

Vanguard Target Retirement 2045 Fund

Category: Aggressive

VTIVX
12/31/2022

Fund Strategy

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation. The fund invests in a mix of Vanguard mutual funds according to an asset allocation strategy designed for investors planning to retire and leave the workforce in or within a few years of 2045 (the target year). The fund's asset allocation will become more conservative over time, meaning that the percentage of assets allocated to stocks will decrease while the percentage of assets allocated to bonds and other fixed income investments will increase.

Fund Information

Strategy Asset (\$ mm): 60,449.00

Share Class Assets (\$ mm): 60,449.00

Manager: William A. Coleman

Manager Tenure: 10 Years

Portfolio Statistics

Alpha*: -0.15 P/E: 15.43

Beta*: 0.92 P/B: 2.30

as of date 11/30/2022 SEC Yield (%): 2.29

Turnover: 5.00

as of date 12/31/2022

*Best fit index: MSCI ACWI NR USD

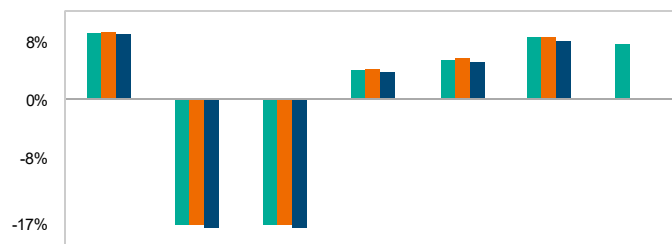
*3-year statistic: MSCI ACWI NR USD

Scorecard

Asset Allocation Strategies	Ticker	Style			Risk / Return			Peer Group		Qual. (2pt max)	Score Components		Score
		Risk Level	Style Diversity	R ²	Risk / Return	Up / Down	Info Ratio	Return Rank	SR Ratio Rank		Allocation	Selection	
Aggressive													
Vanguard Target Retirement 2045...	VTIVX	1	1	1	0	0	0	1	1	2	7	8.2	8
		16.33	88.98/11.02	99.78	16.33/5.14	99.38/100.55	-0.35	31.00	32.00				AGG
Asset Allocation Strategies	Score 12/31/2022	Score 9/30/2022	Score 6/30/2022	Score 3/31/2022	Score 12/31/2021	Score 9/30/2021	Score 6/30/2021	Score 3/31/2021					
Vanguard Target Retirement 2045...	8	8	8	7	8	7	8	8					
	AGG	AGG	AGG	AGG	AGG	AGG	AGG	AGG					

The Scorecard Methodology incorporates both quantitative and qualitative factors into evaluating fund managers and their investment strategies (80% of the score is quantitative and 20% is qualitative). The scoring system is built around pass/fail criteria, on a scale of 0-10 (with 10 being the best) and there is a fund history requirement (5 years for active strategies and 3 years for passive strategies). For Active and Asset Allocation Strategies, the Scorecard factors are weighted 30% to style, 30% to risk/return, 20% to peer group rankings and 20% to qualitative factors.

Performance Analysis as of 12/31/2022



	QTR	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception
Vanguard Target Retirement 2045 Fund	8.89%	-17.36%	-17.36%	3.74%	5.14%	8.34%	7.40%
Style Benchmark	8.97%	-17.29%	-17.29%	3.91%	5.41%	8.29%	-
Peer Group*	8.76%	-17.75%	-17.75%	3.45%	4.83%	7.74%	-
Peer Group Rank*	56	31	31	37	34	21	-
Peer Group Size(funds)*	-	-	212	188	167	98	-

The performance analysis displayed is reflective of past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate over time. Current performance may differ from the performance displayed. Investing includes risk, including potential loss of principal. Carefully consider any and all investment objectives, risk factors and charges and expenses before investing. Contact your financial advisor or consultant for funds current performance and a copy of the most recent prospectus.

Contact for most recent month end performance.

