

Total Stock Market Index Trust

Managed by Manulife Investment Management (North America)

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to approximate the aggregate total return of the Wilshire 5000 Total Market Full Cap Index.

The fund normally invests at least 80% of its net assets (plus any borrowings for investment purposes) at the time of investment in (a) the common stocks that are included in the Wilshire 5000 Total Market Full Cap Index and (b) securities (which may or may not be included in the Wilshire 5000 Total Market Full Cap Index) that the subadvisor believes as a group will behave in a manner similar to the index.

Morningstar Category: Large Blend

Large-blend portfolios are fairly representative of the overall US stock market in size, growth rates and price. Stocks in the top 70% of the capitalization of the US equity market are defined as large cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of US industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index.

Operations and Management

Fund Inception Date 04-29-05
 Portfolio Manager(s) Ashikhusein Shahpurwala, CFA.
 Boncana Maiga, CFA.

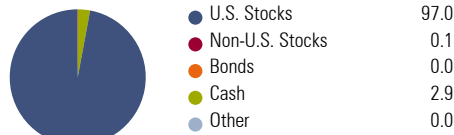
Notes

Authorized for distribution only when preceded or accompanied by current prospectuses for John Hancock Variable Insurance Trust and for the relevant product(s).

The investment objectives and policies of the underlying portfolio of the John Hancock Variable Insurance Trust ("JHVIT"), or other investment company shown, may be similar to those of other funds managed by the same asset manager. There is no guarantee that any portfolio's investment results will be comparable to the investment results of another fund, including other funds with the same asset manager. Investment results will differ and may be higher or lower than the investment results of other such funds.

Portfolio Analysis

Composition as of 09-30-22



Top 10 Holdings as of 09-30-22

| Company | % Assets |
|-----------------------------|----------|
| Apple Inc | 5.62 |
| Microsoft Corp | 4.40 |
| Amazon.com Inc | 2.91 |
| Tesla Inc | 2.10 |
| S+p500 Emini Fut Dec22 Xcme | 1.99 |
| 20221216 12-16-22 | |
| Jh Ctf 12-31-49 | 1.97 |
| Alphabet Inc Class C | 1.50 |
| Alphabet Inc Class A | 1.43 |
| UnitedHealth Group Inc | 1.18 |
| Johnson & Johnson | 1.07 |

| | |
|--------------------------------|------|
| Total Number of Stock Holdings | 3106 |
| Total Number of Bond Holdings | 0 |
| Annual Turnover Ratio % | 8.00 |

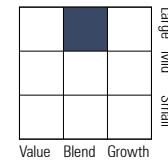
| Risk Measures as of 09-30-22 | Port Avg | Rel S&P 500 | Rel Cat |
|------------------------------|----------|-------------|---------|
| 3 Yr Std Dev | 21.12 | 1.04 | 1.04 |
| 3 Yr Beta | 1.04 | — | 1.06 |
| 3 Yr Sharpe Ratio | 0.40 | 0.89 | 1.03 |
| 3 Yr Alpha | -1.13 | — | 1.05 |
| 3 Yr R-squared | 99.05 | — | 1.04 |

Principal Risks as of 09-30-22

Loss of Money, Not FDIC Insured, Quantitative Investing, Index Correlation/Tracking Error, Market/Market Volatility, Equity Securities, Other, Management, Small Cap, Mid-Cap, Large Cap, Technology Sector

Refer to the [John Hancock Variable Insurance Trust prospectus](#) for details on these risks.

Morningstar Equity Style Box™ as of 09-30-22



| Category | % Mkt Cap |
|----------|-----------|
| Giant | 41.07 |
| Large | 29.69 |
| Medium | 19.70 |
| Small | 6.94 |
| Micro | 2.60 |

Morningstar Equity Sectors as of 09-30-22

| Sector | % Fund |
|------------------------|--------|
| Cyclical | 30.80 |
| Basic Materials | 2.07 |
| Consumer Cyclical | 11.86 |
| Financial Services | 13.46 |
| Real Estate | 3.41 |
| Sensitive | 44.79 |
| Communication Services | 7.78 |
| Energy | 5.16 |
| Industrials | 8.90 |
| Technology | 22.95 |
| Defensive | 24.40 |
| Consumer Defensive | 7.13 |
| Healthcare | 14.37 |
| Utilities | 2.90 |

| Portfolio Statistics as of 09-30-22 | Port Avg | Rel S&P 500 | Rel Cat |
|-------------------------------------|-----------|-------------|---------|
| P/E Ratio | 14.35 | 0.94 | 0.96 |
| P/B Ratio | 2.72 | 0.92 | 0.93 |
| P/C Ratio | 8.65 | 0.88 | 0.90 |
| GeoAvgCap (\$mil) | 92,578.75 | 0.56 | 0.76 |

