

MAINSTAY VP FUNDS TRUST

**MainStay VP MacKay High Yield Corporate Bond Portfolio
MainStay VP MacKay Convertible Portfolio
(each a “Portfolio” and collectively, the “Portfolios”)**

Supplement dated February 26, 2024 (“Supplement”) to the Prospectus and Summary Prospectuses dated May 1, 2023, as supplemented and Statement of Additional Information (“SAI”), as dated May 1, 2023 and amended October 13, 2023, as supplemented

Capitalized terms and certain other terms used in this Supplement, unless otherwise defined in this Supplement, have the meanings assigned to them in the Prospectus, Summary Prospectuses and SAI.

Effective on or about February 28, 2024 the following portfolio manager are added:

- For MainStay VP MacKay High Yield Corporate Bond Portfolio, the table in the section entitled “**Management**” of the Summary Prospectus and Prospectus with respect to the Portfolio is revised to add the below to the existing portfolio management team. Andrew Susser will continue to be the lead portfolio manager of the Portfolio.

| Subadvisor | Portfolio Managers | Service Date |
|--------------------|--------------------------------|---------------------|
| MacKay Shields LLC | Dohyun Cha, Managing Director | Since February 2024 |
| | Won Choi, Managing Director | Since February 2024 |
| | Nate Hudson, Managing Director | Since February 2024 |

- For MainStay VP MacKay Convertible Portfolio, the table in the section entitled “Management” of the Summary Prospectus and Prospectus with respect to the Portfolio is revised to add the below to the existing portfolio management team. Edward Silverstein will continue to be the lead portfolio manager of the Portfolio.

| Subadvisor | Portfolio Managers | Service Date |
|--------------------|--------------------------------|---------------------|
| MacKay Shields LLC | Thomas Wynn, Managing Director | Since February 2024 |

- For each of the Funds, in the section of the Prospectus entitled “**The Fund and its Management,**” the subsection entitled “**Portfolio Manager Biographies**” is amended to include the following for Messrs. Cha, Choi, Hudson and Wynn:

| | |
|------------------------|---|
| Dohyun Cha, CFA | Mr. Cha has managed the MainStay VP MacKay High Yield Corporate Bond Portfolio since February 2024. He is a Managing Director on the High Yield Team, where he follows the energy sector. Prior to joining MacKay Shields in 2006, Mr. Cha was a Vice President at Credit Suisse, where he was an equity analyst covering the basic materials sector. Previously, Mr. Cha was a Financial Analyst in the Investment Banking Division of CIBC World Markets. He received a BS from Boston College and is a CFA® charterholder. Mr. Cha has been working in the investment industry since 1997. |
| Won Choi, CFA | Mr. Choi has managed the MainStay VP MacKay High Yield Corporate Bond Portfolio since February 2024. He is a Managing Director on the High Yield Team, where he follows the financials and metals & mining sectors. Prior to joining MacKay Shields in 2002, he was an Associate at Fenway Partners, Inc, a middle market private equity firm. Previously, Mr. Choi was a Financial Analyst in the Investment Banking Division of Salomon Smith Barney. He received a BA from Yale University and is a CFA® charterholder. Mr. Choi has been working in the investment industry since 1997. |

| | |
|--------------------------------|--|
| <p>Nate Hudson, CFA</p> | <p>Mr. Hudson has managed the MainStay VP MacKay High Yield Corporate Bond Portfolio since February 2024. He is a Managing Director on the High Yield Team, where he follows the automotive and services sectors. Prior to joining MacKay Shields in 2008, Mr. Hudson was a Senior Analyst of High Yield Credit in Strategic Capital's (White Ridge Advisors) proprietary investment group at Banc of America Securities. Previously, he was a sell-side High Yield Analyst at Banc of America Securities and a High Yield Credit Analyst at Nomura Corporate Research & Asset Management (NCRAM). Mr. Hudson received a BA from Yale University and is a CFA® charterholder. He has been working in the investment industry since 1991.</p> |
| <p>Thomas Wynn, CFA</p> | <p>Mr. Wynn has managed the MainStay VP MacKay Convertible Portfolio since February 2024. Rejoining MacKay Shields in 2015, Mr. Wynn is a Managing Director and is a Convertible portfolio manager. With MacKay Shields from 1995 to 2004 in the firm's Convertible area, he left MacKay Shields to pursue opportunities in the hedge fund community with AM Investment Partners. Most recently Mr. Wynn was an Equity Long/Short portfolio manager with Centurion Capital and previously with Deutsche Bank. He has an MBA in Finance from New York University and BA in Economics from the University of Notre Dame. Mr. Wynn is a CFA® charterholder and has been in the investment management business since 1983.</p> |

PLEASE RETAIN THIS SUPPLEMENT FOR YOUR FUTURE REFERENCE.



