	—	—	—	—	—	—	—	—	—	—	—
2014	—	—	—	—	—	—	—	—	—	—	—
2015	—	—	—	—	—	—	—	—	—	—	—
2016	—	—	—	—	—	—	—	—	—	—	—
2017	—	—	—	—	—	—	—	—	—	—	—
2018	—	—	—	—	—	—	—	—	—	—	—
2019	—	—	—	—	—	—	—	—	—	—	—

Rating and Risk

Time Period	Load-Adj Return ¹	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	12.58	—	—
3 Yr	—	—	—
5 Yr	—	—	—
10 Yr	—	—	—
Incept	8.10	—	—

Other Measures

Alpha	Standard Index	Best Fit Index
—	—	—
Beta	—	—
R-Squared	—	—
Standard Deviation	—	—
Mean	—	—
Sharpe Ratio	—	—

starts with a 90% equity exposure until a fund hits 25 years to retirement and continues to decline until arriving at a 30% equity stake seven years after retirement. The series' equity glide path deviates the most from the peer average near retirement when account balances can be expected to be near their peaks. Five years from retirement, the glide path has 59% equity exposure and at retirement it has 50% equity exposure; both 6 percentage points higher than the norm, leaving investors more at risk of a bear market near the retirement date.

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

Ticker VSEXFX
Yield 1.5%
Total Assets \$25.7 mil
Investment Style Equity

Master Category Target-Date 2060+
Investment Style Equity

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19	Sector	YTD Ret %	% Assets
⊕ Vanguard Total Stock Mkt	—	—	54.14
⊕ Vanguard Total Intl Stock	—	—	35.75
⊕ Vanguard Total Bond Market	—	—	6.99
⊕ Vanguard Total Intl Bd	—	—	2.98
⊕ Cnt Market Liquidity Rate	—	—	0.13

Total Fixed Income: 0

Date of Maturity	Amount 000	Value \$000	% Assets
—	—	—	—

Equity Style

Style: Blend	Size: Large-Cap	Fixd-Income Style	Value
—	—	—	—

Value Measures

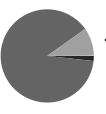
Price/Earnings	16.16	P/E Category	Avg Eff Duration ¹	8.8 Yrs
Price/Book	2.06	0.95	Avg Eff Maturity	5.07
Price/Sales	1.48	0.96	Avg Credit Quality	A
Price/Cash Flow	7.56	0.97	Avg Wtd Coupon	2.91%
Dividend Yield %	2.55	1.05	1 figure provided by fund as of 09-30-19	—

Growth Measures

Long-Term Emgs	9.04	% Rad Category	Sector	% of Stocks	Rad
Book Value	4.28	-1.09	Weights	38.52	0.89
Sales	4.18	1.62	Basic/Alt	4.88	0.93
Cash Flow	7.94	1.03	Cosm/Cyc	11.85	1.05
Historical Emgs	9.48	0.88	Finan/Svcs	17.38	0.99
Market Cap %	—	—	Real Est	4.41	0.48
Giant	45.2	5.5	Sensitive	38.38	1.12
Large	30.4	0.8	Comm/Svs	3.34	1.04
Mid	18.1	43.169	Energy	5.07	1.00
			Industri	11.29	1.00
			Technology	18.88	1.27

Composition - Net

Category	Percentage	Percentage	
Cash	1.7	Defensive	23.10
Stocks	88.4	Cosm/Def	8.28
Bonds	9.8	Hlthcare	11.38
Other	0.1	Utilities	3.44
Foreign	39.4		



Address: Vanguard OneStar Funds
Minimum Purchase: \$10000000 **Add: \$1** **IRA:** —

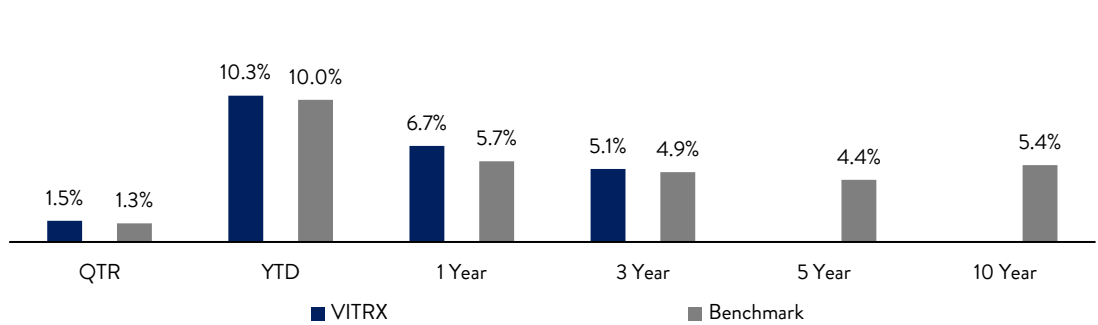
Valley Forge, PA 19482
800-662-7447
www.vanguard.com
07-12-17
Vanguard Group Inc
None

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Product Details

Name	Vanguard Instl Trgt Retire Inc Instl
Ticker	VITRX
Expense Ratio	0.090%
Morningstar Category	US Fund Target-Date Retirement
Benchmark	S&P Target Date Retirement Income TR USD
Inception Date	6/26/2015
Longest Tenured Manager	William A. Coleman;Walter Nejman;
Longest Manager Tenure	4.42 Years
Fund Size	\$6,325,473,601

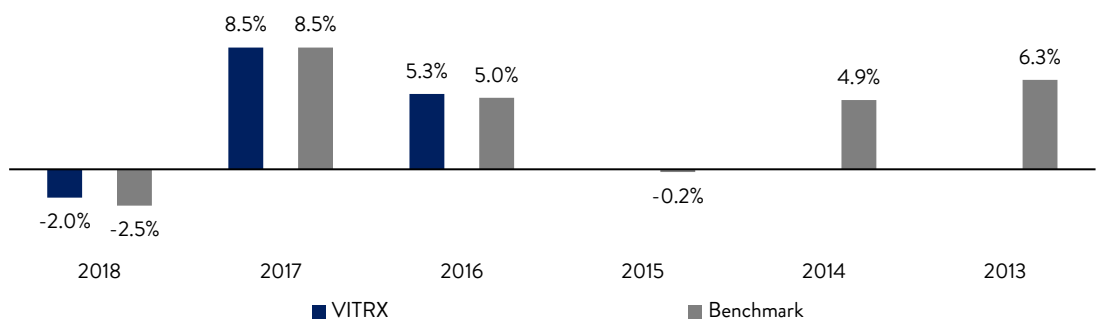
Trailing Performance



Fund Characteristics

	VITRX	+/- Category
% Assets in Top 10 Holdings	N/A (Fund of Funds)	-
Average Market Cap (mil)	\$43,497	\$1,583
P/E Ratio (TTM)	17.61	-0.27
P/B Ratio (TTM)	2.17	-0.06
Est. Dividend Yield	2.52%	-0.02%

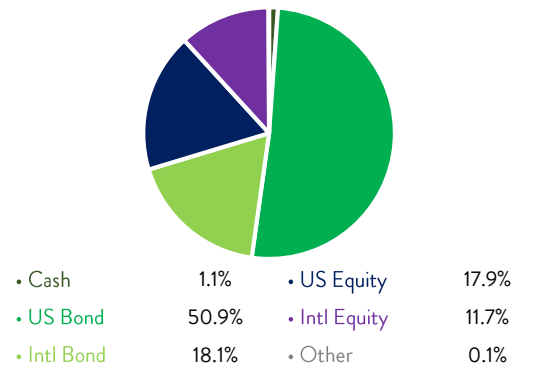
Annual Performance



Sector Allocations

	VITRX	Category	+/- Category
Materials	4.8%	4.2%	0.6%
Communication Services	3.4%	3.0%	0.3%
Consumer Discretionary	12.0%	11.6%	0.4%
Consumer Staples	8.4%	7.7%	0.8%
Healthcare	11.7%	11.5%	0.2%
Industrials	11.2%	10.7%	0.5%
Real Estate	4.4%	8.0%	-3.6%
Technology	18.7%	18.4%	0.2%
Energy	5.0%	4.9%	0.1%
Financial Services	17.0%	16.7%	0.3%
Utilities	3.4%	3.3%	0.1%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Instl Trgt Retire Inc Instl
VITRX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VITRX	1.49%	10.27%	6.73%	5.11%	-	-
• Benchmark	1.32%	9.98%	5.66%	4.91%	4.36%	5.38%
+/- Benchmark	0.17%	0.29%	1.07%	0.21%	-	-
Peer Group Rank	26	51	19	32	-	-

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VITRX	1.49%	2.91%	5.58%	-3.21%
• Benchmark	1.32%	2.82%	5.57%	-3.92%
+/- Benchmark	0.17%	0.09%	0.00%	0.72%

Annual Performance	2018	2017	2016	2015	2014	2013
• VITRX	-1.98%	8.54%	5.29%	-	-	-
• Benchmark	-2.54%	8.54%	5.01%	-0.18%	4.86%	6.28%
+/- Benchmark	0.56%	0.00%	0.28%	-	-	-
Peer Group Rank	13	52	38	-	-	-

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VITRX	1.34%	0.45%	-0.52%	2.05%
• Benchmark	1.55%	0.70%	-0.80%	2.24%
+/- Benchmark	-0.21%	-0.25%	0.28%	-0.19%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VITRX	-	-	-	-	-	-
• Benchmark	4.36%	3.94%	3.89%	3.06%	4.37%	4.56%
+/- Benchmark	-	-	-	-	-	-
Peer Group Rank	-	-	-	-	-	-

