PIMCO

PIMCO High Yield Portfolio

SUMMARY PROSPECTUS

April 30, 2020

Share Class: Administrative Summary Prospectus

Beginning on January 1, 2021, as permitted by regulations adopted by the Securities and Exchange Commission, you may not be receiving paper copies of the Portfolio's shareholder reports from the insurance company that offers your contract unless you specifically request paper copies from the insurance company or from your financial intermediary. Instead, the shareholder reports will be made available on a website, and the insurance company will notify you by mail each time a report is posted and provide you with a website link to access the report. Instructions for requesting paper copies will be provided by your insurance company.

If you already elected to receive shareholder reports electronically, you will not be affected by this change and you need not take any action. You may elect to receive shareholder reports and other communications from the insurance company electronically by following the instructions provided by the insurance company.

You may elect to receive all future reports in paper free of charge from the insurance company. You should contact the insurance company if you wish to continue receiving paper copies of your shareholder reports. Your election to receive reports in paper will apply to all portfolio companies available under your contract at the insurance company.

Before you invest, you may want to review the Portfolio's prospectus, which, as supplemented, 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 online at www.pimco.com/pvit. You can also get this information at no cost by calling 1.800.927.4648 or by sending an email request to piprocess@dstsystems.com. The Portfolio's prospectus and Statement of Additional Information, both dated April 30, 2020, as supplemented, are incorporated by reference into this Summary Prospectus.

Investment Objective

The Portfolio seeks maximum total return, consistent with preservation of capital and prudent investment management.

Fees and Expenses of the Portfolio

This table describes the fees and expenses that you may pay if you buy and hold Administrative Class shares of the Portfolio. Overall fees and expenses of investing in the Portfolio are higher than shown because the table does not reflect variable contract fees and expenses.

Shareholder Fees (fees paid directly from your investment): N/A Annual Portfolio Operating Expenses (expenses that you pay each year as a percentage of the value of your investment):

| | Administrative Class |
|---|-------------------------|
| Management Fees | 0.60% |
| Distribution and/or Service (12b-1) Fees | 0.15% |
| Other Expenses ⁽¹⁾ | 0.03% |
| Total Annual Portfolio Operating Expenses | 0.78% |

"Other Expenses" include interest expense of 0.03%. Interest expense is borne by the Portfolio separately from the management fees paid to Pacific Investment Management Company LLC ("PIMCO"). Excluding interest expense, Total Annual Portfolio Operating Expenses are 0.75% for Administrative Class shares.

Example. The Example is intended to help you compare the cost of investing in Administrative Class shares of the Portfolio with the costs of investing in other mutual funds. The Example assumes that you invest

\$10,000 for the time periods indicated, and then redeem all 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. Although your actual costs may be higher or lower, the Example shows what your costs would be based on these assumptions. The Example does not reflect fees and expenses of any variable annuity contract or variable life insurance policy, and would be higher if it did.

| | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|--------|---------|---------|----------|
| Administrative Class | \$80 | \$249 | \$433 | \$966 |

Portfolio Turnover

The Portfolio pays transaction costs 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 the Annual Portfolio Operating Expenses or in the Example table, affect the Portfolio's performance. During the most recent fiscal year, the Portfolio's portfolio turnover rate was 30% of the average value of its portfolio.