Important Disclosures

This Morningstar Fact Sheet is provided to help you evaluate the investment options available within John Hancock variable life insurance products. **It is authorized for distribution only when preceded or accompanied by current prospectuses for the relevant product of John Hancock Life Insurance Company (U.S.A.) or John Hancock Life Insurance Company of New York (the 'John Hancock Life Insurance Companies'), and for the underlying portfolio. The prospectuses contain details on investment objectives, risks, fees, charges and expenses, as well as other information about the underlying investment company's portfolio. Please read the prospectus containing this and other information on the product and the underlying portfolio and consider these factors carefully before investing.**

This information (including Morningstar Rating) does not reflect expenses and charges that are, or may be, imposed under your variable life insurance policy. **Unlike mutual funds, a variable universal life insurance policy has annual fees and expenses associated with it in addition to life insurance related charges (which differ with the product chosen), including surrender charges and investment management fees. Variable universal life insurance products are long-term contracts and are sold by prospectus; they are unsuitable as a short-term savings vehicle. The primary purpose of variable universal life insurance is to provide lifetime protection against economic loss due to the death of the insured person. Cash values are not guaranteed if the client is invested in the investment accounts. There are risks associated with each investment option, and the policy may lose value.** For further information on fees, expenses and charges, please refer to the applicable variable life insurance prospectus.

The John Hancock Life Insurance Companies have contracted Morningstar Inc., for a fee, as a third-party advisor to produce this fact sheet. In this capacity, Morningstar independently provides analysis on the underlying investment options for John Hancock. John Hancock and its affiliates have not independently verified this information.

This material is neither an offer to sell nor a solicitation to buy securities. The information is current as of the release date noted on Page 1, unless otherwise noted, and is not a guarantee of subsequent portfolio composition, which is subject to change at the discretion of the portfolio manager.

Insurance policies and/or associated riders and features may not be available in all states.

Insurance products are issued by: John Hancock Life Insurance Company (U.S.A.) (not licensed in New York) and John Hancock Life Insurance Company of New York, Valhalla, NY 10595. Securities are offered through **John Hancock Distributors LLC** through other broker/dealers that have a selling agreement with John Hancock Distributors, LLC, 197 Clarendon Street, Boston, MA 02116.

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 the investment style (value, blend, or growth.) A darkened cell in the style box matrix indicates the weighted average style of the portfolio.

For portfolios holding fixed-income investments, a Fixed Income Style Box is calculated. The vertical axis shows the credit quality based on credit ratings and the horizontal

axis shows interest-rate sensitivity as measured by effective duration. There are three credit categories - "High", "Medium", and "Low"; and there are three interest rate sensitivity categories - "Limited", "Moderate", and "Extensive"; resulting in nine possible combinations. As in the Equity Style Box, the combination of credit and interest rate sensitivity for a portfolio is represented by a darkened square in the matrix. Morningstar uses credit rating information from credit rating agencies (CRAs) that have been designated Nationally Recognized Statistical Rating Organizations (NRSROs) by the Securities and Exchange Commission (SEC) in the United States. For a list of all NRSROs, please visit <https://www.sec.gov/ocri/ocri-current-nrsros.html>. Additionally, Morningstar will use credit ratings from CRAs which have been recognized by foreign regulatory institutions that are deemed the equivalent of the NRSRO designation. To determine the rating applicable to a holding and the subsequent holding weighted value of a portfolio two methods may be employed. First is a common methodology approach where if a case exists such that two CRAs have rated a holding, the lower rating of the two should be applied; if three or more CRAs have rated a holding, the median rating should be applied; and in cases where there are more than two ratings and a median rating cannot be determined, the lower of the two middle ratings should be applied. Alternatively, if there is more than one rating available an average can be calculated from all and applied.

Please Note: Morningstar, Inc. is not an NRSRO nor does it issue a credit rating on the fund. Credit ratings for any security held in a portfolio can change over time.