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VITRX	1.99%	1.78%	2.47%	-1.00%
• Benchmark	2.06%	1.79%	2.20%	-0.76%
+/- Benchmark	-0.07%	-0.01%	0.27%	-0.24%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.43	0.00	-	0.00	-	0.00
Beta	0.92	1.00	-	1.00	-	1.00
Standard Deviation	3.74	3.99	-	3.87	-	4.30
Sharpe Ratio	0.93	0.82	-	0.86	-	1.11
Information Ratio	0.33	-	-	-	-	-
Treynor Ratio	3.78	3.29	-	3.33	-	4.83
Upside Capture Ratio	97.45	100.00	-	100.00	-	100.00
Downside Capture Ratio	87.80	100.00	-	100.00	-	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VITRX	1.91%	2.03%	2.28%	1.23%
• Benchmark	1.66%	1.86%	2.18%	1.14%
+/- Benchmark	0.26%	0.16%	0.10%	0.09%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VITRX	-2.15%	-	-	-
• Benchmark	-2.09%	-0.87%	1.69%	1.50%
+/- Benchmark	-0.05%	-	-	-

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Instl Trgt Retire Inc Instl

Ticker VITRX **Yield** 2.5% **Total Assets** \$6,325 mil **Master Category** Target-Date Retirement

Benchmark 1: Morningstar Lifetime Mod Incom TR USD
Benchmark 2: Morningstar Mod Trgt Risk TR USD

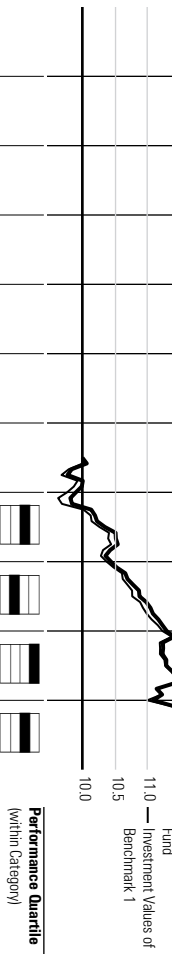
Morningstar Analyst Rating 04-25-19

Historical Profile
 Return Average
 Risk ★★★
 Rating Neutral

Investment Style
 Equity

Morningstar Pillars

Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive



Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.



Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative

Pillar Spectrum
 Positive Negative Neutral

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
NAV	19.60	20.23	21.50	20.51	22.46	22.46	20.51	20.23	21.50	20.51	22.46
Total Return %	—	—	—	—	—	—	5.29	-0.70	8.54	-1.98	11.21
+/- Benchmark 1	—	—	—	—	—	—	-0.70	-0.01	0.22	0.40	0.40
+/- Benchmark 2	—	—	—	—	—	—	-3.28	-6.12	2.77	-3.78	2.21
Income Return %	—	—	—	—	—	—	2.02	2.21	2.21	2.57	1.67
Capital Return %	—	—	—	—	—	—	3.27	6.33	4.36	9.54	9.54
Total Rtn % Rank Cat	—	—	—	—	—	—	40	59	18	50	50
Income \$	—	—	—	—	—	—	0.15	0.39	0.44	0.55	0.34
Capital Gains \$	—	—	—	—	—	—	0.00	0.01	0.00	0.02	0.00
Expense Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Income Ratio %	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00
Turnover Rate %	—	—	—	—	—	—	1	7	7	13	—
Net Assets \$ mil	1,368	2,163	5,351	5,568	6,325	6,325	5,568	2,163	5,351	5,568	6,325

Performance 10-31-19

Year	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	—	—	-2.15	1.23	5.29
2016	2.28	2.03	1.91	-1.00	8.54
2017	2.47	1.78	1.99	2.05	8.54
2018	-0.52	0.45	1.34	-3.21	-1.98
2019	5.58	2.91	1.49	—	—

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	10.63	—	—	—
3 Yr	5.81	Avg	Avg	★★★
5 Yr	—	—	—	—
10 Yr	—	—	—	—
Incept	4.88	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 0

Share change since 08-31-19

- ⊕ Vanguard Total Bond Market
- ⊖ Vanguard Total Stock Mark
- ⊕ Vanguard Smt-Term Intl-P
- ⊖ Vanguard Total Intl Btld
- ⊕ Vanguard Total Intl Stock
- ⊖ Cmt Market Liquidity Rate

Tax Analysis

3 Yr (estimated)	4.87	18	0.89	19
5 Yr (estimated)	—	—	—	—
10 Yr (estimated)	—	—	—	—

Potential Capital Gain Exposure: 6% of assets

Other Measures

Alpha	Beta	R-Squared	Standard Deviation	Mean	Sharpe Ratio
0.6	0.50	87	3.63	5.81	1.12

Equity Style

Style	Blend	Size	Large-Cap
Value Measures	16.27	Price/Earnings	2.08
Price/Book	1.49	Price/Sales	7.65
Price/Cash Flow	0.99	Dividend Yield %	2.52
Avg Eff Duration ¹	1.00	Avg Eff Maturity	7.4 Yrs
Avg Credit Quality	0.96	Avg Wtd Coupon	2.32%

Morningstar's Take by Jason Kephart 04-25-19

The low-cost, straightforward approach behind the Vanguard Target Retirement series of target-date funds continues to earn the series a Morningstar Analyst Rating of Gold.

Over the past decade, this target-date fund series' greatest advantage versus peers has been its low costs. In 2008, for example, the series had a 2.00% expense ratio, which was almost 0.60 percentage points cheaper than the median for the cheapest share class offered by peers. The series' cheapest share class now charges 0.09%, which was 0.41 percentage points cheaper than the median comparable peer at year-end 2018. Given target-date providers' heightened focus on meeting the demand for low costs, the fee compression of target-date funds is likely to continue.

While its fee edge is on the decline, Vanguard's long-standing commitment to low costs inspires confidence that the series will continue to be one of the cheaper options, if no longer the cheapest, over the long term.

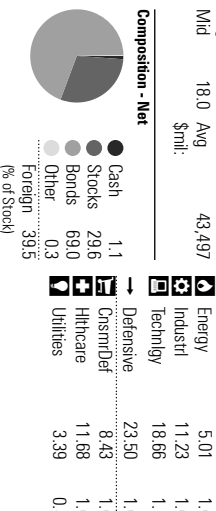
The series' overall stock/bond split across the glide path has been in place since mid-2006. For the most part, it sticks close to the peer norm. The glide path

From a sub-asset-class perspective, the series' stands out for its roughly double allocation to foreign bonds as peers. It uses a currency-hedged index fund that tracks developed-markets debt for the exposure. The currency hedge keeps the volatility of the foreign bonds low, but it also means the performance of the U.S. dollar can have a big impact on returns, particularly when international bonds have historically low yields, like now.

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Address: Vanguard Overseas Funds
 Minimum Purchase: \$100,000.00 Add: \$1 IRA: —

Valley Forge, PA 19482
 800-682-7447
 www.vanguard.com
 06-26-15
 Vanguard Group Inc
 None



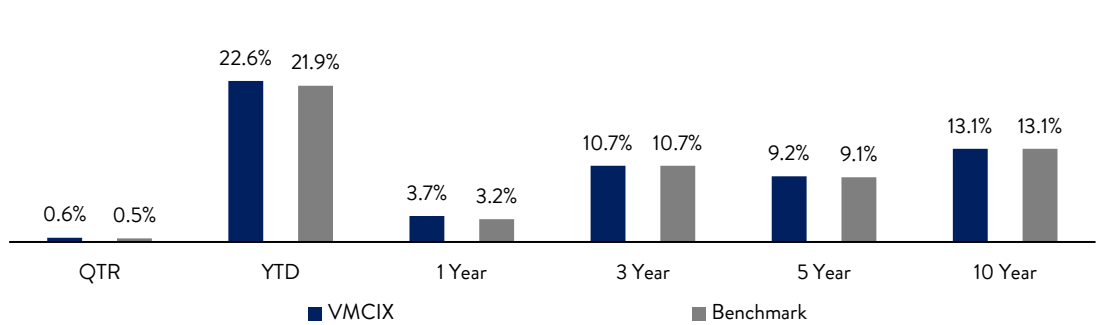
Composition - Net

Category	Percentage
Cash	1.1%
Stocks	29.6%
Bonds	69.0%
Other	0.3%
Foreign (of Stocks)	39.5%

Product Details

Name	Vanguard Mid Cap Index Institutional
Ticker	VMCIX
Expense Ratio	0.040%
Morningstar Category	US Fund Mid-Cap Blend
Benchmark	Russell Mid Cap TR USD
Inception Date	5/21/1998
Longest Tenured Manager	Donald M. Butler
Longest Manager Tenure	21.50 Years
Fund Size	\$106,872,452,212

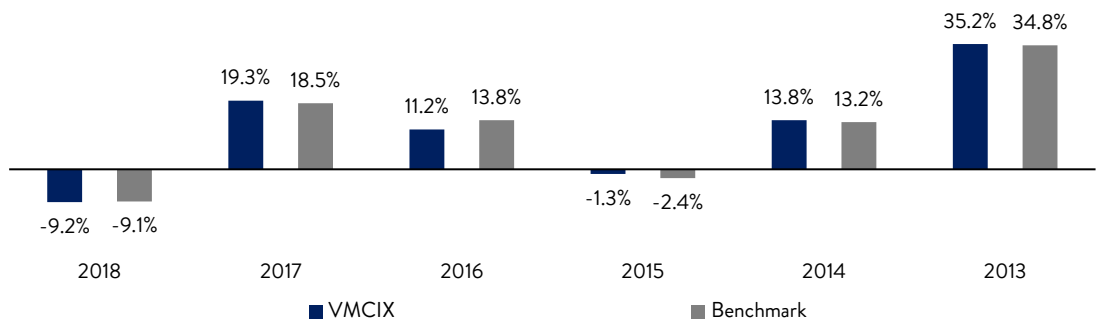
Trailing Performance



Fund Characteristics

VMCIX	+/- Category
% Assets in Top 10 Holdings	6.96%
Average Market Cap (mil)	\$15,818
P/E Ratio (TTM)	20.80
P/B Ratio (TTM)	2.66
Est. Dividend Yield	1.73%