Risk Bucket as of 12/31/2022

Risk Bucket	Risk Range	Risk (X)
Aggressive	15.50X≤18.00	16.33
Moderate Aggressive	13.00X≤15.50	-
Moderate	10.25X≤13.00	-
Moderate Conservative	8.00X≤10.25	-
Conservative	5.00X≤8.00	-

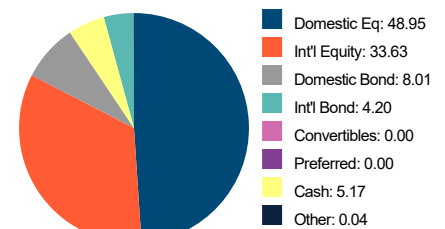
Top 10 Holdings(%) as of 11/30/2022

Vanguard Total Stock Mkt Idx Instl Pls / VSMXPX	50.84
Vanguard Total Intl Stock Index Inv / VGTSX	35.22
Vanguard Total Bond Market II Idx Inv / VTBIX	8.89
Vanguard Total Intl Bd II Idx Instl / VTILX	3.80
-	-
-	-
-	-
-	-
-	-
-	-
-	-
% in Top 10 Holdings	98.75
# of Holdings	6

Additional Information

Prospectus Net Exp. Ratio:	0.08
Prospectus Gross Exp. Ratio:	0.08
Avg Exp Ratio Morningstar (%):	0.44
12b-1 fees (%):	-
Closed - New Inv:	-
Closed - All Inv:	-
Min Investment:	\$1,000
Waiver Amt:	-
Waiver Exp Date:	-
Strategy Inception:	10/27/2003
Share Class Inception:	10/27/2003

Asset Allocation (%) as of 11/30/2022



% Emerging Mkt: 8.19

Disclosures

Fund Fact Sheets

Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current Performance may be lower or higher than the performance data quoted.

The performance data quoted may not reflect the deduction of additional fees, if applicable. Additional fees would reduce the performance quoted.

Performance data is subject to change without prior notice.

Performance of indexes reflects the unmanaged result for the market segment the selected stocks represent. Indexes are unmanaged and not available for direct investment.

The information used in the analysis has been taken from sources deemed to be reliable, including, third-party providers such as Markov Processes International, Morningstar, firms who manage the investments, and/or the retirement plan providers who offer the funds.

Every reasonable effort has been made to insure completeness and accuracy; however, the final accuracy of the numbers and information is the responsibility of the investment manager(s) of each fund and/or the retirement plan providers offering these funds. Discrepancies between the figures reported in this analysis, and those reported by the actual investment managers and/or retirement plan providers, may be caused by a variety of factors, including: Inaccurate reporting by the manager/provider; Changes in reporting by the manager/provider from the time this report was prepared to a subsequent retro-active audit and corrected reporting; Differences in fees and share-classes impacting net investment return; and, Scriveners error by 401(k) Advisors preparing this report.

Fund scores will change as the performance of the funds change and as certain factors measured in the qualitative category change (e.g., manager tenure). Fund scores are not expected to change dramatically from each measured period, however, there is no guarantee this will be the case. Scores will change depending on the changes in the underlying pre-specified Scorecard factors.

Neither past performance or statistics calculated using past performance are a guarantee of a fund's future performance. Likewise, a fund's score using 401(k) Advisor's ScorecardSM System does not guarantee the future performance or style consistency of a fund.

The purpose of this report is to assist fiduciaries in selecting and monitoring investment options. A fund's score is meant to be used by the plan sponsor and/or fiduciaries as a tool for selecting the most appropriate fund.

Fund selection is at the discretion of the investment fiduciaries, which are either the plan sponsor or the committee appointed to perform that function.

This report is provided solely for information purposes only and therefore not an offer to buy or sell a security. An offer to buy or sell a security may be made only after the client has received and read the appropriate prospectus.

For a copy of the most recent prospectus, please contact your Investment Advisor/Consultant.

This report is provided solely for informational purposes only and therefore not an offer to buy or sell a security.

Contact Retirement Plan Advisory Group with any questions about this report or for the most current month-end performance at (800) 959-0071.

Disclosures

Fund Fact Sheets

Asset Class Definitions

Large Cap Value (LCV)

Category typically represents large capitalization companies who have lower prices in relation to their earnings or book value.

