MainStay VP Fidelity Institutional AM® Utilities 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, 2021, as may be amended from time to time, are incorporated by reference into this Summary Prospectus.

Investment Objective

The Portfolio seeks total return.

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.

<table>
<thead>
<tr>
<th>Initial Class</th>
<th>Management Fees (as an annual percentage of the Portfolio’s average daily net assets)</th>
<th>Distribution and Service (12b-1) Fees</th>
<th>Other Expenses</th>
<th>Total Annual Portfolio Operating Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.64%</td>
<td>None</td>
<td>0.03%</td>
<td>0.67%</td>
</tr>
</tbody>
</table>

Note: The management fee is as follows: 0.64% on assets up to $1 billion; 0.61% on assets from $1 billion to $3 billion; and 0.60% on assets over $3 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:

<table>
<thead>
<tr>
<th>Initial Class</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
<th>10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ 68</td>
<td>$ 214</td>
<td>$ 373</td>
<td>$ 835</td>
</tr>
</tbody>
</table>

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 62% 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 borrowing for investment purposes) in securities of issuers in the utilities group of industries and companies deriving a majority of their revenues from their utility operations.

These companies may include, for example, companies that produce electricity, including nuclear and non-nuclear facilities; companies that distribute and transmit natural and manufactured gas; water treatment and other utility companies; and other companies that operate as independent power producers, gas and power marketing and trading specialists and/or integrated energy merchants. The Portfolio will invest at least 25% of its total assets (concentrate its investments) in securities issued by companies in the utilities group of industries. In addition to concentrating on particular industries, the Portfolio may invest a significant percentage of its assets in relatively few companies and may invest up to 25% in a single company. The Portfolio is non-diversified, which means it may invest a greater percentage of its assets in a limited number of issuers than a diversified fund.

FIAM LLC, the Portfolio’s Subadvisor, does not place any emphasis on income when selecting securities, except when it believes that income may have a favorable effect on a security’s market value.

The Subadvisor normally invests the Portfolio’s assets primarily in equity securities.
Market Risk: The principal risks of investing in the Portfolio are summarized below. Conditions in the energy markets may experience periods of stress for potentially prolonged periods that may result in: (i) increased market volatility; (ii) reduced market liquidity; and (iii) increased redemptions of Portfolio shares. Such conditions may add significantly to the risk of volatility in the net asset value of the Portfolio’s shares. The energy markets have experienced significant volatility, including significant swings in the price of crude oil and natural gas prices, and may experience and have historically experienced relatively high volatility for prolonged periods as a result of factors such as supply, technology, regulation, and market collusion. Such conditions may negatively impact the Portfolio and its shareholders. The Subadvisor may take measures to navigate the conditions of the energy markets, but there is no guarantee that such efforts will be effective or that the Portfolio’s performance will correlate with any increase in oil and gas prices.

Market Risk: The value of the Portfolio’s investments may fluctuate because of changes in the markets in which the Portfolio invests, 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 for potentially prolonged periods that may result in: (i) increased market volatility; (ii) reduced market liquidity; and (iii) increased redemptions of Portfolio shares. Such conditions can add significantly to the risk of volatility in the net asset value of the Portfolio’s shares.

Investment Process: In buying and selling securities for the Portfolio, the Subadvisor relies on fundamental analysis, which involves a bottom-up assessment, including macro and quantitative support, of a company’s potential for success in light of factors including its financial condition, earnings outlook, strategy, management, industry position, and economic and market conditions.

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.

Portfolio Management Risk: The investment strategies, practices and risk analyses used by the Subadvisor may not produce the desired results. Investments selected using quantitative methods or based on models that analyze information and data (“quantitative tools”) may perform differently from the market as a whole. The quantitative tool used by the Subadvisor, and the investments selected based on the quantitative tool, may not perform as expected. The quantitative tool may contain certain assumptions in construction and implementation that may adversely affect the Portfolio’s performance. There may be technical issues with the construction and implementation of quantitative tools (for example, software or other technology malfunctions, or programming inaccuracies). In addition, the Portfolio’s performance will reflect, in part, the Subadvisor’s ability to make active qualitative decisions and timely adjust the quantitative tool, including the tool’s underlying metrics and data.

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 portfolio manager’s ability to anticipate such changes that can adversely affect the value of the Portfolio’s holdings.

Utilities Risk: The utilities group of industries can be significantly affected by, among other things, government regulation, interest rate changes, financing difficulties, supply and demand of services or fuel, intense competition, natural resource conservation, and commodity price fluctuations.

Concentration Risk: Because the Portfolio concentrates its investments in securities issued by companies in the utilities group of industries, the Portfolio may be subject to greater risks and market fluctuations than a fund whose portfolio has exposure to a broader range of industries. The Portfolio is particularly susceptible to financial, economic, political, or market events, as well as government regulation, impacting the utilities group of industries, including supply and/or demand for services or fuel, financing costs, conservation efforts, the negative impact of regulation, and other factors. The Portfolio is subject to the risk that: (1) its performance will be closely tied to the performance of the utilities group of industries; (2) its performance will be adversely impacted when such industries experience a downturn; and (3) it will perform poorly during a slump in demand for securities of companies in such industries.