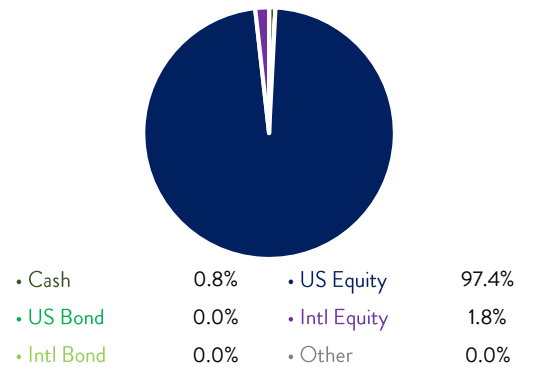
Annual Performance



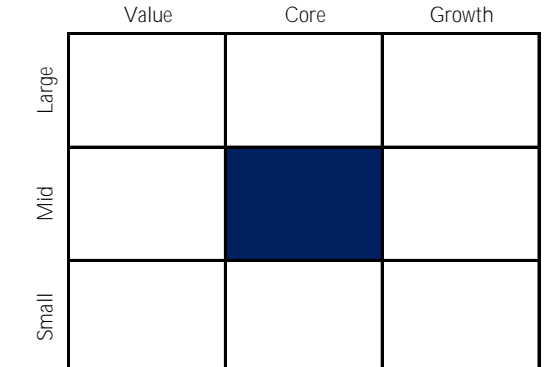
Sector Allocations

VMCIX	Category	+/- Category
Materials	4.6%	5.3%
Communication Services	1.4%	1.3%
Consumer Discretionary	14.8%	14.3%
Consumer Staples	4.3%	4.3%
Healthcare	9.8%	9.7%
Industrials	11.9%	13.6%
Real Estate	9.8%	9.4%
Technology	19.6%	18.3%
Energy	4.3%	3.4%
Financial Services	12.4%	16.1%
Utilities	7.2%	4.3%
Other	0.0%	0.0%

Asset Allocation



Morningstar Style Box



Vanguard Mid Cap Index Institutional
VMCIX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VMCIX	0.60%	22.62%	3.65%	10.68%	9.21%	13.06%
• Benchmark	0.48%	21.93%	3.19%	10.69%	9.10%	13.07%
+/- Benchmark	0.12%	0.69%	0.47%	-0.01%	0.11%	-0.01%
Peer Group Rank	45	14	19	18	12	5

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VMCIX	0.60%	4.36%	16.78%	-15.47%
• Benchmark	0.48%	4.13%	16.54%	-15.37%
+/- Benchmark	0.12%	0.24%	0.25%	-0.09%

Annual Performance	2018	2017	2016	2015	2014	2013
• VMCIX	-9.24%	19.29%	11.23%	-1.33%	13.78%	35.17%
• Benchmark	-9.06%	18.52%	13.80%	-2.44%	13.22%	34.76%
+/- Benchmark	-0.18%	0.78%	-2.57%	1.11%	0.57%	0.41%
Peer Group Rank	27	20	71	20	11	44

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VMCIX	4.68%	2.57%	0.00%	5.67%
• Benchmark	5.00%	2.82%	-0.46%	6.07%
+/- Benchmark	-0.32%	-0.25%	0.46%	-0.40%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VMCIX	9.21%	8.83%	8.86%	6.22%	11.68%	12.31%
• Benchmark	9.10%	8.63%	8.81%	6.26%	11.65%	12.22%
+/- Benchmark	0.11%	0.20%	0.05%	-0.04%	0.03%	0.09%
Peer Group Rank	12	8	8	12	13	19

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VMCIX	3.44%	2.78%	6.19%	2.13%
• Benchmark	3.47%	2.70%	5.15%	3.21%
+/- Benchmark	-0.04%	0.08%	1.04%	-1.07%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	0.10	0.00	0.13	0.00	-0.06	0.00
Beta	0.99	1.00	1.00	1.00	1.01	1.00
Standard Deviation	13.30	13.44	12.77	12.75	14.16	14.05
Sharpe Ratio	0.71	0.70	0.68	0.67	0.90	0.91
Information Ratio	-0.01	-	0.10	-	-0.01	-
Treynor Ratio	9.19	9.08	8.21	8.08	12.45	12.52
Upside Capture Ratio	98.57	100.00	99.63	100.00	100.27	100.00
Downside Capture Ratio	97.58	100.00	98.56	100.00	100.57	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VMCIX	5.19%	2.32%	1.19%	3.44%
• Benchmark	4.52%	3.18%	2.24%	3.62%
+/- Benchmark	0.67%	-0.86%	-1.06%	-0.18%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VMCIX	-7.45%	-1.16%	4.28%	6.64%
• Benchmark	-8.01%	-1.54%	3.95%	5.94%
+/- Benchmark	0.56%	0.37%	0.33%	0.70%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Mid Cap Index Institutional

Ticker VMCIX **Yield** 1.4% **Total Assets** \$78.970 mil **Master Category** Mid-Cap Blend

Benchmark 1: Russell Mid Cap TR USD
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 08-23-19

Gold

Morningstar Pillars

Process **+** Positive
 Performance **+** Positive
 People **+** Positive
 Parent **+** Positive
 Price **+** Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold Silver Bronze Neutral Negative
 Pillar Spectrum
 Positive Negative Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	4.28	-1.16	-7.45	3.44	-1.33
2016	1.19	2.32	5.19	2.13	11.23
2017	6.19	2.78	3.44	5.67	19.29
2018	0.00	2.57	4.68	-15.47	-9.24
2019	16.78	4.36	0.60	—	—

Trailing

	Total Return ¹	+/- Benchmark ²	%Rank Cat ³	Growth of \$10,000 ⁴
3 Mo	0.41	0.30	-2.02	45
6 Mo	2.32	0.47	-1.83	25
1 Yr	14.41	0.69	0.08	14
3 Yr Avg	12.25	-0.03	-2.66	19
5 Yr Avg	8.72	0.05	-2.06	15
10 Yr Avg	13.69	-0.01	0.00	5
15 Yr Avg	9.82	0.02	0.77	3

Tax Analysis Tax Adj. Rate: 11.75 % Rank Cat: 12 Tax-Cost Rat: 0.44 % Rank Cat: 15
 3 Yr (estimated): 8.15 11 0.52 17
 10 Yr (estimated): 13.25 3 0.39 11

Potential Capital Gain Exposure: 26% of assets

Morningstar's Take by Venkata Sai Uppaluri 08-23-19

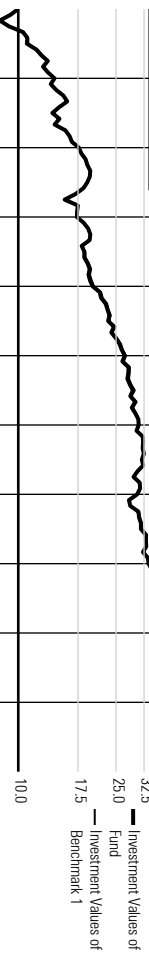
Vanguard Mid-Cap Index Admiral VIMAX is an outstanding way to invest in US mid-cap stocks. As one of the cheapest and most broadly diversified market-cap-weighted funds in the category, it earns a Morningstar Analyst Rating of Gold.

This fund tracks the CRSP U.S. Mid-Cap Index, which offers a broad, market-cap-weighted exposure to U.S. mid-cap stocks. The resulting portfolio accurately represents the composition of the U.S. mid-cap market segment. The fund's sector exposures are similar to the mid-blend Morningstar Category average, though it tends to have a larger market-cap orientation than most of its peers.

Market-cap weighting reflects the market's collective wisdom. Market prices tend to do a good job reflecting information that's available to the public, making it hard to beat the market, especially over long term. However, over shorter time periods, investors may overreact and either drive prices too high or low. Market-cap weighting will increase or decrease exposure to stocks accordingly. That said, the fund's

Historical Profile

Return Risk Rating	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2009	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2010	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2011	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2012	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2013	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2014	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2015	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2016	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2017	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2018	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest
2019	High	Below Avg	★★★★★	★★★★	★★★	★★	★	Lowest



Performance Quartile (within Category)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	History
NAV	16.40	20.36	19.69	22.52	30.08	33.79	32.85	35.99	42.32	37.78	46.37	46.37
Total Return %	40.51	25.67	-1.96	16.01	35.17	13.78	-1.33	11.23	19.29	-9.24	23.98	23.98
+/- Benchmark 1	0.03	0.19	-0.41	-1.27	0.41	0.57	1.11	-2.57	0.78	-0.18	0.77	0.77
+/- Benchmark 2	14.05	10.60	-4.07	0.00	2.78	0.09	-2.72	-0.73	-2.54	-4.86	0.82	0.82
Income Return %	1.74	1.52	1.34	1.64	1.58	1.45	1.44	1.60	1.61	1.64	1.20	1.20
Capital Return %	38.78	24.15	-3.29	14.37	33.59	12.33	-2.77	9.62	17.69	-10.88	22.78	22.78
Total Rtn % Rank Cat	24	26	32	55	40	5	17	73	17	32	10	10
Income \$	0.21	0.25	0.27	0.32	0.36	0.44	0.49	0.52	0.58	0.69	0.45	0.45
Capital Gains \$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Expense Ratio %	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.05	0.04	0.04	0.04	0.04
Income Ratio %	1.51	1.43	1.31	1.52	1.32	1.45	1.48	1.55	1.47	1.62	1.54	1.54
Turnover Rate %	21	16	22	17	32	11	15	15	14	16	—	—
Net Assets \$mil	5,960	7,795	5,611	7,057	9,368	11,172	12,278	14,540	18,222	16,524	20,121	20,121