MainStay VP MacKay Convertible Portfolio

Before you invest, you may want to review the Portfolio's Prospectus, which contains more information about the Portfolio and its risks. You can find the Portfolio's Prospectus, reports to shareholders and other information about the Portfolio by going online to newyorklifeinvestments.com, by calling 800-598-2019 or by sending an e-mail to MainStayShareholderServices@nylim.com. The Portfolio's Prospectus and Statement of Additional Information, both dated May 1, 2023, as may be amended from time to time, are incorporated by reference into this Summary Prospectus.

Investment Objective

The Portfolio seeks capital appreciation together with current income.

Fees and Expenses of the Portfolio

The table below describes the fees and expenses that you may pay if you buy, hold and sell shares of the Portfolio. The table does not include any separate account or policy fees or charges imposed under the variable annuity policies and variable universal life insurance policies for which the Portfolio is an investment option. If they were included, your costs would be higher. Investors should consult the applicable variable annuity policy or variable universal life insurance policy prospectus for more information.

| | Initial Class | Service Class |
|--|---------------|---------------|
| Annual Portfolio Operating Expenses (fees paid directly from your investment) | | |
| Management Fees (as an annual percentage of the Portfolio's average daily net assets) ¹ | 0.54% | 0.54% |
| Distribution and Service (12b-1) Fees | None | 0.25% |
| Other Expenses | 0.03% | 0.03% |
| Total Annual Portfolio Operating Expenses | 0.57% | 0.82% |

1. The management fee is as follows: 0.60% on assets up to \$500 million; 0.55% on assets from \$500 million to \$1 billion; 0.50% on assets from \$1 billion to \$2 billion; and 0.49% on assets over \$2 billion.

Example

The Example is intended to help you compare the cost of investing in the Portfolio with the cost of investing in other mutual funds. The Example does not include any separate account or policy fees or charges imposed under the variable annuity policies and variable universal life insurance policies for which the Portfolio is an investment option. If they were included, your costs would be higher. The Example assumes that you invest \$10,000 in the Portfolio for the time periods indicated whether or not you redeem all of your shares at the end of those periods. The Example also assumes that your investment has a 5% return each year and that the Portfolio's operating expenses remain the same. The Example reflects the contractual fee waiver and/or expense reimbursement arrangement, if applicable, for the current duration of the arrangement only. 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 |
|---------------|--------|---------|---------|----------|
| Initial Class | \$ 58 | \$ 183 | \$ 318 | \$ 714 |
| Service Class | \$ 84 | \$ 262 | \$ 455 | \$ 1,014 |

Portfolio Turnover

The Portfolio 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 Portfolio operating expenses or in the Example, affect the Portfolio's performance. During the most recent fiscal year, the Portfolio's portfolio turnover rate was 14% of the average value of its portfolio.

Principal Investment Strategies

The Portfolio, under normal circumstances, invests at least 80% of its assets (net assets plus any borrowings for investment purposes) in "convertible securities" such as bonds, debentures, corporate notes, and preferred stocks or other securities that are convertible into common stock or the cash value of a stock or a basket or index of equity securities. The balance of the Portfolio may be invested or held in non-convertible debt, equity securities that do not pay regular dividends, U.S. government securities, and cash or cash equivalents.

Investment Process: The Portfolio takes a flexible approach by investing in a broad range of securities of a variety of companies and industries. The Portfolio invests in investment grade and below investment grade debt securities. Below investment grade securities are generally securities that receive low ratings from a nationally recognized statistical rating organization ("NRSRO"), or if unrated, are determined to be of equivalent quality by MacKay Shields LLC, the Portfolio's Subadvisor. Securities that are rated below investment grade by independent rating agencies are commonly referred to as "high-yield securities" or "junk bonds." The Subadvisor may also invest without restriction in securities with lower ratings from a NRSRO. If NRSROs assign different ratings to the same security, the Portfolio will use the higher rating for purposes of determining the security's credit quality.