Morningstar uses the credit rating information to calculate a weighted-average credit quality value for the portfolio. This value is based only upon those holdings which are considered to be classified as "fixed income", such a government, corporate, or securitized issues. Other types of holdings such as equities and many, though not all, types of derivatives are excluded. The weighted-average credit quality value is represented by a rating symbol which corresponds to the long-term rating symbol schemas employed by most CRAs. Note that this value is not explicitly published but instead serves as an input in the Style Box calculation. This symbol is then used to map to a Style Box credit quality category of "low," "medium," or "high". Funds with a "low" credit quality category are those whose weighted-average credit quality is determined to be equivalent to the commonly used High Yield classification, meaning a rating below "BBB", portfolios assigned to the "high" credit category have either a "AAA" or "AA+" average credit quality value, while "medium" are those with an average rating of "AA-" inclusive to "BBB-". It is expected and intended that the majority of portfolios will be assigned a credit category of "medium".

For assignment to an interest-rate sensitivity category, Morningstar uses the average effective duration of the portfolio. From this value there are three distinct methodologies employed to determine assignment to category. Portfolio which are assigned to Morningstar municipal-bond categories employ static breakpoints between categories. These breakpoints are: "Limited" equal to 4.5 years or less, "Moderate" equal to 4.5 years to less than 7 years; and "Extensive" equal to more than 7 years. For portfolios assigned to Morningstar categories other than U.S. Taxable, including all domiciled outside the United States, static duration breakpoints are also used: "Limited" equals less than or equal to 3.5 years, "Moderate" equals greater than 3.5 years but less than or equal to 6 years, and "Extensive" is assigned to portfolios with effective durations of more than 6 years.

Note: Interest-rate sensitivity for non-U.S. domiciled portfolios (excluding those in Morningstar convertible categories) may be assigned using average modified duration

when average effective duration is not available.

For portfolios Morningstar classifies as U.S. Taxable Fixed-Income, interest-rate sensitivity category assignment is based on the effective duration of the Morningstar Core Bond Index (MCBI). The classification assignment is dynamically determined relative to the benchmark index value. A "Limited" category will be assigned to portfolios whose average effective duration is between 25% to 75% of MCBI average effective duration, where the average effective duration is between 75% to 125% of the MCBI the portfolio will be classified as "Moderate", and those portfolios with an average effective duration value 125% or greater of the average effective duration of the MCBI will be classified as "Extensive".

Investment Risk

The John Hancock Life Insurance Companies do not provide advice regarding investment allocations that may be appropriate for you. While all variable portfolios are subject to market risk, allocating assets to a small number of investment options that concentrate portfolio investments in particular business or market sectors will subject your policy's cash value to increased risk and volatility. Examples of business or market sectors where this risk may be particularly high include: technology-related businesses (including internet-related businesses), small-cap securities, foreign countries and foreign securities, high-yield bonds, and real estate securities. Before investing in such a portfolio, consult the current prospectus for complete information on its investments and the applicable risk section, and contact your financial advisor to discuss.

Holdings and allocations are subject to change. Asset allocation may be equal to, less than or greater than 100% due to hedged funds or leveraged cash positions by the fund. Asset allocation does not guarantee a profit or protect against a loss in declining markets.

Risk Measures

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

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.

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

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

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.

Portfolio Statistic Definitions

P/E Ratio Price/Earnings (P/E) Ratio is a stock's current price divided by the company's trailing 12-month earnings per share.

P/B Ratio Price/Book (P/B) Ratio is the weighted average of the price/book ratios of all the stocks in a portfolio.

P/C Ratio Price/Cash (P/C) Ratio represents the weighted average of the price/cash-flow ratios of the stocks in a portfolio.

GeoAvgCap Geometric Average Cap is the geometric mean of the market capitalization for all of the stocks the portfolio owned.

American International Trust, American Global Growth Trust, American Growth Trust, American Growth-Income Trust, and

Important Disclosures

American Asset Allocation Trust, a series of John Hancock Variable Insurance Trust, invests in Class 2 shares of a corresponding American Funds Insurance Series Portfolio (a separate group of mutual funds dedicated to insurance products). The performance of these Trusts will be lower than the performance of the corresponding American Funds Insurance Series portfolio due to the Rule 12b-1 fee assessed against these Trusts.

Variable life insurance and underlying portfolios are: NOT FDIC INSURED | MAY LOSE VALUE | NOT BANK GUARANTEED | NOT INSURED BY ANY GOVERNMENT AGENCY

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