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	14.41	+Avg	-Avg	★★★★
3 Yr	12.25	+Avg	-Avg	★★★★
5 Yr	8.72	+Avg	-Avg	★★★★
10 Yr	13.69	High	-Avg	★★★★★
Incept	9.84	—	—	—

Other Measures

Measure	Value	Standard Index	Best Fit Index
Alpha	-2.9	-2.9	-0.5
Beta	1.05	1.05	0.97
R-Squared	94	94	99
Standard Deviation	13.09	13.09	12.25
Mean	12.25	12.25	12.25
Sharpe Ratio	0.82	0.82	0.82

Portfolio Analysis 09-30-19

Total Stocks: 364

Share change since 08-31-19

⊖ Cnt Market Liquidity Rate
 ⊕ Advanced Micro Devices In
 ⊕ Newmont Goldcorp Corp
 ⊕ ONEOK Inc
 ⊕ Twitter Inc
 ⊕ WEC Energy Group Inc
 ⊕ Amphenol Corp Class A
 ⊕ Motorola Solutions Inc
 ⊕ Eversource Energy
 ⊕ Dollar Tree Inc
 ⊕ SBA Communications Corp
 ⊕ Digital Realty Trust Inc
 ⊕ IDVA Holdings Inc
 ⊕ Transdigm Group Inc
 ⊕ FirstEnergy Corp
 ⊕ IHS Market Ltd
 ⊕ KLA Corp
 ⊕ Fleeter Technologies Inc
 ⊕ Verisk Analytics Inc
 ⊕ Willis Towers Watson PLC

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	Sector	% of Stocks	% of Benchmark 1
Large	Giant	0.0	0.0	Technology	83.80	0.79
Mid	Large	31.3	31.3	Basic/Mat	18.41	0.74
Small	Mid	68.7	14.78	Energy	34.28	0.73
Micro	Small	0.0	12.40	Technology	4.28	0.72
Avg \$mil	Avg \$mil	0.0	9.77	Utilities	38.85	0.71
15.818	15.818	0.96	37.21	Technology	91.41	0.61

Value Measures

Measure	Value	Rel Category
Price/Earnings	18.41	1.11
Price/Book	2.51	1.13
Price/Sales	1.65	1.20
Price/Cash Flow	9.37	1.13
Dividend Yield %	1.73	1.06
Growth Measures	% Rel Category	
Long-Term Engfs	10.59	0.99
Book Value	4.71	0.94
Sales	6.53	1.09
Cash Flow	8.47	1.13
Historical Engfs	12.80	0.61

Profitability

Measure	Value	%
Return on Equity	15.42	
Return on Assets	5.59	
Net Margin	11.74	



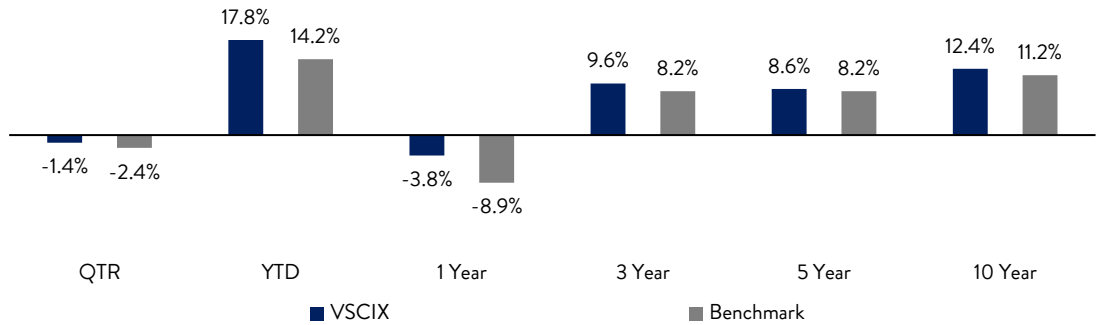
Composition - Net

Asset Class	Percentage
Cash	0.8
Stocks	99.2
Bonds	0.0
Other	0.0
Foreign (% of Stock)	1.8

Product Details

Name	Vanguard Small Cap Index I
Ticker	VSCIX
Expense Ratio	0.040%
Morningstar Category	US Fund Small Blend
Benchmark	Russell 2000 TR USD
Inception Date	7/7/1997
Longest Tenured Manager	Gerard C. O'Reilly; William A. Coleman;
Longest Manager Tenure	3.58 Years
Fund Size	\$91,512,896,486

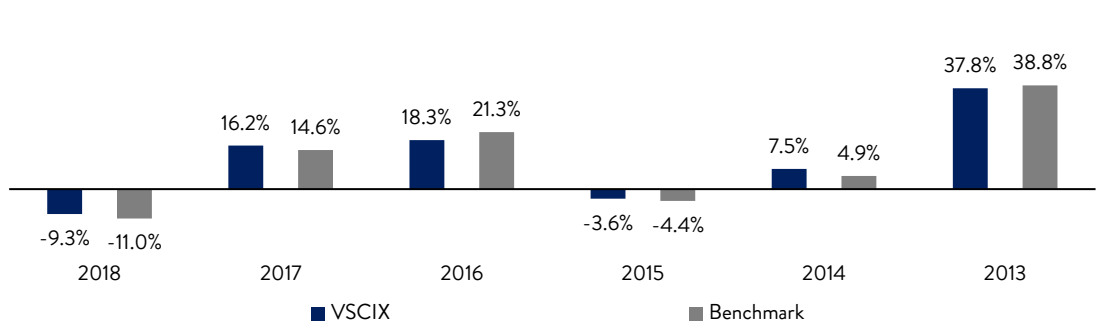
Trailing Performance



Fund Characteristics

	VSCIX	+/- Category
% Assets in Top 10 Holdings	3.25%	-15.86%
Average Market Cap (mil)	\$4,063	\$1,033
P/E Ratio (TTM)	17.82	-0.38
P/B Ratio (TTM)	2.14	0.07
Est. Dividend Yield	1.80%	0.36%

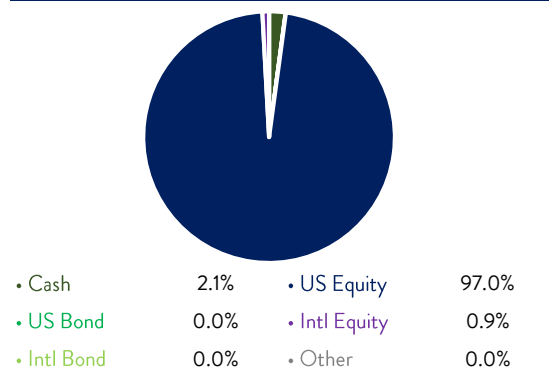
Annual Performance



Sector Allocations

	VSCIX	Category	+/- Category
Materials	5.4%	5.6%	-0.2%
Communication Services	0.8%	0.9%	-0.1%
Consumer Discretionary	13.4%	13.2%	0.2%
Consumer Staples	3.8%	4.0%	-0.2%
Healthcare	10.9%	11.3%	-0.4%
Industrials	14.8%	17.0%	-2.3%
Real Estate	12.3%	8.4%	3.9%
Technology	18.3%	15.3%	3.0%
Energy	2.7%	3.1%	-0.5%
Financial Services	14.2%	17.7%	-3.5%
Utilities	3.4%	3.5%	0.0%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box

	Value	Core	Growth
Large			
Mid			
Small			

Vanguard Small Cap Index I
VSCIX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VSCIX	-1.45%	17.81%	-3.80%	9.64%	8.63%	12.40%
• Benchmark	-2.40%	14.18%	-8.89%	8.23%	8.19%	11.19%
+/- Benchmark	0.95%	3.63%	5.09%	1.41%	0.44%	1.20%
Peer Group Rank	57	19	17	12	23	10

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VSCIX	-1.45%	2.87%	16.20%	-18.34%
• Benchmark	-2.40%	2.10%	14.58%	-20.20%
+/- Benchmark	0.95%	0.77%	1.62%	1.86%

Annual Performance	2018	2017	2016	2015	2014	2013
• VSCIX	-9.32%	16.25%	18.32%	-3.63%	7.53%	37.80%
• Benchmark	-11.01%	14.65%	21.31%	-4.41%	4.89%	38.82%
+/- Benchmark	1.70%	1.60%	-2.99%	0.78%	2.64%	-1.02%
Peer Group Rank	21	14	76	44	20	54

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VSCIX	4.78%	6.21%	-0.21%	5.10%
• Benchmark	3.58%	7.75%	-0.08%	3.34%
+/- Benchmark	1.20%	-1.55%	-0.12%	1.76%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VSCIX	8.63%	7.73%	7.92%	5.26%	11.49%	12.41%
• Benchmark	8.19%	7.06%	7.05%	4.41%	11.07%	12.46%
+/- Benchmark	0.44%	0.66%	0.86%	0.85%	0.42%	-0.05%
Peer Group Rank	23	18	13	17	22	31

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VSCIX	4.59%	1.94%	3.74%	6.13%
• Benchmark	5.67%	2.46%	2.47%	8.83%
+/- Benchmark	-1.08%	-0.52%	1.27%	-2.71%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	1.81	0.00	1.06	0.00	1.70	0.00
Beta	0.90	1.00	0.89	1.00	0.93	1.00
Standard Deviation	15.75	17.21	14.65	16.16	16.27	17.29
Sharpe Ratio	0.56	0.45	0.57	0.50	0.77	0.67
Information Ratio	0.49	-	0.15	-	0.48	-
Treynor Ratio	8.87	6.61	8.52	7.16	12.71	10.64
Upside Capture Ratio	94.75	100.00	89.58	100.00	95.09	100.00
Downside Capture Ratio	85.74	100.00	83.07	100.00	86.95	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VSCIX	6.15%	3.98%	1.00%	3.12%
• Benchmark	9.05%	3.79%	-1.52%	3.59%
+/- Benchmark	-2.89%	0.19%	2.52%	-0.48%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VSCIX	-10.32%	-0.56%	4.81%	6.83%
• Benchmark	-11.92%	0.42%	4.32%	9.73%
+/- Benchmark	1.59%	-0.98%	0.49%	-2.89%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Small Cap Index I

