Putnam VT Mortgage Securities Fund

Prospectus

4 | 30 | 21

FUND SYMBOLS	CLASS IA	CLASS IB
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This prospectus explains what you should know about Putnam VT Mortgage Securities Fund, one of the funds of Putnam Variable Trust, which is available for purchase by separate accounts of insurance companies. Please read it carefully. Certain shares of other funds of the Trust are offered through other prospectuses.

These securities have not been approved or disapproved by the Securities and Exchange Commission (SEC) nor has the SEC passed upon the accuracy or adequacy of this prospectus. Any statement to the contrary is a crime.

Fund summary

Goal

Putnam VT Mortgage Securities Fund seeks as high a level of current income as Putnam Investment Management, LLC believes is consistent with preservation of capital.

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	0.39%	N/A	0.35%	0.74%	(0.24)%	0.50%
Class IB	0.39%	0.25%	0.35%	0.99%	(0.24)%	0.75%

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	$51	$212	$388	$896
Class IB	$77	$291	$524	$1,191

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 895%.

Investments, risks, and performance

Investments

We invest mainly in mortgages, mortgage-related fixed income securities and related derivatives that are either investment-grade or below-investment-grade in quality (sometimes referred to as "junk bonds"). Under normal circumstances, we invest at least 80% of the fund's net assets (plus any borrowings for investment purposes) in mortgages, mortgage-related fixed income securities and related derivatives (i.e., derivatives used to acquire exposure to, or whose underlying securities are, mortgages or mortgage-related securities). The fund generally uses the net unrealized gain or loss, or market value, of mortgage-related derivatives for purposes of this policy, but may use the notional value of a derivative if that is determined to be a more appropriate measure of the fund's investment exposure. This policy may be changed only after 60 days' notice to shareholders.

We expect to invest in mortgage-backed investments that are obligations of U.S. government agencies and instrumentalities and accordingly are backed by the full faith and credit of the United States (e.g., Ginnie Mae mortgage-backed bonds) as well as in mortgage-backed investments that are backed by only the credit of a federal agency or government-sponsored entity (e.g., Fannie Mae and Freddie Mac mortgage-backed bonds), and that have short- to long-term maturities. The fund currently has significant investment exposure to commercial mortgage-backed securities.

We also expect to invest in lower-rated, higher-yielding mortgage-backed securities, including non-agency residential mortgage-backed securities (which may be backed by non-qualified or "sub-prime" mortgages), commercial mortgage-backed securities, and collateralized mortgage obligations (including interest only, principal only, and other prepayment derivatives). Non-agency (i.e., privately issued) securities typically are lower-rated and higher yielding than securities issued or backed by agencies such as Ginnie Mae, Fannie Mae or Freddie Mac. While our emphasis will be on mortgage-backed securities, we may also invest to a lesser extent in other types of asset-backed securities.

We may consider, among other factors, credit, interest rate, prepayment and liquidity risks, as well as general market conditions, when deciding whether to buy or sell investments.

We typically use to a significant extent derivatives, including interest rate swaps, swaptions, forward delivery contracts, total return swaps, and options on mortgage-backed securities and indices, for both hedging and non-hedging purposes, including to obtain or adjust exposure to mortgage-backed investments.

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, such as the housing or real estate markets. These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings or in relevant markets. 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.

The risks associated with bond investments include interest rate risk, which is the risk that 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 issuers of the fund's investments may default on payment of interest or principal. Bond investments may be more susceptible to downgrades or defaults during economic downturns or other periods of economic stress. Default risk is generally higher for non-qualified mortgages. Interest rate risk is generally greater for longer-term bonds, and credit risk is generally greater for below-investment grade bonds, which may be considered speculative. Mortgage- and asset-backed investments, unlike traditional debt investments, are also subject to prepayment risk, which means that they may increase in value less than other bonds when interest rates decline and decline in value more than other bonds when interest rates rise. We may have to invest the proceeds from prepaid investments, including mortgage- and asset-backed investments, in other investments with less attractive terms and yields. The fund's investments in mortgage-backed securities and asset-backed securities, and in certain other securities and derivatives, may be or become illiquid. The fund's concentration in an industry group composed of privately issued residential and commercial mortgage-backed securities and mortgage-backed securities issued or guaranteed by the U.S. government or its agencies or instrumentalities may make the fund's net asset value more susceptible to economic, market, political and other developments affecting the residential and commercial real estate markets and the servicing of mortgage loans secured by real estate properties. During periods of difficult economic conditions, delinquencies and losses on commercial mortgage-backed securities in particular generally increase, including as a result of the effects of those conditions on commercial real estate markets, the ability of commercial tenants to make loan payments, and the ability of a property to attract and retain commercial tenants.