Principal Investment Strategies

The Portfolio seeks to achieve its investment objective by investing under normal circumstances at least 80% of its assets in high yield investments ("junk bonds"), which may be represented by forwards or derivatives such as options, futures contracts or swap agreements. High yield investments include securities (i) rated below investment grade by each of Moody's Investors Services, Inc. ("Moody's"), Standard & Poor's Ratings Services ("S&P") or Fitch, Inc. ("Fitch") that provides a rating on such investment or, if unrated, determined by PIMCO to be of comparable quality, or (ii) comprising the ICE BofAML U.S. High Yield, BB-B Rated, Constrained Index. The Portfolio may invest up to 20% of its total assets in securities rated Caa or below by Moody's, or equivalently rated by S&P or Fitch, or, if unrated, determined by PIMCO to be of comparable quality. The remainder of the Portfolio's assets may be invested in investment grade Fixed Income Instruments. "Fixed Income Instruments" include bonds, debt securities and other similar instruments issued by various U.S. and non-U.S. public- or private-sector entities. The average portfolio duration of this Portfolio normally varies within two years (plus or minus) of the portfolio duration of the securities comprising the ICE BofAML U.S. High Yield, BB-B Rated, Constrained Index, as calculated by PIMCO, which as of February 29, 2020 was 3.55 years. Duration is a measure used to determine the sensitivity of a security's price to changes in interest rates. The longer a security's duration, the more sensitive it will be to changes in interest rates. The Portfolio may invest up to 20% of its total assets in securities denominated in foreign currencies and may invest without limit in U.S. dollar-denominated securities of foreign issuers. The Portfolio will normally limit its foreign currency exposure (from non-U.S. dollar-denominated securities or currencies) to 20% of its total assets. The Portfolio may invest up to 15% of its total assets in securities and instruments that are economically tied to emerging market countries (this limitation does not apply to investment grade sovereign debt denominated in the local currency with less than 1 year remaining to maturity, which means the Portfolio may invest, together with any other investments denominated in foreign currencies, up to 20% of its total assets in such instruments).

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PIMCO High Yield Portfolio

The Portfolio may invest, without limitation, in derivative instruments, such as options, futures contracts or swap agreements, or in mortgage- or asset-backed securities, subject to applicable law and any other restrictions described in the Portfolio's prospectus or Statement of Additional Information. The Portfolio may purchase or sell securities on a when-issued, delayed delivery or forward commitment basis and may engage in short sales. The Portfolio may, without limitation, seek to obtain market exposure to the securities in which it primarily invests by entering into a series of purchase and sale contracts or by using other investment techniques (such as buy backs or dollar rolls). The "total return" sought by the Portfolio consists of income earned on the Portfolio's investments, plus capital appreciation, if any, which generally arises from decreases in interest rates, foreign currency appreciation, or improving credit fundamentals for a particular sector or security. The Portfolio may invest up to 10% of its total assets in preferred securities.

Principal Risks

It is possible to lose money on an investment in the Portfolio. The principal risks of investing in the Portfolio, which could adversely affect its net asset value, yield and total return, are listed below.

Interest Rate Risk: the risk that fixed income securities will decline in value because of an increase in interest rates; a portfolio with a longer average portfolio duration will be more sensitive to changes in interest rates than a portfolio with a shorter average portfolio duration

Call Risk: the risk that an issuer may exercise its right to redeem a fixed income security earlier than expected (a call). Issuers may call outstanding securities prior to their maturity for a number of reasons (e.g., declining interest rates, changes in credit spreads and improvements in the issuer's credit quality). If an issuer calls a security that the Portfolio has invested in, the Portfolio may not recoup the full amount of its initial investment and may be forced to reinvest in lower-yielding securities, securities with greater credit risks or securities with other, less favorable features

Credit Risk: the risk that the Portfolio could lose money if the issuer or guarantor of a fixed income security, or the counterparty to a derivative contract, is unable or unwilling, or is perceived (whether by market participants, rating agencies, pricing services or otherwise) as unable or unwilling, to meet its financial obligations

High Yield Risk: the risk that high yield securities and unrated securities of similar credit quality (commonly known as "junk bonds") are subject to greater levels of credit, call and liquidity risks. High yield securities are considered primarily speculative with respect to the issuer's continuing ability to make principal and interest payments, and may be more volatile than higher-rated securities of similar maturity

Market Risk: the risk that the value of securities owned by the Portfolio may go up or down, sometimes rapidly or unpredictably, due to factors affecting securities markets generally or particular industries

Issuer Risk: the risk that the value of a security may decline for a reason directly related to the issuer, such as management performance, financial leverage and reduced demand for the issuer's goods or services

