

Putnam VT High Yield Fund

IMPORTANT NOTICE: Delivery of paper fund reports

In accordance with regulations adopted by the Securities and Exchange Commission, beginning on or after January 1, 2021, at the election of your insurance provider, you may not receive paper copies of the fund's annual and semiannual reports in the mail from the insurance provider that offers your variable annuity contract or variable life insurance policy unless you specifically request it. Instead, they will be available on a website, and your insurance provider will notify you by mail whenever a new one is available, and provide you with a website link to access the report.

If you wish to continue to receive paper reports free of charge after January 1, 2021, please contact your insurance provider.

If you already receive these reports electronically, no action is required.

Before you invest, you may wish to review the fund's prospectus, which contains more information about the fund and its risks. You may obtain the prospectus and other information about the fund, including the statement of additional information (SAI) and most recent reports to shareholders, at no cost by visiting putnam.com/individual/annuities, calling 1-800-225-1581, or e-mailing Putnam at funddocuments@putnam.com.

The fund's prospectus and SAI, both dated 4/30/20, are incorporated by reference into this summary prospectus.

Fund summary

Goal

Putnam VT High Yield Fund seeks high current income. Capital growth is a secondary goal when consistent with achieving high current income.

Fees and expenses

The following table describes the fees and expenses you may pay if you buy and hold shares of the fund. The fees and expenses information does not reflect insurance-related charges or expenses borne by contract holders indirectly investing in the fund. If it did, expenses would be higher.

Annual fund operating expenses

expenses you pay each year as a percentage of the value of your investment)

Share class	Management fees	Distribution and service (12b-1) fees	Other expenses	Total annual fund operating expenses
Class 1A	0.56%	N/A	0.17%	0.73%
Class 1B	0.56%	0.25%	0.17%	0.98%

Example

The following hypothetical example is intended to help you compare the cost of investing in the fund with the cost of investing in other funds. The example does not reflect insurance-related charges or expenses. If it did, expenses would be higher. It assumes that you invest 10,000 in the fund for the time periods indicated and then redeem or hold all your shares at the end of those periods. It assumes a 5% return on your investment each year and that the fund's operating expenses remain the same. Your actual costs may be higher or lower.

Share class	1 year	3 years	5 years	10 years
Class 1A	75	233	406	906
Class 1B	100	312	542	1,201

Portfolio turnover

The fund pays transaction-related costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher turnover rate may indicate higher transaction costs. These costs, which are not reflected in annual fund operating expenses or the above example, affect fund performance. The fund's turnover rate in the most recent fiscal year was 37%.

Investments risks and performance

Investments

We invest mainly in bonds that are obligations of U.S. companies, are below investment-grade in quality (sometimes referred to as "junk bonds"), and have intermediate- to long-term maturities (three years or longer). Under normal circumstances, we invest at least 80% of the fund's net assets in securities rated below investment-grade. This policy may be changed only after 60 days' notice to shareholders. We may also invest in other debt instruments, including loans. We may consider, among other factors, credit, interest rate and prepayment risks, as well as general market conditions, when deciding whether to buy or sell investments. We may also use derivatives, such as futures, options, certain foreign currency transactions and swap contracts, for both hedging and non-hedging purposes.

Risks

It is important to understand that you can lose money by investing in the fund.

The value of investments in the fund's portfolio may fall or fail to rise over extended periods of time for a variety of reasons, including general economic, political or financial market conditions, investor sentiment and market perceptions, government actions, geopolitical events or changes, and factors related to a specific issuer, geography, industry or sector. These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings. The risks associated with bond investments include interest rate risk which means the value of the fund's investments is likely to fall if interest rates rise. Bond investments are also subject to credit risk, which is the risk that the issuer of a bond may default on payment of interest or principal. Interest rate risk is generally greater for longer-term bonds, and credit risk is generally greater for below-investment-grade bonds (a significant part of the fund's investments), which may be considered speculative. Our use of derivatives may increase the risks of investing in the fund by increasing investment exposure (which may be considered leverage) or, in the case of many over-the-counter instruments, because of the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations.