Ticker VSCIX **Yield** 1.4% **Total Assets** \$66,031 mil **Mistar Category** Small Blend

Benchmark 1: Russell 2000 TR USD
Benchmark 2: S&P 500 TR USD

Morningstar Analyst Rating 07-10-19



Morningstar Pillars

Process	Positive
Performance	Positive
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

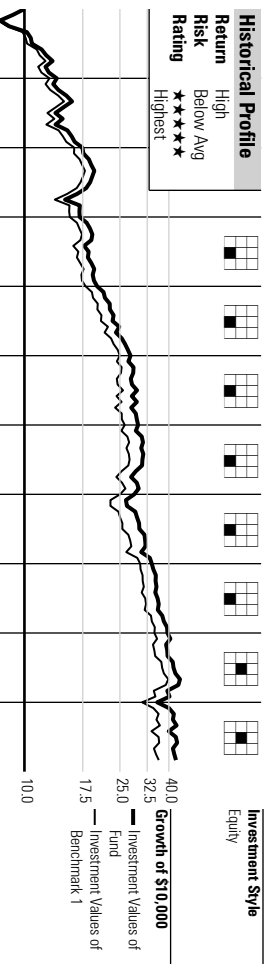
Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum



Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	4.81	-0.56	-10.32	3.12	-3.63
2016	1.00	3.98	6.15	6.13	18.32
2017	3.74	1.94	4.59	5.10	16.25
2018	-0.21	6.21	4.78	-18.34	-9.32
2019	16.20	2.87	-1.45	—	—



Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	History
Return	27.50	34.77	33.39	38.76	52.71	55.87	53.05	61.77	70.78	63.22	74.97	NAV
Risk	36.40	27.95	-2.65	18.26	37.80	7.53	-3.63	18.32	16.25	-9.32	19.69	Total Return %
Rating	9.23	1.09	1.53	1.91	-1.02	2.64	0.78	-2.99	1.60	1.70	2.51	+/- Benchmark 1
	9.94	12.88	-4.76	2.26	5.41	-6.16	-5.02	6.36	-5.58	-4.93	-3.47	+/- Benchmark 2
	1.58	1.51	1.33	2.17	1.79	1.53	1.42	1.76	1.57	1.51	1.08	Income Return %
	34.82	26.43	-3.97	16.09	36.01	6.00	-5.05	16.55	14.68	-10.83	18.61	Capital Return %
	24	23	41	20	46	13	34	13	13	20	20	Capital Return % Rank Cat
	0.32	0.42	0.46	0.73	0.69	0.81	0.79	0.93	0.96	1.06	0.68	Income \$
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Capital Gains \$
	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.05	0.04	0.04	0.04	Expense Ratio %
	1.50	1.42	1.31	1.98	1.55	1.55	1.46	1.68	1.49	1.47	1.37	Income Ratio %
	14	12	17	14	29	10	11	14	15	15	15	Turnover Rate %
	4.162	5.711	4.894	5.955	9.185	9.975	10.036	13.030	15.352	14.454	16.941	Net Assets \$/mil

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Rtn vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	8.70	High	-Avg	★★★★
3 Yr	11.77	High	-Avg	★★★★
5 Yr	8.03	+Avg	-Avg	★★★★
10 Yr	13.35	High	-Avg	★★★★★
Incept	8.78	—	—	—

Portfolio Analysis 09-30-19

Total Stocks: 1381

Stock	Share change since 08-31-19	Sector	YTD Ret %	% Assets
⊖ Atmos Energy Corp	—	Utilities	23.01	0.37
⊖ Burlington Stores Inc	—	Constr Def	18.13	0.36
⊖ IDEXX Corp	—	Industri	24.71	0.34
⊖ Lerdos Holdings Inc	—	Technology	65.42	0.34
⊖ Stenis PLC	—	Hlth Care	33.48	0.34
⊖ Teldyne Technologies Inc	—	Technology	59.17	0.32
⊖ Zebra Technologies Corp	—	Technology	49.39	0.31
⊖ Equity Lifestyle Properti	—	Real Est	49.90	0.30
⊖ UGI Corp	—	Utilities	8.99	0.29
⊖ West Pharmaceutical Servi	—	Hlth Care	47.35	0.29
⊖ Tyler Technologies Inc	—	Technology	44.51	0.28
⊖ Allegion PLC	—	Industri	46.59	0.27
⊖ Aqua America Inc	—	Utilities	34.55	0.27
⊖ Booz Allen Hamilton Holdi	—	Industri	57.67	0.27
⊖ Insulet Corp	—	Hlth Care	83.21	0.27
⊖ Ieradyne Inc	—	Technology	96.95	0.27
⊖ EPAM Systems Inc	—	Technology	51.68	0.26
⊖ National Real Propertie	—	Real Est	25.62	0.26
⊖ PerkinElmer Inc	—	Hlth Care	9.79	0.26
⊖ DyrusStone Inc	—	Real Est	37.48	0.25

Tax Analysis

	Tax Adj Prof%	%Rank Cat	Tax-Cost Rat	%Rank Cat	Growth of \$10,000
3 Yr (estimated)	11.24	6	0.47	81	9,888
5 Yr (estimated)	7.42	3	0.56	13	10,870
10 Yr (estimated)	12.83	6	0.45	11	14,712

Other Measures

	Standard Index	Best Fit Index
Alpha	-4.6	1.8
Beta	1.17	0.94
R-Squared	83	99
Standard Deviation	15.48	11.77
Mean	11.77	11.77
Sharpe Ratio	0.69	0.69

Morningstar's Take by Daniel Sotiroff 07-10-19
Vanguard Small-Cap Index Fund is one of the best U.S. small-cap funds available. Its well-diversified portfolio features a rock-bottom expense ratio that should provide a sustainable edge over its Morningstar Category peers. It earns a Morningstar Analyst Rating of Gold.

The fund tracks the CRSP U.S. Small Cap Index, a market-cap-weighted index that targets stocks landing in the smallest 85% to 98% of the market as ranked by market capitalization. Most of these small-cap names haven't established durable competitive advantages and tend to be riskier than their large-cap counterparts. But this fund's broad reach helps it effectively diversify firm-specific risk while accurately representing the small-cap segment of the market. Market-cap weighting relies on the information aggregated in stock prices to weight its holdings. Most of the time, the risks of portfolio concentration that may sully index funds are more than offset by the cost advantages and efficiency gained from market-cap weighting.

The fund layers two more advantages on top of this cost-efficient approach to further reduce its transaction

costs. It invests in larger stocks than many of its category peers. These stocks tend to be more liquid and less expensive to trade than their smaller counterparts. And its index employs generous buffering rules, waiting until stocks are solidly in an adjacent size segment before trading them. It moves only half of the position at a time and spreads the trade across five days to further reduce market impact costs. The fund's average 10-year turnover of 15% is less than one fourth of the turnover for the average fund in the small-cap blend category.

Keeping costs low has translated into exceptional category-relative performance. The fund beat the category average by 2.5 percentage points per year with similar risk over the trailing 10 years through May 2019. Its low fee and cost-effective approach were the biggest contributors to its outperformance. This fund stays near fully invested, so it suffered a larger drawdown than the category average during the financial crisis. But its smaller cash drag can pay off during bull markets.

Address:

Vanguard Index Funds
Valley Forge, PA 19482
888-809-8102
www.vanguard.com
Inception: 07-07-97
Advisor: Vanguard Group Inc
Subadvisor: Vanguard

Minimum Purchase: \$500,000 **Add:** \$1 **IRA:** —

Min Auto Inv Plan: —
Sales Fees: 0.04%
Management Fee: No-load
Actual Fees: Mgr 0.04% Dist: —
Expense Projections: 3Yr: \$13 5Yr: \$23 10Yr: \$51
Income Distribution: Quarterly

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of Stocks	Rank 1
Large	Giant	0.0	Cyclical	45.35	1.13
Mid	Large	0.4	Basic/Mat	5.43	1.53
Small	Mid	58.5	ConsM/Cyc	13.38	1.32
Micro	Small	39.9	FinanSvcs	14.24	0.84
	Avg \$/mil	1.2	Real Est	12.30	1.28
		4.063	Sensitive	36.56	1.02
			ConsSvcs	0.83	0.30
			Energy	2.66	0.87
			Industri	14.77	0.88
			Technology	18.30	1.39
			Defensive	1.18	0.76
			ConsM/Def	3.80	1.10
			Hlthcare	10.86	0.66
			Utilities	3.45	0.86

Value Measures

Value Measure	Value	Rel Category
Price/Earnings	17.12	1.09
Price/Book	1.94	1.06
Price/Sales	1.23	1.18
Price/Cash Flow	7.26	1.00
Dividend Yield %	1.80	1.16
Growth Measures	% Rel Category	
Long-Term Engfs	10.82	0.99
Book Value	5.54	-1.45
Sales	5.11	0.91
Cash Flow	5.82	0.83
Historical Engfs	10.68	0.57