Liquidity Risk: the risk that a particular investment may be difficult to purchase or sell and that the Portfolio may be unable to sell illiquid

investments at an advantageous time or price or achieve its desired level of exposure to a certain sector. Liquidity risk may result from the lack of an active market, reduced number and capacity of traditional market participants to make a market in fixed income securities, and may be magnified in a rising interest rate environment or other circumstances where investor redemptions from fixed income mutual funds may be higher than normal, causing increased supply in the market due to selling activity

Derivatives Risk: the risk of investing in derivative instruments (such as futures, swaps and structured securities), including leverage, liquidity, interest rate, market, credit and management risks, mispricing or valuation complexity. Changes in the value of the derivative may not correlate perfectly with, and may be more sensitive to market events than, the underlying asset, rate or index, and the Portfolio could lose more than the initial amount invested. The Portfolio's use of derivatives may result in losses to the Portfolio, a reduction in the Portfolio's returns and/or increased volatility. Over-the-counter ("OTC") derivatives are also subject to the risk that a counterparty to the transaction will not fulfill its contractual obligations to the other party, as many of the protections afforded to centrally-cleared derivative transactions might not be available for OTC derivatives. For derivatives traded on an exchange or through a central counterparty, credit risk resides with the Portfolio's clearing broker, or the clearinghouse itself, rather than with a counterparty in an OTC derivative transaction. Changes in regulation relating to a mutual fund's use of derivatives and related instruments could potentially limit or impact the Portfolio's ability to invest in derivatives, limit the Portfolio's ability to employ certain strategies that use derivatives and/or adversely affect the value of derivatives and the Portfolio's performance

Equity Risk: the risk that the value of equity securities, such as common stocks and preferred securities, may decline due to general market conditions which are not specifically related to a particular company or to factors affecting a particular industry or industries. Equity securities generally have greater price volatility than fixed income securities

Mortgage-Related and Other Asset-Backed Securities Risk: the risks of investing in mortgage-related and other asset-backed securities, including interest rate risk, extension risk, prepayment risk and credit risk

Foreign (Non-U.S.) Investment Risk: the risk that investing in foreign (non-U.S.) securities may result in the Portfolio experiencing more rapid and extreme changes in value than a portfolio that invests exclusively in securities of U.S. companies, due to smaller markets, differing reporting, accounting and auditing standards, increased risk of delayed settlement of portfolio transactions or loss of certificates of portfolio securities, and the risk of unfavorable foreign government actions, including nationalization, expropriation or confiscatory taxation, currency blockage, or political changes or diplomatic developments. Foreign securities may also be less liquid and more difficult to value than securities of U.S. issuers

Emerging Markets Risk: the risk of investing in emerging market securities, primarily increased foreign (non-U.S.) investment risk

Sovereign Debt Risk: the risk that investments in fixed income instruments issued by sovereign entities may decline in value as a result of default or other adverse credit event resulting from an issuer's inability or unwillingness to make principal or interest payments in a timely fashion

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Currency Risk: the risk that foreign (non-U.S.) currencies will change in value relative to the U.S. dollar and affect the Portfolio's investments in foreign (non-U.S.) currencies or in securities that trade in, and receive revenues in, or in derivatives that provide exposure to, foreign (non-U.S.) currencies

Leveraging Risk: the risk that certain transactions of the Portfolio, such as reverse repurchase agreements, loans of portfolio securities, and the use of when-issued, delayed delivery or forward commitment transactions, or derivative instruments, may give rise to leverage, magnifying gains and losses and causing the Portfolio to be more volatile than if it had not been leveraged. This means that leverage entails a heightened risk of loss

Management Risk: the risk that the investment techniques and risk analyses applied by PIMCO will not produce the desired results and that legislative, regulatory, or tax restrictions, policies or developments may affect the investment techniques available to PIMCO and the individual portfolio manager in connection with managing the Portfolio. There is no guarantee that the investment objective of the Portfolio will be achieved

Short Exposure Risk: the risk of entering into short sales, including the potential loss of more money than the actual cost of the investment, and the risk that the third party to the short sale will not fulfill its contractual obligations, causing a loss to the Portfolio

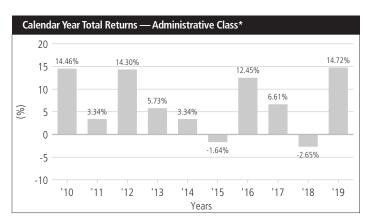
Please see "Description of Principal Risks" in the Portfolio's prospectus for a more detailed description of the risks of investing in the Portfolio. An investment in the Portfolio is not a deposit of a bank and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency.