In selecting convertible securities for purchase or sale, the Subadvisor takes into account a variety of investment considerations, including the potential return of the common stock into which the convertible security is convertible, credit risk, projected interest return, and the premium for the convertible security relative to the underlying common stock.

The Subadvisor's investment process includes a risk analysis that gives consideration to a variety of security-specific risks, including but not limited to, environmental, social and governance ("ESG") risks that may have a material impact on the performance of a security. In addition to proprietary research, the Subadvisor may use screening tools and, to the extent available, third party data to identify ESG risk factors that may not have been captured through its own research. The Subadvisor's consideration of ESG risk is weighed against other criteria and no sectors or industries are explicitly excluded from the Portfolio.

The Portfolio may also invest in "synthetic" convertible securities, which are derivative positions composed of two or more securities whose investment characteristics, taken together, resemble those of traditional convertible securities. Unlike traditional convertible securities whose conversion values are based on the common stock of the issuer of the convertible security, "synthetic" and "exchangeable" convertible securities are preferred stocks or debt obligations of an issuer which are structured with an embedded equity component whose conversion value is based on the value of the common stocks of one or more different issuers or a particular benchmark (which may include indices, baskets of domestic stocks, commodities, a foreign issuer or basket of foreign stocks, or a company whose stock is not yet publicly traded). The value of a synthetic convertible is the sum of the values of its preferred stock or debt obligation component and its convertible component.

The Portfolio may invest in foreign securities, which are securities issued by companies organized outside the United States or that trade primarily in non-U.S. securities markets. An issuer of a security is considered to be a U.S. or foreign issuer based on the issuer's "country of risk" (or similar designation) as determined by a third-party such as Bloomberg.

The Subadvisor may sell a security if it believes the security will no longer contribute to meeting the investment objective of the Portfolio. In considering whether to sell a security, the Subadvisor may evaluate, among other things, the condition of the economy, meaningful changes in the issuer's financial condition, changes in credit risk, and changes in projected interest return.

Principal Risks

You can lose money by investing in the Portfolio. An investment in the Portfolio is not a bank deposit and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency. The investments selected by the Subadvisor may underperform the market in which the Portfolio invests or other investments. The Portfolio may receive large purchase or redemption orders which may have adverse effects on performance if the Portfolio were required to sell securities, invest cash or hold a relatively large amount of cash at times when it would not otherwise do so.

The principal risks of investing in the Portfolio are summarized below.

Market Risk: Changes in markets may cause the value of investments to fluctuate, which could cause the Portfolio to underperform other funds with similar investment objectives and strategies. Such changes may be rapid and unpredictable. From time to time, markets may experience periods of stress as a result of various market and economic factors for potentially prolonged periods that may result in: (i) increased market volatility; (ii) reduced market liquidity; and (iii) increased redemptions of shares. Such conditions may add significantly to the risk of volatility in the net asset value of the Portfolio's shares.

Portfolio Management Risk: The investment strategies, practices and risk analyses used by the Subadvisor may not produce the desired results or expected returns. The Subadvisor may give consideration to certain ESG criteria when evaluating an investment opportunity. The application of ESG criteria may result in the Portfolio (i) having exposure to certain securities or industry sectors that are significantly different than the composition of the Portfolio's benchmark; and (ii) performing differently than other funds and strategies in its peer group that do not take into account ESG criteria or the Portfolio's benchmark.

Yield Risk: There can be no guarantee that the Portfolio will achieve or maintain any particular level of yield.

Convertible Securities Risk: Convertible securities are typically subordinate to an issuer's other debt obligations. In part, the total return for a convertible security depends upon the performance of the underlying stock into which it can be converted. Also, issuers of convertible securities are often not as strong financially as those issuing securities with higher credit ratings, are more likely to encounter financial difficulties and typically are more vulnerable to changes in the economy, such as a recession or a sustained period of rising interest rates, which could affect their ability to make interest and principal payments. If an issuer stops making interest and/or principal payments, the Portfolio could lose its entire investment.

Synthetic Convertible Securities Risk: The values of a synthetic convertible and a true convertible security may respond differently to market fluctuations. In addition, in purchasing a synthetic convertible security, the Portfolio may have counterparty (including counterparty credit) risk with respect to the financial institution or investment bank that offers the instrument.