Profitability

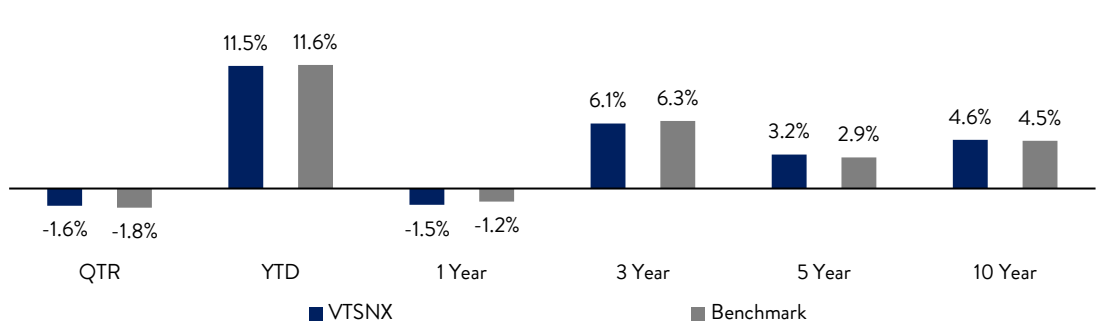
Return on Equity	Return on Assets	Net Margin
11.75	3.32	10.84



Product Details

Name	Vanguard Total Intl Stock Index I
Ticker	VTSNX
Expense Ratio	0.080%
Morningstar Category	US Fund Foreign Large Blend
Benchmark	MSCI ACWI Ex USA NR USD
Inception Date	11/29/2010
Longest Tenured Manager	Michael Perre
Longest Manager Tenure	11.25 Years
Fund Size	\$16,563,597,463

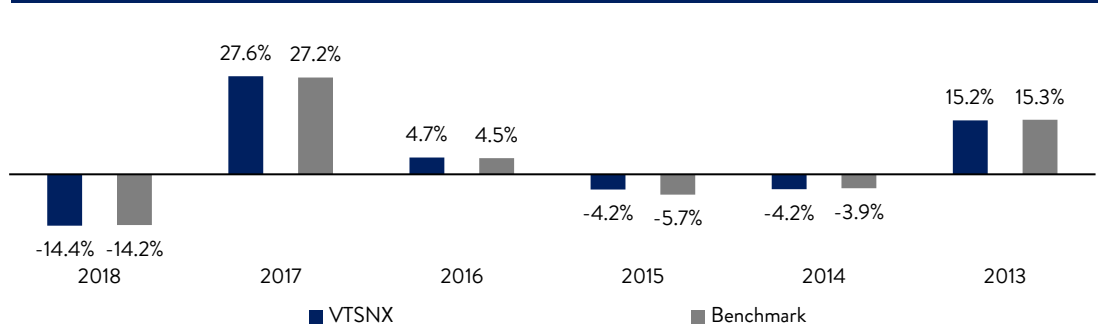
Trailing Performance



Fund Characteristics

	VTSNX	+/- Category
% Assets in Top 10 Holdings	8.36%	-5.19%
Average Market Cap (mil)	\$22,637	-\$16,490
P/E Ratio (TTM)	14.65	-1.02
P/B Ratio (TTM)	1.52	-0.14
Est. Dividend Yield	3.52%	0.02%

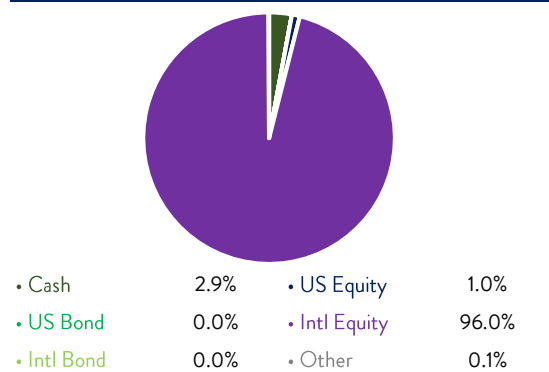
Annual Performance



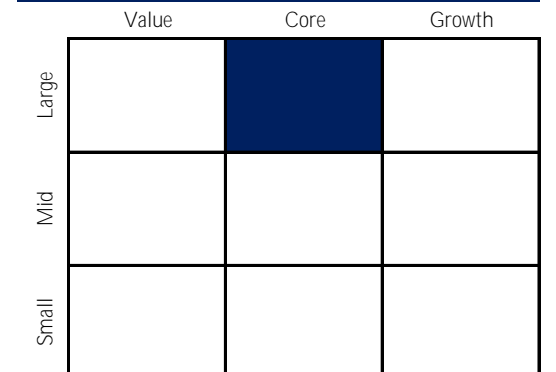
Sector Allocations

	VTSNX	Category	+/- Category
Materials	8.2%	7.6%	0.6%
Communication Services	3.7%	3.7%	0.0%
Consumer Discretionary	11.6%	11.8%	-0.2%
Consumer Staples	9.7%	11.2%	-1.6%
Healthcare	8.5%	10.7%	-2.1%
Industrials	12.2%	13.5%	-1.4%
Real Estate	4.1%	2.8%	1.2%
Technology	12.1%	11.0%	1.1%
Energy	6.5%	5.6%	0.8%
Financial Services	20.2%	19.0%	1.2%
Utilities	3.3%	3.0%	0.4%
Other	0.0%	0.0%	0.0%

Asset Allocation



Morningstar Style Box



Vanguard Total Intl Stock Index I
VTSNX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• VTSNX	-1.61%	11.47%	-1.53%	6.09%	3.17%	4.55%
• Benchmark	-1.80%	11.56%	-1.23%	6.33%	2.90%	4.45%
+/- Benchmark	0.19%	-0.09%	-0.30%	-0.25%	0.27%	0.10%
Peer Group Rank	61	68	38	33	37	55

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• VTSNX	-1.61%	2.75%	10.26%	-11.66%
• Benchmark	-1.80%	2.98%	10.31%	-11.46%
+/- Benchmark	0.19%	-0.23%	-0.05%	-0.20%

Annual Performance	2018	2017	2016	2015	2014	2013
• VTSNX	-14.39%	27.55%	4.70%	-4.24%	-4.15%	15.15%
• Benchmark	-14.20%	27.19%	4.50%	-5.66%	-3.87%	15.29%
+/- Benchmark	-0.20%	0.36%	0.20%	1.42%	-0.29%	-0.13%
Peer Group Rank	40	26	13	81	32	85

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• VTSNX	0.54%	-3.17%	-0.45%	4.87%
• Benchmark	0.71%	-2.61%	-1.18%	5.00%
+/- Benchmark	-0.16%	-0.56%	0.73%	-0.13%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• VTSNX	3.17%	2.34%	2.79%	0.97%	4.49%	6.44%
• Benchmark	2.90%	2.16%	2.57%	0.68%	4.12%	5.99%
+/- Benchmark	0.27%	0.18%	0.23%	0.29%	0.37%	0.45%
Peer Group Rank	37	33	23	21	36	36

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• VTSNX	5.97%	5.83%	8.46%	-1.92%
• Benchmark	6.16%	5.78%	7.86%	-1.25%
+/- Benchmark	-0.20%	0.05%	0.60%	-0.66%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.22	0.00	0.32	0.00	0.11	0.00
Beta	1.00	1.00	0.96	1.00	1.00	1.00
Standard Deviation	11.51	11.45	12.09	12.47	14.70	14.55
Sharpe Ratio	0.43	0.45	0.23	0.21	0.34	0.33
Information Ratio	-0.19	-	0.17	-	0.05	-
Treynor Ratio	4.47	4.72	2.24	1.88	4.00	3.91
Upside Capture Ratio	98.68	100.00	96.49	100.00	100.57	100.00
Downside Capture Ratio	99.84	100.00	94.31	100.00	100.15	100.00

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• VTSNX	6.66%	0.24%	-0.16%	2.75%
• Benchmark	6.91%	-0.64%	-0.38%	3.24%
+/- Benchmark	-0.25%	0.88%	0.22%	-0.50%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• VTSNX	-11.59%	1.30%	4.07%	-4.19%
• Benchmark	-12.17%	0.53%	3.49%	-3.87%
+/- Benchmark	0.58%	0.78%	0.58%	-0.32%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.

Vanguard Total Intl Stock Index I

Ticker VTSNX **Yield** 2.9% **Total Assets** \$380,887 mil **Miscr Category** Foreign Large Blend

Benchmark 1: MSCI ACWI Ex USA NR USD
Benchmark 2: MSCI ACWI Ex USA NR USD



Morningstar Analyst Rating 12-18-18

Morningstar Pillars

Process	Positive
Performance	Neutral
People	Positive
Parent	Positive
Price	Positive

Morningstar Analyst Rating

Morningstar evaluates mutual funds based on five key pillars, which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum

Gold	Silver	Bronze	Neutral	Negative
Positive	Negative	Negative	Neutral	Neutral

Performance 10-31-19

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Total
2015	4.07	1.30	-11.59	2.75	-4.24
2016	-0.16	0.24	6.66	-1.92	4.70
2017	8.46	5.83	5.97	4.87	27.55
2018	-0.45	-3.17	0.54	-11.66	-14.39
2019	10.26	2.75	-1.61	—	—

Trailing

	Total Return ¹	+/- Benchmark	+/- Benchmark	%Rank Cat	Growth of \$10,000
3 Mo	3.76	0.89	0.89	57	10,376
6 Mo	1.78	-0.19	-0.19	65	10,178
1 Yr	11.10	-0.17	-0.17	37	11,110
3 Yr Avg	7.92	-0.15	-0.15	46	12,569
5 Yr Avg	3.93	0.11	0.12	46	12,128
10 Yr Avg	—	—	—	—	—
15 Yr Avg	—	—	—	—	—

Tax Analysis

	Tax Adj Return	%Rank Cat	Tax-Cost Rat	%Rank Cat
3 Yr (estimated)	7.06	36	0.80	39
5 Yr (estimated)	3.07	36	0.83	45
10 Yr (estimated)	—	—	—	—

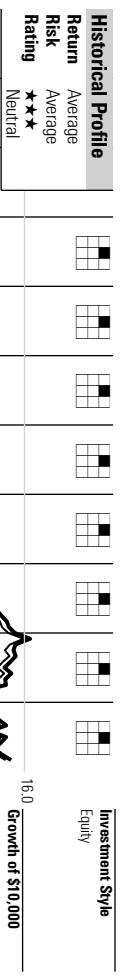
Potential Capital Gain Exposure: 15% of assets

Morningstar's Take by Daniel Sotiroff 12-18-18

Vanguard Total International Stock Index is a great foreign-stock fund. Its low-cost, low-turnover portfolio is one of the most comprehensive in the foreign large-blend Morningstar Category, earning a Morningstar Analyst Rating of Gold.

