

Vanguard Instl Trgt Retire 2045 Instl VITLX

Benchmark

Morningstar Lifetime Mod 2045 TR USD

Overall Morningstar Rating™

★★★★

Out of 182 Target-Date 2045 funds. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure for details.

Morningstar Return

Above Average

Morningstar Risk

Average

Investment Objective & Strategy

From investment's prospectus

The investment seeks to provide capital appreciation and current income consistent with its current asset allocation.

The fund invests in other 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.

Fees and Expenses as of 01-28-19

Prospectus Net Expense Ratio	0.09%
Prospectus Gross Expense Ratio	0.09%
Maximum Sales Charge	—
12b-1 Fee	—
Redemption Fee/Term	—

Waiver Data	Type	Exp. Date	%
—	—	—	—

Operations and Management

Fund Inception Date	06-26-15
Portfolio Manager(s)	William A. Coleman, CFA Walter Nejman
Name of Issuer	Vanguard
Telephone	800-662-7447
Web Site	www.vanguard.com

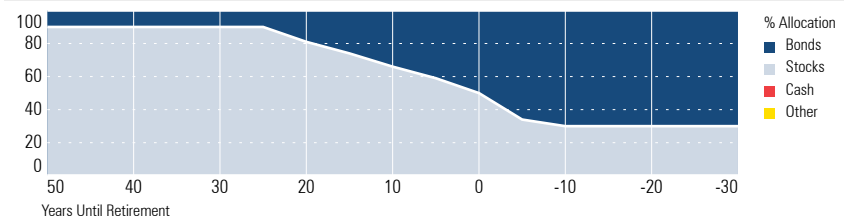
Benchmark Description: Morningstar Lifetime Mod 2045 TR USD

The index measures the performance of a portfolio of global equities, bonds and traditional inflation hedges such as commodities and TIPS. This portfolio is held in proportions appropriate for a US investor who has a target maturity date of 2045. The Moderate risk profile is for investors who are comfortable with average exposure to equity market volatility.

Category Description: Target-Date 2045

Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2041-2045) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

Allocation of Assets



Performance

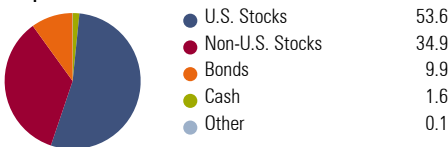
Trailing Returns	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Investment Return %	11.54	3.33	10.49	—	—	6.82
Benchmark Return %	11.92	3.59	10.65	—	—	6.76
Category Average %	11.52	2.94	9.92	—	—	6.15
Morningstar Rating™	—	—	★★★★	—	—	—
# of Funds in Category	—	—	182	—	—	—

Quarter End Returns as of 03-31-19	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
Fund Return %	11.54	3.33	10.49	—	—	6.82
Standardized Return %	11.54	3.33	10.49	—	—	6.82

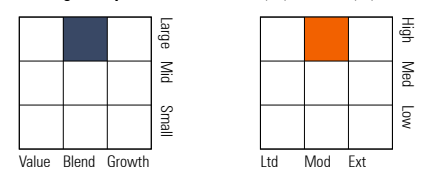
Performance Disclosure: The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when redeemed, may be worth more or less than their original cost.

Portfolio Analysis as of 03-31-19

Composition as of 03-31-19



Morningstar Style Box™ as of 03-31-19(EQ) ; 01-31-19(F-I)



Top 10 Holdings as of 03-31-19

Top 10 Holdings	% Assets
Vanguard Total Stock Market Idx I	54.19
Vanguard Total Intl Stock Index Inv	35.68
Vanguard Total Bond Market II Idx Inv	7.16
Vanguard Total Intl Bd Idx Admiral™	2.90
Cmt Market Liquidity Rate	0.06
Total Number of Holdings	5
Annual Turnover Ratio %	6.00
Total Fund Assets (\$mil)	19,317.09

Morningstar Sectors as of 03-31-19

Morningstar Sectors	% Fund	S&P 500 %
Cyclical	38.56	32.26
Basic Materials	5.06	2.46
Consumer Cyclical	11.73	11.90
Financial Services	17.86	15.40
Real Estate	3.91	2.50
Sensitive	38.52	42.16
Communication Services	3.41	3.56
Energy	5.82	5.43
Industrials	11.49	10.23
Technology	17.80	22.94
Defensive	22.92	25.59
Consumer Defensive	7.84	7.77
Healthcare	11.89	14.49
Utilities	3.19	3.33

Principal Risks as of 03-31-19

Hedging Strategies, Credit and Counterparty, Prepayment (Call), Currency, Loss of Money, Not FDIC Insured, Country or Region, Income, Interest Rate, Market/Market Volatility, Equity Securities, Fixed-Income Securities, Management, Target Date

Disclosure

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares when redeemed may be worth more or less than the original investment. Fund portfolio statistics change over time. The fund is not FDIC-insured, may lose value and is not guaranteed by a bank or other financial institution.

