Summary Prospectus April 28, 2023

# Virtus Newfleet Multi-Sector Intermediate Bond Series — Class A Shares


This Summary Prospectus is intended for use in connection with a variable life insurance policy or a variable annuity contract and is not intended for use by other investors.

Before you invest, you may want to review the Series' prospectus, which contains more information about the Series and its risks. You can find the Series' prospectus, shareholder reports, statement of additional information (SAI), and other information about the Series online at www.virtus.com/our-products/individual-investors/variable-insurance-trust-funds.

The Series' prospectus and SAI, both dated April 28, 2023 are incorporated by reference into this Summary Prospectus.

## Investment Objective

The Series has an investment objective of long-term total return.

## Fees and Expenses

The following table describes the fees and expenses you may pay if you buy, hold and sell shares of the Virtus Newfleet Multi-Sector Intermediate Bond Series. The table does not include any fees or sales charges imposed under the variable contracts for which the Series is an investment option. If they were included, your costs would be higher.

| Shareholder Fees *(fees paid directly from your investment)* | Class A |
|---|---|
| Shareholder Fees | None |

| Annual Series Operating Expenses *(expenses that you pay each year as a percentage of the value of your investment)* | Class A |
|---|---|
| Management Fees | 0.50% |
| Distribution and/or Service (12b-1) Fees | 0.25% |
| Other Expenses | 0.20% |
| Total Annual Series Operating Expenses | 0.95% |
| Less: Expense Reimbursement[(a)] | (0.01)% |
| Total Annual Series Operating Expenses After Expense Reimbursement[(a)(b)] | 0.94% |

(a) The Series' investment adviser has contractually agreed to limit the Series' total annual operating expenses (excluding certain expenses, such as front-end sales charges, taxes, leverage and borrowing expenses (such as commitment, amendment and renewal expenses on credit or redemption facilities), interest, brokerage commissions, expenses incurred in connection with any merger or reorganization, unusual or infrequently occurring expenses (such as litigation), acquired fund fees and expenses, and dividend expenses, if any) so that such expenses do not exceed 0.94% through April 30, 2024. Following the contractual period, the adviser may discontinue these expense reimbursement arrangements at any time. The adviser may recapture operating expenses reimbursed and/or fees waived under these arrangements for a period of three years following the date such waiver or reimbursement occurred, provided that the recapture does not cause the Series to exceed its expense limit in effect at the time of the waiver or reimbursement, and any in effect at the time of recapture, after repayment is taken into account.

(b) Not included in the table are extraordinary proxy expenses. If such amounts were reflected in this table, the Total Annual Series Operating Expenses After Expense Reimbursement would have been 0.97% for Class A Shares.

### Example

This example is intended to help you compare the cost of investing in the Series with the cost of investing in other mutual funds. The example assumes that you invest $10,000 in the Series for the time periods indicated and then redeem all of your shares at the end of those periods. The example also assumes that your investment has a 5% return each year, that the Series' total operating expenses remain the same and that the expense reimbursement arrangement remains in place for the contractual period. The example does not reflect variable contract fees and charges, and if it did, the costs shown would be higher. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

| | 1 Year | 3 Years | 5 Years | 10 Years |
|---|---|---|---|---|
| Class A | $96 | $302 | $525 | $1,165 |

### Portfolio Turnover

The Series pays transaction costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher portfolio turnover rate may indicate higher transaction costs. These costs, which are not reflected in Annual Series Operating Expenses or in the Example, affect the Series' performance. During the most recent fiscal year, the Series' portfolio turnover rate was 43% of the average value of its portfolio.

## Principal Investment Strategies

The Series seeks to generate high current income and total return by applying extensive credit research and a time-tested approach to capitalize on opportunities across undervalued sectors of the bond market. The Series seeks diversification among 14 sectors in order to increase return potential and reduce risk.

Under normal circumstances, the Series invests at least 80% of its assets in fixed income securities. The subadviser intends to invest the Series' assets in the following sectors of fixed income securities:

- Securities issued or guaranteed as to principal and interest by the U.S. Government, its agencies, authorities or instrumentalities;
- Collateralized mortgage obligations ("CMOs"), real estate mortgage investment conduits ("REMICs") and other pass-through securities, including those issued or guaranteed as to principal and interest by the U.S. Government, its agencies, authorities or instrumentalities;
- Debt instruments issued by foreign issuers, including foreign governments and their political subdivisions and issuers located in emerging markets;
- Investment grade securities (primarily of U.S. issuers, secondarily of non-U.S. issuers), which are securities with credit ratings within the four highest rating categories of a nationally recognized statistical rating organization, including short-term securities; and
- High-yield debt instruments (so-called "junk bonds"), including bank loans (which are generally floating-rate).