Debt Securities Risk: The risks of investing in debt or fixed-income securities include (without limitation): (i) credit risk, e.g., the issuer or guarantor of a debt security may be unable or unwilling (or be perceived as unable or unwilling) to make timely principal and/or interest payments or otherwise honor its obligations, or changes in an issuer's credit rating or the market's perception of an issuer's creditworthiness may affect the value of the Portfolio's investments; (ii) maturity risk, e.g., a debt security with a longer maturity may fluctuate in value more than one with a shorter maturity; (iii) market risk, e.g., low demand for debt securities may negatively impact their price; (iv) interest rate risk, e.g., when interest rates go up, the value of a debt security generally goes down, and when interest rates go down, the value of a debt security generally goes up (long-term debt securities are generally more susceptible to interest rate risk than short-term debt securities); and (v) call or prepayment risk, e.g., during a period of falling interest rates, the issuer may redeem a security by repaying it early, which may reduce the Portfolio's income if the proceeds are reinvested at lower interest rates.

Interest rate risk is the risk that the value of the Portfolio's investments in fixed income or debt securities will change because of changes in interest rates. There is a risk that interest rates across the financial system may change, possibly significantly and/or rapidly. Changes in interest rates or a lack of market participants may lead to decreased liquidity and increased volatility in the fixed-income or debt markets, making it more difficult for the Portfolio to sell its fixed-income or debt holdings. Decreased liquidity in the fixed-income or debt markets also may make it more difficult to value some or all of the Portfolio's fixed-income or debt holdings. For most fixed-income investments, when market interest rates fall, prices of fixed-rate debt securities rise. However, when

market interest rates fall, prices of certain variable and fixed-rate debt securities may be adversely affected (i.e., falling interest rates bring the possibility of prepayment risk, as an instrument may be redeemed before maturity). Very low or negative interest rates may magnify interest rate risk. Low interest rates (or negative interest rates) may magnify the risks associated with rising interest rates. The Portfolio may also be subject to heightened interest rate risk when the Federal Reserve raises interest rates. Changing interest rates, including rates that fall below zero, may have unpredictable effects on markets, may result in heightened market volatility and may detract from Portfolio performance to the extent the Portfolio is exposed to such interest rates and/or volatility. Other factors that may affect the value of debt securities include, but are not limited to, economic, political, public health, and other crises and responses by governments and companies to such crises. Not all U.S. government debt securities are guaranteed by the U.S. government—some are backed only by the issuing agency, which must rely on its own resources to repay the debt. The Portfolio's yield will fluctuate with changes in short-term interest rates.

High-Yield Securities Risk: Investments in high-yield securities or non-investment grade securities (commonly referred to as "junk bonds") are considered speculative because investments in such securities present a greater risk of loss than investments in higher quality securities. Such securities may, under certain circumstances, be less liquid than higher rated securities. These securities pay investors a premium (a high interest rate or yield) because of the potential illiquidity and increased risk of loss. These securities can also be subject to greater price volatility. In times of unusual or adverse market, economic or political conditions, these securities may experience higher than normal default rates.

Equity Securities Risk: Investments in common stocks and other equity securities are particularly subject to the risk of changing economic, stock market, industry and company conditions and the risks inherent in the ability to anticipate such changes that can adversely affect the value of portfolio holdings.

Foreign Securities Risk: Investments in foreign (non-U.S.) securities may be riskier than investments in U.S. securities. Foreign regulatory regimes and securities markets can have less stringent investor protections and disclosure standards and less liquid trading markets than U.S. regulatory regimes and securities markets, and can experience political, social and economic developments that may affect the value of investments in foreign securities. Foreign securities may also subject the Portfolio's investments to changes in currency rates. Changes in the value of foreign currencies may make the return on an investment increase or decrease, unrelated to the quality or performance of the investment itself. Economic sanctions may be, and have been, imposed against certain countries, organizations, companies, entities and/or individuals. Economic sanctions and other similar governmental actions or developments could, among other things, effectively restrict or eliminate the Portfolio's ability to purchase or sell certain foreign securities or groups of foreign securities, and thus may make the Portfolio's investments in such securities less liquid or more difficult to value. Such sanctions may also cause a decline in the value of securities issued by the sanctioned country or companies located in or economically tied to the sanctioned country. In addition, as a result of economic sanctions and other similar governmental actions or developments, the Portfolio may be forced to sell or otherwise dispose of foreign investments at inopportune times or prices. The Portfolio may seek to hedge against its exposure to changes in the value of foreign currency, but there is no guarantee that such hedging techniques will be successful in reducing any related foreign currency valuation risk.