The fund tracks the FTSE Global All Cap ex US Index, which targets stocks of all sizes from more than 40 overseas developed and emerging markets. It weights its holdings by market capitalization, an approach that benefits investors by capturing the market's consensus opinion of each stock's value while mitigating turnover. Markets usually get long-term prices correct, but they occasionally make mistakes. Investors can drive valuations up if they get excited about a particular area of the market, and market-cap-weighting will increase the fund's exposure to it. Broad diversification mitigates the impact of the worst performers on the fund's overall performance. The portfolio includes more than 6,000 stocks, and its 10 largest names account for only 8% of assets. Non-US stock funds like this one can diversify a U.S. stock portfolio. The portfolio's sector weightings

Address: Vanguard Star Funds
 Valley Forge PA 19482
 800-662-7447
Web Address: www.vanguard.com
Inception: 11-29-10
Advisor: Vanguard Group Inc
Subadvisor: None



Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Historical Return	105.42	87.32	100.18	112.01	103.98	96.94	98.50	122.03	101.46	114.61	146.1
Risk	—	—	—	—	—	—	—	—	—	—	—
Average	—	—	—	—	—	—	—	—	—	—	—
Rating	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral

Rating and Risk

Time Period	Load-Adj Return %	Morningstar Risk vs Cat	Morningstar Risk vs Cat	Morningstar Risk-Adj Rating
1 Yr	11.10	—	—	—
3 Yr	7.92	Avg	Avg	★★★★
5 Yr	3.93	Avg	Avg	★★★★
10 Yr	—	—	—	—
Incept	4.72	—	—	—

Other Measures

Alpha	Standard Index	-0.1	Best Fit Index	-0.1
Beta	1.00	1.00	1.00	1.00
R-Squared	99	99	99	99
Standard Deviation	11.55	7.92	—	—
Mean	5.97	5.97	—	—
Sharpe Ratio	0.57	0.57	—	—

are comparable to its average category peer, and it allocates 10% more than the category average to emerging-markets stocks. But this modest gap shouldn't impact the fund's category-relative performance.

The fund's total and risk-adjusted returns were similar to the category average between its launch in April 1996 and November 2018. It remains fully invested, while its better-performing competitors were more defensive, giving them an advantage during this period of lackluster market performance. The fund's 0.11% expense ratio is a sizable cost advantage over most of its competitors. In a stronger market environment, its smaller cash balance should help its category-relative performance.

Minimum Purchase: \$500,000 **Add:** \$1 **IRA:** —
Mfn Auto Inv Plan: — **Add:** —
Sales Fees: No-load
Management Fee: 0.07%
Actual Fees: Mgr 0.07% Dist: —
Expense Projections: 3Yr: \$26 5Yr: \$45 10Yr: \$103
Income Distribution: Quarterly

Portfolio Analysis 09-30-19

Total Stocks: 7415

Share change since 08-31-19

Stock	Change	Weight	Sector	Country	% Assets
* Vanguard Cash Mgmt Fds	—	—	—	United States	2.85
⊖ Nestle SA	—	—	Casmr Def	Switzerland	1.29
⊕ Alibaba Group Holding Ltd	—	—	Casmr Cyc	China	0.98
⊖ Tencent Holdings Ltd	—	—	Technology	China	0.98
⊖ Taiwan Semiconductor Mfg Co	—	—	Technology	Taiwan	0.88
⊖ Roche Holding AG Divident	—	—	Hlth Care	Switzerland	0.83
⊖ Samsung Electronics Co Lt	—	—	Technology	South Korea	0.79
⊖ Novartis AG	—	—	Hlth Care	Switzerland	0.77
⊖ Toyota Motor Corp	—	—	Casmr Cyc	Japan	0.69
⊖ HSBC Holdings PLC	—	—	Finan Svcs	United Kingdom	0.64
⊖ BP PLC	—	—	Finan Svcs	United Kingdom	0.52
⊖ Royal Dutch Shell PLC Cla	—	—	Energy	United Kingdom	0.52
⊖ AstraZeneca PLC	—	—	Hlth Care	France	0.52
⊖ Royal Bank of Canada	—	—	Finan Svcs	United Kingdom	0.48
⊖ AIA Group Ltd	—	—	Finan Svcs	Canada	0.48
⊖ SAP SE	—	—	Technology	Germany	0.47
⊖ Royal Dutch Shell PLC B	—	—	Energy	United Kingdom	0.45
⊖ The Toronto-Dominion Bank	—	—	Finan Svcs	Canada	0.44
⊖ GlaxoSmithKline PLC	—	—	Hlth Care	United Kingdom	0.43

Current Investment Style

Value Blend Growth	Market Cap	%	Weights	% of Stocks	Rel Brnk 1
Large	Giant	43.4	⬆️ Cyclical	44.03	1.04
Mid	Large	31.3	⬆️ BasicMat	8.18	1.14
Small	Mid	19.3	⬆️ CasmrCyc	11.59	1.13
Micro	Small	5.3	⬆️ FinanSvcs	20.20	0.94
	Micro	0.7	⬆️ Real Est	4.06	1.26
	Avg \$mil	22.637	⬆️ Sensitive	34.44	0.97
	Rel Category		⬆️ CommSvcs	3.70	0.49
	Rel Category		⬆️ Energy	6.45	0.94
	Rel Category		⬆️ Industrl	12.17	1.00
	Rel Category		⬆️ Technology	12.12	1.34
	Rel Category		⬆️ Defnsive	21.54	0.97
	Rel Category		⬆️ CasmrDef	9.65	0.98
	Rel Category		⬆️ Hlthcare	8.54	0.95
	Rel Category		⬆️ Utilites	3.35	1.01

Value Measures

Price/Earnings	13.73	Rel Category
Price/Book	1.42	0.87
Price/Sales	1.07	0.88
Price/Cash Flow	5.89	0.83
Dividend Yield %	3.52	1.03
Growth Measures	% Rel Category	
Long-Term Engfs	7.86	0.98
Book Value	4.44	0.86
Sales	3.08	1.36
Cash Flow	3.64	0.79
Historical Engfs	5.44	0.78

Regional Exposure

Japan	17	% Stock
UK	40	% Stock
Europe	17	% Stock
Latin America	3	% Stock
Asia X	27	% Stock
Other	5	% Stock

Composition - Net

Cash	2.9	Bonds	0.0	Country Exposure	% Stock
Stocks	97.0	Other	0.1	Japan	17
				UK	11
				France	7
				China	8

The Voya Fixed Account is available through a group annuity or other type of contract issued by Voya Retirement Insurance and Annuity Company ("VRIAC"). The Voya Fixed Account is an obligation of VRIAC's general account which supports all of the company's insurance and annuity commitments. All guarantees are based on the financial strength and claims-paying ability of VRIAC, who is solely responsible for all obligations under its contracts.

Asset Class: Stability of Principal

Important Information

This information should be read in conjunction with your contract prospectus, contract prospectus summary or disclosure booklet, as applicable. Please read them carefully before investing.

Voya Retirement Insurance and Annuity Company

One Orange Way
Windsor, CT 06095-4774
www.voyaretirementplans.com

Objective

Stability of principal is the primary objective of this investment option. The Voya Fixed Account guarantees minimum rates of interest and may credit interest that exceeds the guaranteed minimum rates. Daily credited interest becomes part of principal and the investment increases through compound interest. All amounts invested by your plan in the Voya Fixed Account receive the same credited rate. This is known as a portfolio method of interest rate crediting.

Key Features

The Voya Fixed Account is intended to be a long-term investment for participants seeking stability of principal. The assets supporting it are invested by VRIAC with this goal in mind. Therefore, VRIAC may impose restrictions on the ability to move funds into or out of this investment option or among investment options in general. These restrictions help VRIAC to provide stable credited interest rates which historically have not varied significantly from month to month despite the general market's volatility in new money interest rates.

Transfers from the Voya Fixed Account to other investment options within the contract are limited to the 'window,' which varies, but will never be less than 10 percent of the balance in the Voya Fixed Account as of the date of transfer, reduced by any prior transfers made during the same calendar year. Withdrawals from the Voya Fixed Account are not subject to this window limitation, and may be made for any reason, subject

to plan or Internal Revenue Code limitations. However, for contracts with a withdrawal fee schedule, the withdrawal may be subject to a withdrawal fee.

Interest Rate Structure

The Voya Fixed Account guarantees principal and a guaranteed minimum interest rate ("GMIR") for the life of the contract, as well as featuring two declared interest rates: a current rate, determined at least monthly, and a guaranteed minimum floor rate declared for a defined period - currently one calendar year. The GMIR may vary by participant based on the date the participant established an account under the VRIAC contract. The guaranteed minimum floor rate may change after a defined period, but it will never be lower than the GMIR that applies for the life of the contract. The current rate, the guaranteed minimum floor rate and the GMIR are expressed as annual effective yields. Taking the effect of compounding into account, the interest credited to your account daily yields the then current credited rate.

VRIAC's determination of credited interest rates reflects a number of factors, which may include mortality and expense risks, interest rate guarantees, the investment income earned on invested assets and the amortization of any capital gains and/or losses realized on the sale of invested assets. Under this option, VRIAC assumes the risk of investment gain or loss by guaranteeing the principal amount you allocate to this option and promising a minimum interest rate during the accumulation period and also throughout the annuity payout period, if applicable.