Large Cap Growth (LCG)

Category typically represents large capitalization companies who have higher prices relative to their earnings or book value, generally due to a higher forecasted or expected growth rate.

Large Cap Blend (LCB)

Category typically represents large capitalization companies who display both value and growth-like characteristics.

Mid Cap Value (MCV)

Category typically represents mid-capitalization companies who have lower prices in relation to their earnings or book value.

Mid Cap Growth (MCG)

Category typically represents mid-capitalization companies who have higher prices relative to their earnings or book value, generally due to a higher forecasted or expected growth rate.

Mid Cap Blend (MCB)

Category typically represents mid-capitalization companies who display both value and growth-like characteristics.

Small Cap Value (SCV)

Category typically represents small capitalization companies who have lower prices in relation to their earnings or book value.

Small Cap Growth (SCG)

Category typically represents small capitalization companies who have higher prices relative to their earnings or book value, generally due to a higher forecasted or expected growth rate.

Small Cap Blend (SCB)

Category typically represents small capitalization companies who display both value and growth-like characteristics.

International Equity (IE)

Category typically represents primarily large capitalization foreign companies displaying both value and growth-like characteristics.

Emerging Market Equity (EME)

Category typically represents foreign companies in countries that are not considered to have fully developed markets or economies.

Global Equity (GE)

Category typically represents primarily large capitalization domestic and foreign companies displaying both value and growth-like characteristics.

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Fund Fact Sheets

Asset Class Definitions

Core Fixed Income (CFI)

Category typically represents domestic fixed income securities representing a broad array of fixed income securities including government, credit and mortgage backed securities.

Global Fixed Income (GFI)

Category typically represents a broad array of fixed income securities across many different countries.

Intermediate Government (IG)

Category typically represents domestic Government or Government-backed fixed income securities.

U.S. Government TIPS (UGT)

Category typically represents treasury inflation protected securities which are Government securities designed to offer inflation protection by adjusting the principal based on changes in the Consumer Price Index.

High Yield (HY)

Category typically represents below investment grade domestic fixed income securities, which have a higher likelihood of default.

REIT (RE)

Category typically represents real estate securities traded on a stock exchange.

Technology (TEC)

Category typically represents a particular segment of the stock market focused on technology related companies.

Natural Resources (NR)

Category typically represents a particular segment of the stock market focused on natural resource related companies.

HealthCare (HC)

Category typically represents a particular segment of the stock market focused on healthcare related companies.

Communication (COM)

Category typically represents a particular segment of the stock market focused on communications related companies.

Financial Services (FS)

Category typically represents a particular segment of the stock market focused on financial services companies.

Utilities (UTI)

Category typically represents a particular segment of the stock market focused on utility companies.

Disclosures

Fund Fact Sheets

Consider the investment objectives, risks, and charges and expenses of the investment company carefully before investing. The prospectus contains this and other information about the investment company. Please contact your advisor for the most recent prospectus. Prospectus should be read carefully before investing.

Investment Risks:

International/Emerging Markets: The investor should note that funds that invest in international securities involve special additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Funds: The investor should note that funds that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor to increased industry-specific risks.

Non-Diversified Funds: The investor should note that funds that invest more of their assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small-Cap Stocks: The investor should note that funds that invest in stocks of small cap companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid-Cap Stocks: The investor should note that funds that invest in companies with market capitalization below \$10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds: The investor should note that funds that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Bond/Fixed Income Funds: The investor should note that funds that invest in bonds (fixed income securities), including government, corporate and mortgage-backed securities, involve additional risks. Interest rate risk may cause bonds to lose their value. The investor should be aware that it is possible in a rising rate environment for investment grade bond strategies to lose value and experience negative returns over certain time periods.

Stable Value Funds: The investor should note that these funds invest in short to intermediate term securities that can and may lose value. These funds, while managed to protect principal, do not guarantee the investor's principal, nor are they insured or guaranteed by the FDIC or any other government agency.

Money Market Funds: The investor should note that these funds invest in short term securities that can and may lose value. These funds, while managed to protect principal, do not guarantee the investor's principal, nor are they insured or guaranteed by the FDIC or any other government agency.

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