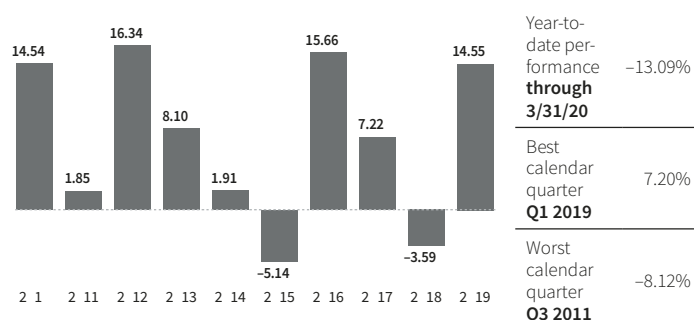
There is no guarantee that the investment techniques, analyses, or judgments that we apply in making investment decisions for the fund will produce the intended outcome or that the investments we select for the fund will perform as well as other securities that were not selected for the fund. We, or the fund's other service providers, may experience disruptions or operating errors that could negatively impact the fund.

The fund may not achieve its goal, and it is not intended to be a complete investment program. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency.

Performance

The performance information below gives some indication of the risks associated with an investment in the fund by showing the fund's performance year to year and over time. The performance information does not reflect insurance-related charges or expenses. If it did, performance would be lower. Please remember that past performance is not necessarily an indication of future results.

Annual total returns for class IA shares



Average annual total returns

for periods ended 12/31/19

Share class	1 year	5 years	10 years
Class IA	14.55%	5.37%	6.86%
Class IB	14.40%	5.13%	6.59%
JPMorgan Developed High Yield Index (no deduction for fees or expenses)	14.60%	6.36%	7.88%

Your fund's management

Investment advisor

Putnam Investment Management, LLC

Portfolio managers

Paul Scanlon, Co-Head of Fixed Income, portfolio manager of the fund since 2002

Norman Boucher, Portfolio Manager, portfolio manager of the fund since 2005

Robert Salvin, Portfolio Manager, portfolio manager of the fund since 2005

Sub-advisor

Putnam Investments Limited*

* Though the investment advisor has retained the services of Putnam Investments Limited (PIL), PIL does not currently manage any assets of the fund.

Purchase and sale of fund shares

Fund shares are offered to separate accounts of various insurers. The fund requires no minimum investment, but insurers may require minimum investments from those purchasing variable insurance products for which the fund is an underlying investment option. Insurers may purchase or sell shares on behalf of separate accounts by submitting an order to Putnam Retail Management any day the New York Stock Exchange (NYSE) is open. Some restrictions may apply.

Tax information

Generally, owners of variable insurance contracts are not taxed currently on income or gains realized with respect to such contracts. However, some distributions from such contracts may be taxable at ordinary income tax rates and distributions to contract owners younger than 59½ may be subject to a 10% penalty tax. For more information, please see the prospectus (or other offering document) for your variable insurance contract.

Payments to insurance companies

The fund is offered as an underlying investment option for variable insurance contracts. The fund and its related companies may make payments to the sponsoring insurance company (or its affiliates) and dealers for distribution and/or other services. These payments may create an incentive for the insurance company to include the fund, rather than another investment, as an option in its products and may create a conflict of interest for dealers in recommending the fund over another investment. The prospectus (or other offering document) for your variable insurance contract may contain additional information about these payments.

Information about the Summary Prospectus Prospectus and SAI

The summary prospectus, prospectus, and SAI for a fund provide information concerning the fund. The summary prospectus, prospectus, and SAI are updated at least annually and any information provided in a summary prospectus, prospectus, or SAI can be changed without a shareholder vote unless specifically stated otherwise. The summary prospectus, prospectus, and the SAI are not contracts between the fund and its shareholders and do not give rise to any contractual rights or obligations or any shareholder rights other than any rights conferred explicitly by federal or state securities laws that may not be waived.

Additional information is available at putnam.com/individual/annuities, by calling 1-800-225-1581, or by e-mailing Putnam at funddocuments@putnam.com.