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. Our use of short selling may result in losses if the securities appreciate in value.

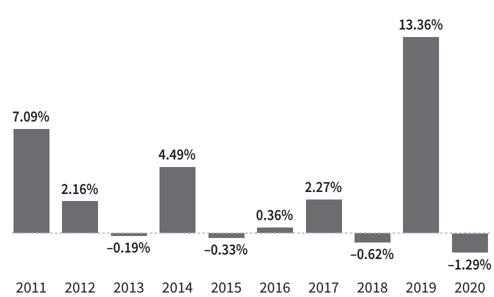
There is no guarantee that the investment techniques, analyses, or judgments that we apply in making investment decisions for the fund will produce the intended outcome or that the investments we select for the fund will perform as well as other securities that were not selected for the fund. We, or 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, 2018, the fund was managed with a materially different investment strategy and may have achieved materially different performance results under its current investment 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



Year-to-date performance **through 3/31/21**	2.32%
Best calendar quarter **Q4 2020**	4.99%
Worst calendar quarter **Q1 2020**	–9.91%

Average annual total returns

(for periods ended 12/31/20)

Share class	1 year	5 years	10 years
Class IA	–1.29%	2.68%	2.64%
Class IB	–1.68%	2.42%	2.37%
Bloomberg Barclays U.S. MBS Index+ (no deduction for fees, expenses or taxes)	3.87%	3.05%	3.01%
Bloomberg Barclays Government Bond- Bloomberg Barclays U.S. MBS Linked Benchmark*+ (no deduction for fees, expenses or taxes)	3.87%	2.83%	2.80%

* The Bloomberg Barclays Government Bond-Bloomberg Barclays U.S. MBS Linked Benchmark represents performance of the Bloomberg Barclays Government Bond Index from inception date of the fund, January 1, 2000, through April 29, 2018 and performance of the Bloomberg Barclays U.S. MBS Index from April 30, 2018 through the current period.

+ Source: Bloomberg Index Services Limited.

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Your fund's management

Investment advisor

Putnam Investment Management, LLC

Portfolio managers

Michael Salm, Co-Chief Investment Officer, Fixed Income, portfolio manager of the fund since 2007

Brett Kozlowski, Co-Head of Structured Credit, portfolio manager of the fund since 2018

Jatin Misra, Co-Head of Structured Credit, portfolio manager of the fund since 2017

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.

What are the fund's main investment strategies and related risks?

This section contains greater detail on the fund's main investment strategies and the related risks you would face as a fund shareholder. It is important to keep in mind that risk and reward generally go hand in hand; the higher the potential reward, the greater the risk. As mentioned in the fund summary, we pursue the fund's goal by investing mainly in mortgages, mortgage-related fixed income securities and related derivatives that are either investment-grade or below-investment-grade in quality (sometimes referred to as "junk bonds").

- **Interest rate risk.** The values of fixed income securities (including mortgage-related and other asset-backed securities, bonds and other debt instruments) usually rise and fall in response to changes in interest rates. Interest rates can change in response to the supply and demand for credit, government and/or central bank monetary policy and action, inflation rates, and other factors. Declining interest rates generally result in an increase in the value of existing debt instruments, and rising interest rates generally result in a decrease in the value of existing debt instruments. Changes in a debt instrument's value usually will not affect the amount of interest income paid to the fund, but will affect the value of the fund's shares. Interest rate risk is generally greater for investments with longer maturities.

  Some investments give the issuer the option to call or redeem an investment before its maturity date. If an issuer calls or redeems an investment during a time of declining interest rates, we might have to reinvest the proceeds in an investment offering a lower yield, and, therefore, the fund might not benefit from any increase in value as a result of declining interest rates.