The Series may invest in all or some of these sectors.

The Series may use credit default swaps to increase or hedge (decrease) investment exposure to various fixed income sectors and instruments.

## Principal Risks

The Series may not achieve its objective(s), and it is not intended to be a complete investment program. The value of the Series' investments that supports your share value may decrease. If between the time you purchase shares and the time you sell shares the value of the Series' investments decreases, you will lose money. Investment values can decrease for a number of reasons. Conditions affecting the overall economy, specific industries or companies in which the Series invests can be worse than expected, and investments may fail to perform as the subadviser expects. As a result, the value of your shares may decrease. Purchase and redemption activities by separate accounts of participating insurance companies may impact the management of the Series and its ability to achieve its investment objective(s). The principal risks of investing in the Series are identified below.

> ***Credit Risk.*** If the issuer of a debt instrument fails to pay interest or principal in a timely manner, or negative perceptions exist in the market of the issuer's ability to make such payments, the price of the security may decline.

> ***Interest Rate Risk.*** The values of debt instruments may rise or fall in response to changes in interest rates, and this risk may be enhanced for securities with longer maturities.

> ***High-Yield/High-Risk Fixed Income Securities (Junk Bonds) Risk.*** There is a greater risk of issuer default, less liquidity, and increased price volatility related to high-yield/high-risk securities than investment grade securities.

> ***Bank Loan Risk.*** In addition to the risks typically associated with high-yield/high-risk fixed income securities, bank loans may be unsecured or not fully collateralized, may be subject to restrictions on resale, may be less liquid and may trade infrequently on the secondary market. Bank loans settle on a delayed basis; thus, sale proceeds may not be available to meet redemptions for a substantial period of time after the sale of the loan.

> ***Foreign Investing Risk.*** Investing in foreign securities subjects the Series to additional risks such as increased volatility; currency fluctuations; less liquidity; less publicly available information about the foreign investment; and political, regulatory, economic, and market risk.

> ***Emerging Market Risk.*** Emerging markets securities may be more volatile, or more greatly affected by negative conditions, than those of their counterparts in more established foreign markets.

> ***Mortgage-Backed and Asset-Backed Securities Risk.*** Changes in interest rates may cause both extension and prepayment risks for mortgage-backed and asset-backed securities. These securities are also subject to risks associated with the non-repayment of underlying collateral, including losses to the Series.

> ***Market Volatility Risk.*** The value of the securities in the Series may go up or down in response to the prospects of individual companies and/or general economic conditions. Price changes may be short- or long-term. Local, regional or global events such as war or military conflict (e.g. Russia's invasion of Ukraine), acts of terrorism, the spread of infectious illness or other public health issue, recessions, or other events could have a significant impact on the Series and its investments, including hampering the ability of the Series' portfolio manager(s) to invest the Series' assets as intended.

> ***Derivatives Risk.*** Derivatives and other similar instruments (collectively referred to in this section as "derivatives") may include, among other things, futures, options, forwards and swap agreements and may be used in order to hedge portfolio risks, create leverage or attempt to increase returns. Investments in derivatives may result in increased volatility and the Series may incur a loss greater than its principal investment.

> ***Income Risk.*** Income received from the Series may vary widely over the short- and long-term and/or be less than anticipated if the proceeds from maturing securities in the Series are reinvested in lower-yielding securities.

> ***Long-Term Maturities/Durations Risk.*** Debt instruments with longer maturities or durations may experience greater price fluctuations than instruments having shorter maturities or durations.

> ***Prepayment/Call Risk.*** Issuers may prepay or call their fixed rate obligations when interest rates fall, forcing the Series to reinvest in obligations with lower interest rates and the Series may not benefit fully from the increase in value that other fixed income investments experience when interest rates decline.