Liquidity and Valuation Risk: The Portfolio's investments may be illiquid at the time of purchase or liquid at the time of purchase and subsequently become illiquid due to, among other things, events relating to the issuer of the securities, market events, operational issues, economic conditions, investor perceptions or lack of market participants. The lack of an active trading market may make it difficult to sell or obtain an accurate price for a security. If market conditions or issuer specific developments make it difficult to value securities, the Portfolio may value these securities using more subjective methods, such as fair value pricing. In such cases, the value determined for a security could be different than the value realized upon such security's sale. As a result, an investor could pay more than the market value when buying shares or receive less than the market value when selling shares. This could affect the proceeds of any redemption or the number of shares an investor receives upon purchase. The Portfolio is subject to the risk that it could not meet redemption requests within the allowable time period without significant dilution of remaining investors' interests in the Portfolio. To meet redemption requests or to raise cash to pursue other investment opportunities, the Portfolio may be forced to sell securities at an unfavorable time and/or under unfavorable conditions, which may adversely affect the Portfolio's performance. These risks are heightened for fixed-income instruments when interest rates are low or rapidly increasing.

Money Market/Short-Term Securities Risk: To the extent the Portfolio holds cash or invests in money market or short-term securities, the Portfolio may be less likely to achieve its investment objective. In addition, it is possible that the Portfolio's investments in these instruments could lose money.

Private Placement and Restricted Securities Risk: The Portfolio may invest in privately issued securities, including those which may be resold only in accordance with Rule 144A under the Securities Act of 1933, as amended. Securities acquired in a private placement generally are subject to strict restrictions on resale, and there may be no market or a limited market for the resale of such securities. Therefore, the Portfolio may be unable to dispose of such securities when it desires to do so or at the most favorable price. This potential lack of liquidity also may make it more difficult to accurately value these securities.

Past Performance

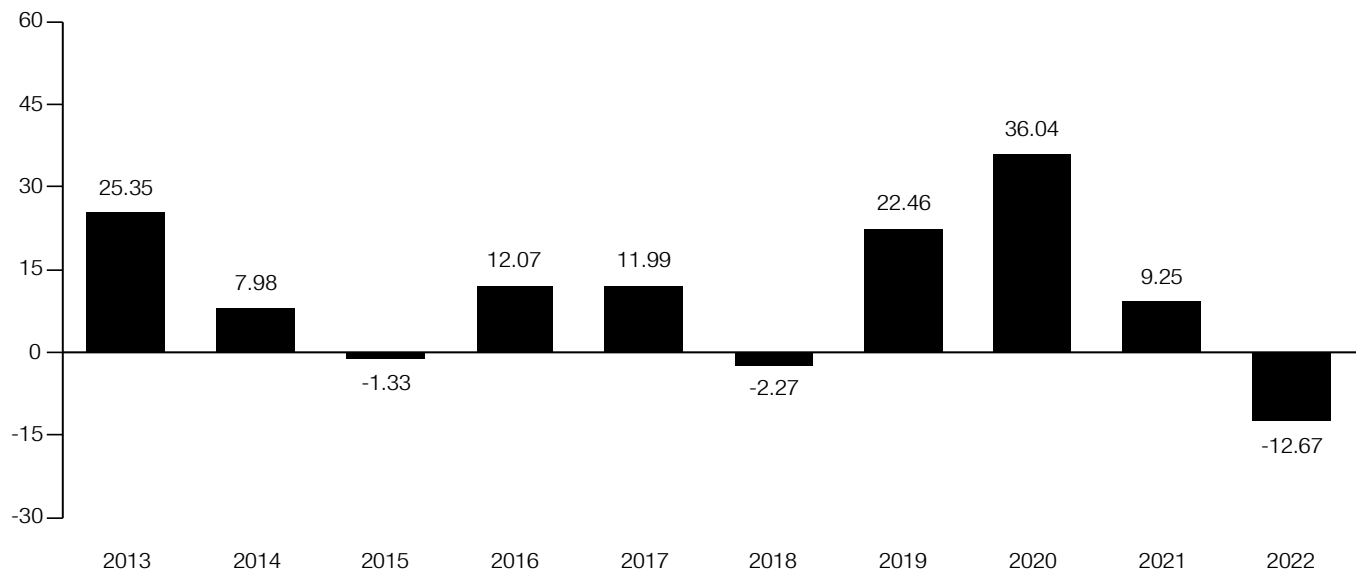
The following bar chart and table provide some indication of the risks of investing in the Portfolio by showing changes in the Portfolio's performance from year to year and by showing how the Portfolio's average annual returns compare with those of a broad-based securities market index over time. Separate variable annuity and variable universal life insurance account and policy fees and charges are not reflected in the bar chart and table. If they were, returns would be less than those shown. The Portfolio has selected the ICE BofA U.S. Convertible Index as its primary benchmark.