Currently, the guaranteed minimum floor rate equals the GMIR. The current rate to be credited under a contract may be higher than the GMIR/guaranteed minimum floor rate and may be changed at any time, except that we will not apply a decrease to the current rate following a rate change initiated solely by us prior to the last day of the three-month period measured from the first day of the month in which such change was effective. The current rate for a plan's initial investment in the Voya Fixed Account may be in effect for less than a full three-month period.

Any insurance products, annuities and funding agreements that you may have purchased are issued by Voya Retirement Insurance and Annuity Company ("VRIAC"). VRIAC is solely responsible for meeting its obligations. Plan administrative services provided by VRIAC or Voya Institutional Plan Services, LLC ("VIPS"). Neither VRIAC nor VIPS engage in the sale or solicitation

of securities. If custodial or trust agreements are part of this arrangement, they may be provided by Voya Institutional Trust Company. All companies are members of the Voya® family of companies. Securities distributed by Voya Financial Partners, LLC (member SIPC) or other broker-dealers with which it has a selling agreement. All products or services may not be available in all states.

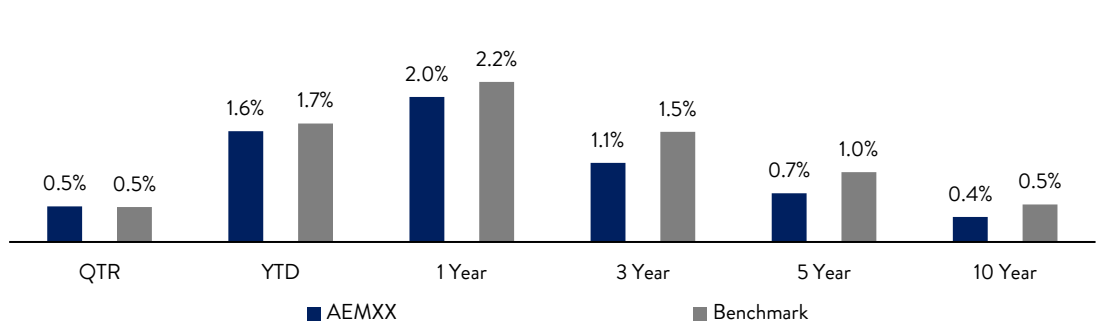
Voya Government Money Market A
AEMXX

Fund Fact Sheet
Data as of 09/30/2019

Product Details

Name	Voya Government Money Market A
Ticker	AEMXX
Expense Ratio	0.400%
Morningstar Category	US Fund Money Market - Taxable
Benchmark	USTREAS Stat US T-Bill 90 Day TR
Inception Date	4/15/1994
Longest Tenured Manager	David S. Yealy
Longest Manager Tenure	15.00 Years
Fund Size	\$274,122,236

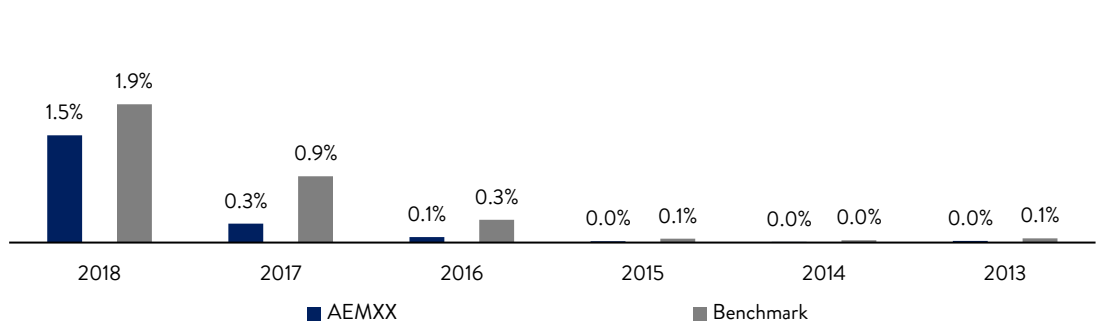
Trailing Performance



Fund Characteristics

AEMXX	+/- Category
% Assets in Top 10 Holdings	97.17% / 84.07%
Average Eff Duration	- / -
Average Eff Maturity	- / -
Average Credit Quality	- / AAA (Cat Avg.)
Average Coupon	- / -

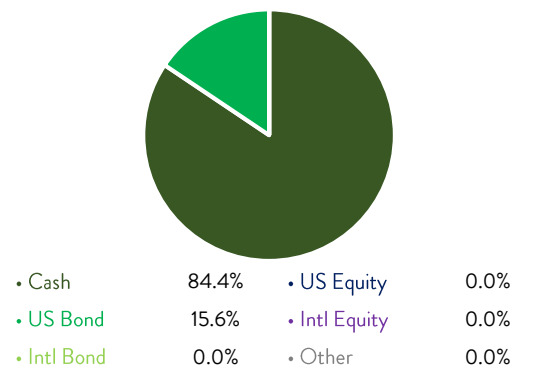
Annual Performance



Sector Allocations

AEMXX	Category	+/- Category
Government	15.6%	25.1% / -9.5%
Municipal	0.0%	0.3% / -0.3%
Bank Loan	0.0%	0.0% / 0.0%
Convertible	0.0%	0.0% / 0.0%
Corporate Bond	0.0%	0.8% / -0.8%
Preferred Stock	0.0%	0.0% / 0.0%
Agency MBS	0.0%	0.3% / -0.3%
Non-Agency RMBS	0.0%	0.0% / 0.0%
Commercial MBS	0.0%	0.0% / 0.0%
Asset-Backed	0.0%	0.0% / 0.0%
Cash & Equivalents	84.4%	73.4% / 11.1%
Other	0.0%	0.0% / 0.0%

Asset Allocation



Morningstar Style Box

	Low IR Sens	Mod IR Sens	Ext IR Sens
High Qual			
Med Qual			
Low Qual			

Voya Government Money Market A
AEMXX

Fund Fact Sheet
Data as of 09/30/2019

Trailing Performance	QTR	YTD	1 Year	3 Year	5 Year	10 Year
• AEMXX	0.50%	1.55%	2.04%	1.11%	0.68%	0.35%
• Benchmark	0.49%	1.66%	2.25%	1.55%	0.98%	0.53%
+/- Benchmark	0.01%	-0.11%	-0.21%	-0.44%	-0.29%	-0.18%
Peer Group Rank	30	39	42	54	49	49

5-Year Quarterly Performance	3Q19	2Q19	1Q19	4Q18
• AEMXX	0.50%	0.53%	0.52%	0.47%
• Benchmark	0.49%	0.57%	0.59%	0.57%
+/- Benchmark	0.01%	-0.04%	-0.07%	-0.10%

Annual Performance	2018	2017	2016	2015	2014	2013
• AEMXX	1.51%	0.26%	0.08%	0.02%	0.01%	0.02%
• Benchmark	1.94%	0.93%	0.32%	0.05%	0.03%	0.06%
+/- Benchmark	-0.43%	-0.67%	-0.24%	-0.03%	-0.02%	-0.03%
Peer Group Rank	44	76	39	20	22	11

5-Year Quarterly Performance	3Q18	2Q18	1Q18	4Q17
• AEMXX	0.40%	0.35%	0.27%	0.13%
• Benchmark	0.51%	0.46%	0.39%	0.30%
+/- Benchmark	-0.10%	-0.11%	-0.12%	-0.17%

Rolling 5-Year Performance	10/2014 - 09/2019	07/2014 - 06/2019	04/2014 - 03/2019	01/2014 - 12/2018	10/2013 - 09/2018	07/2013 - 06/2018
• AEMXX	0.68%	0.58%	0.48%	0.37%	0.28%	0.20%
• Benchmark	0.98%	0.88%	0.77%	0.65%	0.54%	0.44%
+/- Benchmark	-0.29%	-0.30%	-0.29%	-0.28%	-0.26%	-0.24%
Peer Group Rank	49	53	53	55	55	56

5-Year Quarterly Performance	3Q17	2Q17	1Q17	4Q16
• AEMXX	0.09%	0.04%	0.01%	0.01%
• Benchmark	0.26%	0.22%	0.15%	0.11%
+/- Benchmark	-0.17%	-0.18%	-0.14%	-0.09%

Risk Statistics	3 Year		5 Year		10 Year	
	Manager	Benchmark	Manager	Benchmark	Manager	Benchmark
Alpha	-0.73	0.00	-0.21	0.00	-0.12	0.00
Beta	-3.29	1.00	2.84	1.00	3.69	1.00
Standard Deviation	0.24	0.19	0.24	0.25	0.19	0.22
Sharpe Ratio	-8.04	-7.98	-4.10	-3.76	-2.75	-2.06
Information Ratio	-6.55	-	-3.77	-	-2.64	-
Treynor Ratio	0.15	-0.07	-0.12	-0.04	-0.05	-0.02
Upside Capture Ratio	72.00	100.00	70.04	100.00	66.60	100.00
Downside Capture Ratio	-	-	-	-	-	-

5-Year Quarterly Performance	3Q16	2Q16	1Q16	4Q15
• AEMXX	0.07%	0.00%	0.00%	0.02%
• Benchmark	0.07%	0.06%	0.07%	0.03%
+/- Benchmark	-0.01%	-0.06%	-0.07%	-0.01%

5-Year Quarterly Performance	3Q15	2Q15	1Q15	4Q14
• AEMXX	0.00%	0.00%	0.00%	0.01%
• Benchmark	0.01%	0.01%	0.01%	0.01%
+/- Benchmark	-0.01%	-0.01%	-0.01%	0.01%

All data and information on this fact sheet is taken from sources believed to be accurate but is not guaranteed to be accurate, complete, or correct.