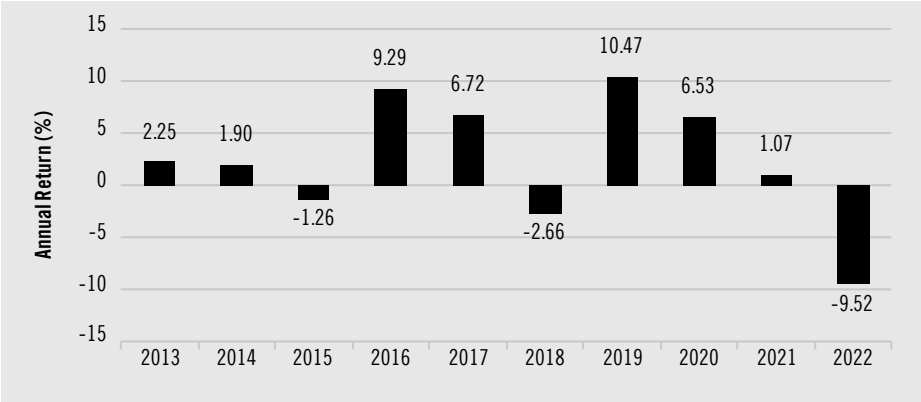
> ***Redemption Risk.*** One or more large shareholders or groups of shareholders may redeem their holdings in the Series, resulting in an adverse impact on remaining shareholders in the Series by causing the Series to take actions it would not otherwise have taken.

> ***U.S. Government Securities Risk.*** U.S. Government securities may be subject to price fluctuations. An agency may default on an obligation not backed by the full faith and credit of the United States. Any guarantee on U.S. government securities does not apply to the value of the Series' shares.

## Performance Information

The following bar chart and table provide some indication of the risks of investing in the Series. The bar chart shows changes in the Series' performance from year to year over a 10-year period. The Series' past performance is not necessarily an indication of how the Series will perform in the future. The table shows how the Series' average annual returns compare to those of a broad-based securities market index. The Series' returns in the chart and table do not reflect the deduction of any separate account or variable contract charges. The returns would have been less than those shown if such charges were deducted. Updated performance information is available at virtus.com or by calling 800-367-5877.

**Calendar year total returns for Class A Shares**




| Best Quarter: | 2020, Q2: | 9.67% | Worst Quarter: | 2020, Q1: | -9.48% | Year to Date (3/31/2023): | 2.56% |
|---|---|---|---|---|---|---|---|

**Average Annual Total Returns** (for the periods ended 12/31/2022)

| | 1 Year | 5 Years | 10 Years |
|---|---|---|---|
| Class A Shares | -9.52% | 0.93% | 2.31% |
| Bloomberg U.S. Aggregate Bond Index (does not reflect fees or expenses) | -13.01% | 0.02% | 1.06% |

The Bloomberg U.S. Aggregate Bond Index measures the U.S. investment grade fixed rate bond market. The index is calculated on a total return basis. The index is unmanaged and not available for direct investment.

## Management

The Series' investment adviser is Virtus Investment Advisers, Inc. ("VIA").

The Series' subadviser is Newfleet Asset Management ("Newfleet"), an operating division of Virtus Fixed Income Advisers, LLC, an affiliate of VIA.

> *David L. Albrycht, CFA,* Newfleet Division President and Chief Investment Officer, & senior portfolio manager of Newfleet, has managed the Series since since 1998.

## Purchase and Sale of Series Shares

The Series does not offer its shares to the general public. The Series currently offers shares only to the separate accounts of participating insurance companies. Virtus Variable Insurance Trust (the "Trust"), of which the Series is a separate investment portfolio, has entered into an agreement with the insurance company sponsor of each separate account (participation agreement) setting forth the terms and conditions pursuant to which the insurance company will purchase and redeem shares of the Series. For information concerning the purchase of units of the separate accounts, see the variable contract prospectus.

## Tax Information

Since the separate accounts are the only shareholders of the Series, no discussion is included herein as to the federal income tax consequences at the shareholder level. For information concerning the federal income tax consequences to the purchasers of variable contracts, see the variable contract prospectus which describes the particular separate account and variable contract.

## Payments to Insurance Companies and Other Financial Intermediaries

Series shares are generally available only through intermediaries, i.e., the separate accounts. The Series (and/or its related companies) may pay the insurance companies (and/or their related companies) for distribution and/or other services; some of the payments may, in turn, go to broker-dealers and other financial intermediaries. For example, the Series may make payments for sub-transfer agency services to one or more of the insurance companies. Such payments may create a conflict of interest for an intermediary by influencing the intermediary's investment recommendations, or be a factor in the insurance company's decision to include the Series as an underlying investment option in a variable contract. Ask your salesperson or review your variable contract prospectus for more information.

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