- **Credit risk.** Investors normally expect to be compensated in proportion to the risk they are assuming. Thus, debt of issuers with poor credit prospects usually offers higher yields than debt of issuers with more secure credit. Higher-rated investments generally have lower credit risk. The value of a debt instrument may also be affected by changes in, or perceptions of, the financial condition of the issuer, borrower, counterparty, or other entity, or underlying collateral or assets, or changes in, or perceptions of, specific or general market, economic, industry, political, regulatory, geopolitical, environmental, public health, and other conditions.

  We may invest without limit in higher-yield, higher-risk debt investments that are rated below BBB or its equivalent at the time of purchase by any nationally recognized securities rating agency rating such investments, or in unrated investments that we believe are of comparable quality. This includes investments in the lowest rating category of the rating agency. We will not necessarily sell an investment if its rating is reduced after buying it.

Investments rated below BBB or its equivalent are below-investment-grade in quality. This rating reflects a greater possibility that the issuers may be unable to make timely payments of interest and principal and thus default. If a default occurs, or is perceived as likely to occur, the value of the investment will usually be more volatile and is likely to fall. A default or expected default could also make it difficult for us to sell the investment at a price approximating the value we had previously placed on it. We may have to participate in legal proceedings involving the issuer. This could increase the fund's operating expenses and decrease its net asset value. Lower-rated debt usually has a more limited market than higher-rated debt, which may at times make it difficult for us to buy or sell certain debt instruments or to establish their fair values.

Credit ratings are based largely on the issuer's historical financial condition and the rating agencies' investment analysis at the time of rating. The rating assigned to any particular investment does not necessarily reflect the issuer's current financial condition, and does not reflect an assessment of the investment's volatility or liquidity. Although we consider credit ratings in making investment decisions, we perform our own investment analysis and do not rely only on ratings assigned by the rating agencies. Our success in achieving the fund's goal may depend more on our own credit analysis when we buy lower-rated debt than when we buy investment-grade debt.

Although investment-grade investments generally have lower credit risk, they may share some of the risks of lower-rated investments. U.S. government investments generally have the least credit risk, but are not completely free of credit risk. While some investments, such as U.S. Treasury obligations and Ginnie Mae certificates, are backed by the full faith and credit of the U.S. government, no assurance can be given that the U.S. government will continue to provide financial support to U.S. government-sponsored agencies or instrumentalities where it is not obligated to do so by law, such as Fannie Mae and Freddie Mac. In September 2008, the Federal Housing Finance Agency (FHFA), an agency of the U.S. government, placed Fannie Mae and Freddie Mac into conservatorship, a statutory process with the objective of returning the entities to normal business operations. FHFA operates Fannie Mae and Freddie Mac as conservator until they are stabilized. It is unclear how long the conservatorship will last, how Fannie Mae and Freddie Mac will operate following conservatorship, or what effect this conservatorship will have on the securities issued or guaranteed by Fannie Mae or Freddie Mac. In addition, the impact of any policy or legislative changes in the United States with respect to the housing market, and the practical implications for market participants, is uncertain and may not be known fully for some time after any changes are implemented. Residential and commercial mortgage-backed securities with payments not guaranteed by a government agency, including collateralized investment vehicles, which comprise a substantial portion of the fund's investments, generally involve greater credit risk than securities guaranteed by government agencies.

Bond investments may be more susceptible to downgrades or defaults during economic downturns or other periods of economic stress, which can significantly strain the financial resources of debt issuers, including the issuers of the bonds in which the fund invests. This may make it less likely that those issuers can meet their financial obligations when due and may adversely impact the value of their bonds, which could negatively impact the performance of the fund. It is difficult to predict the level of financial stress and duration of such stress issuers may experience.