Performance

Total return reflects performance without adjusting for sales charges or the effects of taxation, but is adjusted to reflect all actual ongoing fund expenses and assumes reinvestment of dividends and capital gains. If adjusted, sales charges would reduce the performance quoted.

The fund's performance is compared with that of an index. The index is an unmanaged portfolio of specified securities and the index does not reflect any initial or ongoing expenses. The Best Fit Index is the index that the fund has the highest correlation with. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Best and Worst 3 Month Performance

Morningstar calculates best and worst 3-month period (in percentage) in-house on a monthly basis.

Best 3-month Period: The highest total return the stock has posted in a consecutive three-month period over the trailing 15 years, or if a fund does not have 15 years of history, it will go back as far as the inception date.

Worst 3-month Period: The lowest total return the stock has posted in a consecutive three-month period over the trailing 15 years, or if a fund does not have 15 years of history, it will go back as far as the inception date.

Growth of \$10,000 Graph

The Growth of \$10,000 graph shows a fund's performance based on how \$10,000 invested in the fund would have grown over time. The returns used in the graph are not load-adjusted. The growth of \$10,000 begins at the date of the fund's inception, or the first year listed on the graph, whichever is appropriate. Located alongside the fund's graph line is a line that represents the growth of \$10,000 in an index. The inclusion of the index allows investors to compare the performance of the fund with the performance of a benchmark index.

Morningstar Rating™

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive

1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

For private funds, the Morningstar Rating presented is hypothetical, because Morningstar does not independently analyze private funds. Rather, the rating is assigned as a means to compare these funds with the universe of mutual funds that Morningstar rates. The evaluation of this investment does not affect the retail mutual fund data published by Morningstar.

Morningstar Return

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Avg), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Risk Measures

R-squared reflects the percentage of a fund's movements that are explained by movements in its benchmark index, showing the degree of correlation between the fund and the benchmark.

Beta is a measure of a fund's sensitivity to market movements. A portfolio with a beta greater than 1 is more volatile than the market, and a portfolio with a beta less than 1 is less volatile than the market.

Alpha measures the difference between a fund's actual returns and its expected performance, given its level of risk (as measured by beta).

Sharpe ratio uses standard deviation and excess return to determine reward per unit of risk.

Standard deviation is a statistical measure of the volatility of the fund's returns.

Mean represents the annualized three-year geometric return.

Morningstar Style Box™

The Morningstar Style Box reveals a fund's investment strategy as of the date noted on this report.

For equity funds the vertical axis shows the market capitalization of the long stocks owned and the horizontal axis shows investment style (value, blend, or growth).

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest rate sensitivity as measured by a bond's effective duration.

Morningstar seeks credit rating information from fund companies on a periodic basis (e.g., quarterly). In compiling credit rating information, Morningstar instructs fund companies to only use ratings that have been assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). If two NRSROs have rated a security, fund companies are to report the lowest rating; if three or more NRSROs have rated the same security differently, fund companies are to report the rating that is in the middle. For example, if NRSRO X rates a security AA-, NRSRO Y rates the same security an A and NRSRO Z rates it a BBB+, the fund company should use the credit rating of 'A' in its reporting to Morningstar. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on the fund. An NRSRO rating on a fixed-income security can change from time-to-time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low", "medium", or "high" based on their average credit quality. Funds with a low credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; medium are those less than "AA-", but greater or equal to "BBB-"; and high are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index (MCBI), which is currently three years. The

Disclosure

classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBF's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBF will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBF will be classified as Extensive.

For municipal bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases static breakpoints are utilized. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-US taxable and non-US domiciled fixed income funds static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: greater than 3.5 and less than equal to 6 years; (iii) Extensive: greater than 6 years.

Investment Risk

Foreign Securities Funds/Emerging Markets Funds: The investor should note that funds that invest in foreign 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.

Specialty/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 Funds: The investor should note that funds that invest in stocks of small 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 Funds: The investor should note that funds that invest in companies with market capitalizations 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 Bond Funds: 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.

Tax-Free Municipal Bond Funds: The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.