Performance Information

The performance information shows summary performance information for the Portfolio in a bar chart and an Average Annual Total Returns table. The information provides some indication of the risks of investing in the Portfolio by showing changes in its performance from year to year and by showing how the Portfolio's average annual returns compare with the returns of a broad-based securities market index. The Portfolio's performance information reflects applicable fee waivers and/or expense limitations in effect during the periods presented. Absent such fee waivers and/or expense limitations, if any, performance would have been lower. Performance shown does not reflect any charges or expenses imposed by an insurance company and, if it did, performance shown would be lower. The bar chart and the table show performance of the Portfolio's Administrative Class shares. The Portfolio's past performance is not necessarily an indication of how the Portfolio will perform in the future.

The ICE BofAML U.S. High Yield, BB-B Rated, Constrained Index tracks the performance of BB-B rated U.S. Dollar-denominated corporate bonds publicly issued in the U.S. domestic market. Qualifying bonds are capitalization-weighted provided the total allocation to an individual issuer (defined by Bloomberg tickers) does not exceed 2%. Issuers that exceed the limit are reduced to 2% and the face value of each of their bonds is adjusted on a pro-rata basis. Similarly, the face value of bonds of all other issuers that fall below the 2% cap are increased on a pro-rata basis.

Performance for the Portfolio is updated daily and monthly and may be obtained as follows: daily updates on the net asset value may be obtained by calling 1-888-87-PIMCO and monthly performance may be obtained at www.pimco.com/pvit.



*For the periods shown in the bar chart, the highest quarterly return was 7.54% in the Q1 2019, and the lowest quarterly return was -6.85% in the Q3 2011.

Average Annual Total Returns (for periods ended 12/31/19)

| | 1 Year | 5 Years | 10 Years |
|--|--------|---------|----------|
| Administrative Class Return | 14.72% | 5.66% | 6.88% |
| ICE BofAML U.S. High Yield, BB-B Rated, Constrained Index (reflects no deductions for fees, expenses or taxes) | 15.11% | 6.11% | 7.40% |

Investment Adviser/Portfolio Manager





PIMCO serves as the investment adviser for the Portfolio. The Portfolio's portfolio is jointly and primarily managed by Andrew Jessop and Sonali Pier. Mr. Jessop is a Managing Director of PIMCO and has managed the Portfolio since January

2010. Ms. Pier is an Executive Vice President of PIMCO and has managed the Portfolio since July 2019.

Purchase and Sale of Portfolio Shares

Shares of the Portfolio currently are sold to segregated asset accounts ("Separate Accounts") of insurance companies that fund variable annuity contracts and variable life insurance policies ("Variable Contracts") and other funds that serve as underlying investment options for Variable Contracts (*i.e.*, variable insurance funds). Investors do not deal directly with the Portfolio to purchase and redeem shares. Please refer to the prospectus for the Separate Account for information on the allocation of premiums and on transfers of accumulated value among sub-accounts of the Separate Account.

Tax Information

The shareholders of the Portfolio are the insurance companies offering the variable products or other variable insurance funds. Please refer to the prospectus for the Separate Account and the Variable Contract for

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information regarding the federal income tax treatment of distributions to the Separate Account.

Payments to Insurance Companies and Other Financial Intermediaries

The Portfolio and/or its related companies (including PIMCO) may pay the insurance company and other intermediaries for the sale of the Portfolio and/or other services. These payments may create a conflict of interest by influencing the insurance company or intermediary and your salesperson to recommend a Variable Contract and the Portfolio over another investment. Ask your insurance company or salesperson or visit your financial intermediary's Web site for more information.