- **Illiquid markets risk.** The markets for below-investment-grade mortgage-backed securities and asset-backed securities, and certain other securities and derivatives in which the fund intends to invest have been at times characterized by less liquidity and significant imputed transaction costs. Commercial mortgage-backed securities may be less liquid and exhibit greater price volatility than other types of mortgage- or asset-backed securities. Imputed transaction costs represent the undisclosed amount of profit (sometimes referred to as "mark-up" or "dealer spread") included in the price of an investment by the other party to a transaction. Fund shareholders will bear a share of the imputed transaction costs incurred when the fund sells shares and deploys new capital and when it sells investments to fund shareholder redemptions. These transaction costs may be considerable and will reduce returns. While we intend generally to invest in markets that are liquid, depending on market conditions, we may not be able to sell the fund's investments when desirable to do so, or we may be able to sell them only at less than their fair value. Market liquidity for lower-rated investments may be more likely to deteriorate than for higher-rated investments. Dealers in below-investment-grade mortgage- and asset-backed securities play an important role in providing liquidity, but are under no obligation to do so and may stop providing liquidity at any time. The impact of regulatory changes may further limit the ability or willingness of dealers to provide liquidity. Changing regulatory and market conditions, especially conditions in the residential and commercial real estate markets, or changes to the status of Fannie Mae and Freddie Mac or of the securities they issue, may adversely affect the liquidity of the fund's investments. These risks may be magnified in a rising interest rate environment or in 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.
- **Industry concentration risk.** Focusing investments in sectors and industries with high positive correlations to one another creates additional risk. The fund's concentration in an industry

group composed of private issuers of residential and commercial mortgage-backed securities and mortgage-backed securities issued or guaranteed by the U.S. government or its agencies or instrumentalities makes the fund's net asset value more susceptible to economic, market, political and other developments affecting the residential and commercial real estate markets and the servicing of mortgage loans secured by real estate properties. This policy may not be changed without approval of the fund's shareholders. Factors affecting the residential and commercial real estate markets include the supply and demand of real property in particular markets, changes in the availability, terms and costs of mortgages, changes in tenants' ability to make loan payments, changes in zoning laws and eminent domain practices, the impact of environmental laws, delays in completion of construction, changes in real estate values, changes in property taxes, levels of occupancy, adequacy of rent to cover operating expenses, changes in government regulations, and local and regional market conditions. Some of these factors may vary greatly by geographic location. The value of these investments also may be affected by changes in interest rates and social and economic trends. Mortgage-backed securities are subject to the risk of fluctuations in income from underlying real estate assets, prepayments, extensions, and defaults by borrowers. Because the fund currently has significant investment exposure to commercial mortgage-backed securities, the fund may be particularly susceptible to adverse developments affecting those securities. Commercial mortgage-backed securities include securities that reflect an interest in, or are secured by, mortgage loans on commercial real property, such as industrial and warehouse properties, office buildings, retail space and shopping malls, cooperative apartments, hotels and motels, nursing homes, hospitals and senior living centers. Many of the risks of investing in commercial mortgage-backed securities reflect the risks of investing in the real estate securing the underlying mortgage loans. During periods of difficult economic conditions (including periods of significant disruptions to business operations, supply chains, and customer activity and lower consumer demand for goods and services), delinquencies and losses on commercial real estate generally increase, including as a result of the effects of those conditions on commercial real estate markets, the ability of commercial tenants to make loan payments, and the ability of a property to attract and retain commercial tenants. The risk of defaults on residential mortgage-backed securities is generally higher in the case of mortgage-backed investments that include non-qualified mortgages. The fund may also invest in asset-backed securities, whose underlying assets may include, among other things, motor vehicle installment sales or installment loan contracts, leases of various types of personal property and receivables from credit card agreements, and which are subject to risks similar to those of mortgage-backed securities. Litigation with respect to the representations and warranties given in connection with the issuance of mortgage-backed securities can be an important consideration in investing in such securities, and the outcome of any such litigation could significantly impact the value of the fund's mortgage-backed investments.

- **Prepayment risk.** Traditional debt investments typically pay a fixed rate of interest until maturity, when the entire principal amount is due. In contrast, payments on securitized debt instruments, including mortgage-backed and asset-backed investments, typically include both interest and partial payment of principal. Principal may also be prepaid voluntarily or as a result of refinancing or foreclosure. We may have to invest the proceeds from prepaid investments in other investments with less attractive terms and yields.

  Compared to debt that cannot be prepaid, mortgage-backed investments are less likely to increase in value during periods of declining interest rates and have a higher risk of decline in value during periods of rising interest rates. These investments may increase the volatility of the fund. Some mortgage-backed investments receive only the interest portion or the principal portion of payments on the underlying mortgages. The yields and values of these investments are extremely sensitive to changes in interest rates and in the rate of principal payments on the underlying mortgages. The market for these investments may be volatile and limited, which may make them difficult to buy or sell. Asset-backed securities are structured like mortgage-backed securities, but instead of mortgage loans or interests in mortgage loans, the underlying assets may include such items as motor vehicle installment sales or installment loan contracts, leases of various types of real and personal property and receivables from credit card agreements. Asset-backed securities are subject to risks similar to those of mortgage-backed securities.