Index returns reflect no deductions for fees, expenses or taxes, except for foreign withholding taxes where applicable.

Performance data for the classes varies based on differences in their fee and expense structures. Past performance is not necessarily an indication of how the Portfolio will perform in the future.

Annual Returns, Initial Class Shares

(by calendar year 2013-2022)



Best Quarter

| | |
|----------|--------|
| 2020, Q2 | 23.28% |
|----------|--------|

Worst Quarter

| | |
|----------|---------|
| 2020, Q1 | -13.68% |
|----------|---------|

Average Annual Total Returns (for the periods ended December 31, 2022)

| | Inception | 1 Year | 5 Years | 10 Years |
|--|-----------|---------|---------|----------|
| Initial Class | 10/1/1996 | -12.67% | 9.21% | 10.04% |
| Service Class | 6/5/2003 | -12.89% | 8.93% | 9.77% |
| ICE BofA U.S. Convertible Index ¹ | | -18.71% | 9.29% | 10.01% |

1. The ICE BofA U.S. Convertible Index is a market-capitalization weighted index of domestic corporate convertible securities. In order to be included in the ICE BofA U.S. Convertible Index, bonds and preferred stocks must be convertible only to common stock.

Management

New York Life Investment Management LLC serves as the Manager. MacKay Shields LLC serves as the Subadvisor. The individual listed below is primarily responsible for day-to-day portfolio management.

| Subadvisor | Portfolio Manager | Service Date |
|--------------------|--|--------------|
| Mackay Shields LLC | Edward Silverstein, Senior Managing Director | Since 2001 |

How to Purchase and Sell Shares

Shares of the Portfolio are currently offered to certain separate accounts to fund variable annuity policies and variable universal life insurance policies issued by New York Life Insurance and Annuity Corporation ("NYLIAC") and may also be offered to fund variable annuity policies and variable universal life insurance policies issued by other insurance companies. Shares of the Portfolio are also offered as underlying investments of the MainStay VP Asset Allocation Portfolios ("Asset Allocation Portfolios") and other variable insurance funds. Service Class shares of the Portfolio are currently offered to certain separate accounts to fund variable annuity policies and variable universal life insurance policies issued by participating insurance companies.

Individual investors do not transact directly with the Portfolio to purchase and redeem shares. Rather, investors select underlying investment options offered by the applicable policy. Please refer to the prospectus for the variable annuity policy or variable universal life insurance policy that offers the Portfolio as an underlying investment option for information on the allocation of premium payments and on transfers among the investment divisions of the separate account.

Tax Information

Because the Portfolio's shareholders are the separate accounts of NYLIAC or other insurance companies through which you purchased your variable annuity policy or variable universal life insurance policy and the Asset Allocation Portfolios and other variable insurance funds, no discussion is included here as to the

federal income tax consequences at the shareholder level. For information concerning the federal income tax consequences to variable annuity and variable universal life insurance policy owners, consult the prospectus relating to the appropriate policy.

Compensation to Broker/Dealers and Other Financial Intermediaries

The Portfolio and/or its related companies may pay NYLIAC or other participating insurance companies, broker/dealers, or other financial intermediaries for the sale of Portfolio shares and related services. These payments may create a conflict of interest by influencing the broker/dealer or other financial intermediary or your sales person to recommend the Portfolio over another investment and/or a policy that offers this Portfolio over another investment. Ask your individual salesperson or visit your broker/dealer's or other financial intermediary firm's website for more information. For additional information about these payments, please see the section entitled "The Fund and its Management" in the Prospectus.

"New York Life Investments" is both a service mark, and the common trade name, of certain investment advisors affiliated with New York Life Insurance Company.