

Putnam VT Focused International Equity Fund*

*Prior to April 30, 2021, the fund was known as Putnam VT Global Equity Fund.

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 4/30/21, are incorporated by reference into this summary prospectus.

Fund summary

Goal

Putnam VT Focused International Equity Fund seeks capital appreciation.

Fees and expenses

The following table describes the fees and expenses you may pay if you buy, hold and sell shares of the fund. You may pay other fees, such as brokerage commissions and other fees to financial intermediaries, which are not reflected in the tables and examples below. 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	Expense reimbursement [#]	Total annual fund operating expenses after expense reimbursement
Class IA	0.69%	N/A	0.16%	0.85%	(0.05)%	0.80%
Class IB	0.69%	0.25%	0.16%	1.10%	(0.05)%	1.05%

[#] Reflects Putnam Investment Management, LLC’s contractual obligation to limit certain fund expenses through 4/30/22. This obligation may be modified or discontinued only with approval of the fund’s Board of Trustees.

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. Only the first year of each period in the example takes into account the expense reimbursement described above. Your actual costs may be higher or lower.

Share class	1 year	3 years	5 years	10 years
Class IA	\$82	\$266	\$466	\$1,044
Class IB	\$107	\$345	\$601	\$1,336

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 58%.

Investments, risks, and performance

Investments

We invest mainly in common stocks (growth or value stocks or both) of companies of any size outside the United States that we believe have favorable investment potential. Under normal circumstances, we invest at least 80% of the fund’s net assets in equity investments. This policy may be changed only after 60 days’ notice to shareholders. The fund’s equity investments may include common stocks, preferred stocks, convertible securities, warrants, American Depositary Receipts (ADRs) and Global Depositary Receipts (GDRs). We invest in both developed countries and in emerging markets.

We may consider, among other factors, a company’s valuation, financial strength, growth potential, competitive position in its industry, projected future earnings, cash flows and dividends when deciding whether to buy or sell investments. We may also consider other factors that we believe will cause the stock price to rise. We may also use derivatives, such as futures, options, certain foreign currency transactions, warrants and swap contracts, for both hedging and non-hedging purposes.

The fund is “non-diversified,” which means it may invest a greater percentage of its assets in fewer issuers than a “diversified” fund. The fund expects to invest in a limited number of issuers.

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 novel coronavirus (COVID-19) pandemic and efforts to contain its spread are likely to negatively affect the value, volatility, and liquidity of the securities and other assets in which the fund invests and exacerbate other risks that apply to the fund. These effects could negatively impact the fund's performance and lead to losses on your investment in the fund. Growth stocks may be more susceptible to earnings disappointments, and value stocks may fail to rebound or realize their potential. These risks are generally greater for small and midsize companies. The fund will be more susceptible to these risks than other funds because it invests in a limited number of issuers or sectors, and the fund may perform poorly as a result of adverse developments affecting those issuers or sectors.

The value of international investments traded in foreign currencies may be adversely impacted by fluctuations in exchange rates. International investments, particularly investments in emerging markets, may carry risks associated with potentially less stable economies or governments (such as the risk of seizure by a foreign government, the imposition of currency or other restrictions, or high levels of inflation), and may be or become illiquid. In addition, there may be less information publicly available about companies domiciled in non-U.S. markets, and particularly emerging markets, and these companies may not be subject to regulatory, accounting, auditing and financial reporting standards and practices as stringent as those in the United States. Further, there may be limited legal remedies for investors in companies domiciled in these markets. These factors may impact the fund's performance.

Investments focused in a single region may be affected by common economic forces and other factors. In addition, events in any one country within the region may impact the other countries or the region as a whole. Because the fund currently invests, and may in the future invest, significantly in European and Asian companies, the fund is particularly susceptible to economic, political, regulatory and other events or conditions affecting issuers in Europe and Asia. European financial markets have in recent years experienced increased volatility due to concerns with some countries' high levels of sovereign debt, budget deficits, and unemployment. Asia includes countries in various stages of economic development, from emerging market economies to the highly developed economy of Japan. Some parts of Asia may be subject to a greater degree of economic, political and social instability than is the case in the United States.

As a non-diversified fund, the fund invests in fewer issuers and is more vulnerable than a more broadly diversified fund to fluctuations in the values of the securities it holds.

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,

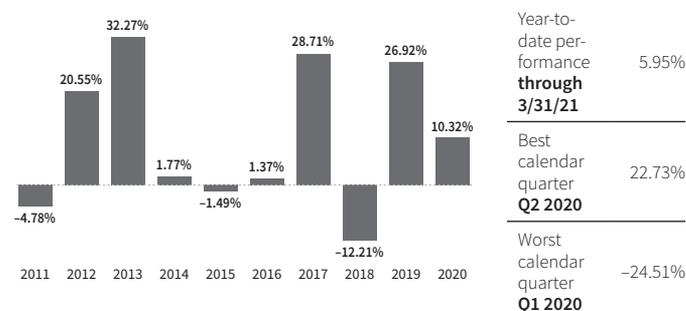
may experience disruptions or operating errors that could negatively impact the fund.

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. Before April 30, 2021, the fund was managed with a materially different investment strategy and may have achieved materially different performance results under its current strategy from that shown for periods before this date. 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 12/31/20)

Share class	1 year	5 years	10 years
Class IA	10.32%	9.91%	9.33%
Class IB	10.07%	9.63%	9.06%
MSCI ACWI ex USA Index (ND)* (no deduction for fees, expenses or taxes, other than withholding taxes on reinvested dividends)	10.65%	8.93%	4.92%
MSCI World Index (ND)–MSCI ACWI ex USA Index (ND) Linked Benchmark** (no deduction for fees, expenses or taxes, other than withholding taxes on reinvested dividends)	26.36%	11.97%	8.22%

*As of April 30 2021, the MSCI ACWI ex USA Index (ND) (an unmanaged index of equity securities from developed countries (excluding the United States) and emerging countries) replaced the MSCI World Index (ND) (an unmanaged index of equity securities from developed countries) as the benchmark for this fund because, in Putnam Management's opinion, the securities tracked by the MSCI ACWI ex USA Index (ND) more accurately reflect the types of securities that generally will be held by the fund. The average annual total returns of the MSCI World Index for the one-year, five-year, and ten-year periods ended on December 31, 2020 were 15.90%, 12.19%, and 9.87%, respectively.

**The MSCI World Index (ND)–MSCI ACWI ex USA Index (ND) Linked Benchmark represents performance of the MSCI World Index (ND) from the inception date of the fund, May 1, 1990, through April 30, 2021 and performance of the MSCI ACWI ex USA Index (ND) from April 30, 2021 forward.

Your fund's management

Investment advisor

Putnam Investment Management, LLC

Portfolio managers

Spencer Morgan, Portfolio Manager, portfolio manager of the fund since 2021

Karan Sohdi, Portfolio Manager, portfolio manager of the fund since 2021

Sub-advisors

Putnam Investments Limited*

The Putnam Advisory Company, LLC*

*Though the investment advisor has retained the services of Putnam Investments Limited (PIL) and The Putnam Advisory Company, LLC, PIL and PAC do 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.