Non-Diversification Risk: The Portfolio is a non-diversified, open-end management investment company under the Investment Company Act of 1940, as amended. A non-diversified fund may have a significant portion of its investments in a smaller number of issuers than a diversified fund. Having a larger percentage of assets in a smaller number of issuers makes a non-diversified fund, like the Portfolio, more susceptible to the risk that one single event or occurrence can have a significant adverse impact upon the Portfolio.

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 the Portfolio’s 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.

Regulatory Risk: The Portfolio as well as the issuers of the securities and other instruments in which the Portfolio invests are subject to considerable regulation and the risks associated with adverse changes in laws and regulations governing their operations.

The utilities group of industries is subject to significant government regulation and oversight, including regulatory limits on rates, profits and the ability to pay dividends to investors as well as restrictions on a company’s access to new markets, which may adversely affect the Portfolio’s investments in utilities issuers. In addition, deregulation of the utilities group of industries may subject utility companies to greater competition and may reduce their profitability. Together, these risks subject utilities issuers to uncertainty and may result in increased price volatility of securities of issuers in the utilities group of industries.
Exchange-Traded Fund ("ETF") Risk: The risks of owning an ETF generally reflect the risks of owning the securities in which the ETF invests or is designed to track, although lack of liquidity in an ETF could result in it being more volatile than its underlying portfolio securities. Disruptions in the markets for the securities underlying ETFs purchased or sold by the Portfolio could result in losses on the Portfolio's investment in ETFs. ETFs also have management fees and transaction costs that may make them more expensive than owning the underlying securities directly.

Derivatives Risk: Derivatives are investments whose value depends on (or is derived from) the value of an underlying instrument, such as a security, asset, reference rate or index. Derivative strategies may expose the Portfolio to greater risk than if it had invested directly in the underlying instrument and often involve leverage, which may exaggerate a loss, potentially causing the Portfolio to lose more money than it originally invested and would have lost had it invested directly in the underlying instrument. For example, if the Portfolio is the seller of credit protection in a credit default swap, the Portfolio effectively adds leverage to its portfolio and is subject to the credit exposure on the full notional value of the swap. Derivatives may be difficult to sell, unwind and/or value. Derivatives may also be subject to counterparty risk, which is the risk that the counterparty (the party on the other side of the transaction) on a derivative transaction will be unable or unwilling to honor its contractual obligations to the Portfolio. Futures may be more volatile than direct investments in the instrument underlying the contract, and may not correlate perfectly to the underlying instrument. Futures and other derivatives also may involve a small initial investment relative to the risk assumed, which could result in losses greater than if they had not been used. Derivatives may also increase the expenses of the Portfolio.

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.

Past Performance

The following bar chart and table indicate some of the risks of investing in the Portfolio. The bar chart shows you how the Portfolio’s calendar year performance has varied over time. The average annual total returns table shows how the Portfolio’s average annual total returns compare to those of a broad-based securities market index. 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 MSCI USA IMI Utilities 25/50 Index as its primary benchmark. The MSCI USA IMI Utilities 25/50 Index is a modified market capitalization-weighted index of stocks designed to measure the performance of utilities companies in the MSCI U.S. Investable Market 2500 Index.

Past performance is not necessarily an indication of how the Portfolio will perform in the future. The Portfolio replaced its subadvisor, modified its principal investment strategies and changed its classification from a diversified fund to a non-diversified fund as of November 30, 2018. The past performance in the bar chart and table prior to that date reflects the Portfolio’s prior subadvisor, principal investment strategies and diversification status.

Annual Returns, Initial Class Shares
(by calendar year 2013-2020)

<table>
<thead>
<tr>
<th>Year</th>
<th>Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20.33%</td>
</tr>
<tr>
<td>2014</td>
<td>12.68%</td>
</tr>
<tr>
<td>2015</td>
<td>11.43%</td>
</tr>
<tr>
<td>2016</td>
<td>14.72%</td>
</tr>
<tr>
<td>2017</td>
<td>0.80%</td>
</tr>
<tr>
<td>2018</td>
<td>23.26%</td>
</tr>
<tr>
<td>2019</td>
<td>-0.38%</td>
</tr>
<tr>
<td>2020</td>
<td></td>
</tr>
</tbody>
</table>

Best Quarter: Q4/2020 12.52%
Worst Quarter: Q1/2020 -18.51%

Average Annual Total Returns (for the periods ended December 31, 2020)

<table>
<thead>
<tr>
<th></th>
<th>Inception</th>
<th>1 Year</th>
<th>5 Years</th>
<th>Since Inception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Class</td>
<td>2/17/2012</td>
<td>-0.38%</td>
<td>9.61%</td>
<td>8.13%</td>
</tr>
<tr>
<td>MSCI USA IMI Utilities 25/50 Index (Gross) (reflects no deductions for fees, expenses, or taxes)</td>
<td></td>
<td>-0.74%</td>
<td>11.43%</td>
<td>10.90%</td>
</tr>
</tbody>
</table>
### Management
New York Life Investment Management LLC serves as the Portfolio’s Manager. FIAM LLC serves as the Subadvisor. The individual listed below is primarily responsible for the day-to-day portfolio management of the Portfolio.

<table>
<thead>
<tr>
<th>Subadvisor</th>
<th>Portfolio Manager</th>
<th>Portfolio Service Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIAM LLC</td>
<td>Douglas Simmons, Portfolio Manager</td>
<td>Since 2018</td>
</tr>
</tbody>
</table>

### 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.

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.*

To Statutory Prospectus  
To Statement of Additional Information