- **Derivatives.** We may engage to a significant extent in a variety of transactions involving derivatives, including interest rate swaps, swaptions (options on swap contracts), forward delivery contracts and total return swaps, and options on mortgage-backed securities and indices. Derivatives are financial instruments whose value depends upon, or is derived from, the value of something else, such as one or more underlying investments, pools of investments, indexes or currencies. We may make use of "short" derivatives positions, the values of which typically move in the opposite direction from the price of the underlying investment, pool of investments, index or currency. We may use derivatives both for hedging and non-hedging purposes. For example, we may use derivatives to increase or decrease the fund's exposure to long- or short-term interest rates (in the United States or abroad) or as a substitute for a direct investment in the securities of one or more issuers. However, we may also choose not to use derivatives based on our evaluation of market conditions or the availability of suitable derivatives. Investments in derivatives may be applied toward meeting a requirement to invest in a particular kind of investment if the derivatives have economic characteristics similar to that investment.

  Derivatives involve special risks and may result in losses. The successful use of derivatives depends on our ability to manage these sophisticated instruments. Some derivatives are "leveraged," which means they provide the fund with investment exposure greater than the value of the fund's investment in the derivatives. As a result, these derivatives may magnify or otherwise increase investment losses to the fund. The risk of loss from certain short derivatives positions is theoretically unlimited. When the fund invests in derivatives, the fund segregates cash and other liquid assets equivalent in value either to the notional value of the derivative (e.g., including when the fund is a seller of credit protection under a credit default swap) or its mark-to-market value (e.g., for total return swaps). The value of derivatives may move in unexpected ways due to the use of leverage or other factors, especially in unusual market conditions, and may result in increased volatility.

Other risks arise from the potential inability to terminate or sell derivatives positions. A liquid secondary market may not always exist for the fund's derivatives positions. In fact, many over-the-counter instruments (investments not traded on an exchange) will not be liquid. Over-the-counter instruments also involve the risk that the other party to the derivatives transaction will not meet its obligations. For further information about additional types and risks of derivatives and the fund's asset segregation policies, see *Miscellaneous Investments, Investment Practices and Risks* in the Statement of Additional Information (SAI).

- **Liquidity and illiquid investments.** We may invest up to 15% of the fund's net assets in illiquid investments, which may be considered speculative and which may be difficult to sell. The sale of many of these investments is prohibited or limited by law or contract. Some investments may be difficult to value for purposes of determining the fund's net asset value. Certain other investments may not have an active trading market due to adverse market, economic, industry, political, regulatory, geopolitical, environmental, public health, and other conditions, including investors trying to sell large quantities of a particular investment or type of investment, or lack of market makers or other buyers for a particular investment or type of investment. We may not be able to sell the fund's illiquid investments when we consider it desirable to do so, or we may be able to sell them only at less than their value.
- **Market risk.** 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 (including perceptions about monetary policy, interest rates or the risk of default); government actions (including protectionist measures, intervention in the financial and housing markets or other regulation, and changes in fiscal, monetary or tax policies); geopolitical events or changes (including natural disasters, epidemics or pandemics, terrorism and war); and factors related to a specific issuer, geography (such as a region of the United States), industry or sector (such as the housing or real estate markets). These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings or in relevant markets. During those periods, the fund may experience high levels of shareholder redemptions, and may have to sell securities at times when it would otherwise not do so, and at unfavorable prices. These risks may be exacerbated during economic downturns or other periods of economic stress.

  The novel coronavirus (COVID-19) pandemic and efforts to contain its spread have negatively affected, and are likely to continue to negatively affect, the global economy, the economies of the United States and other individual countries, and the financial performance of individual issuers, sectors, industries, asset classes, and markets in significant and unforeseen ways. The COVID-19 pandemic has resulted in significant market volatility, exchange trading suspensions and closures, declines in global financial markets, higher default rates, and economic downturns and recessions, and these effects may continue for an extended period of time and may increase in severity over time. In addition, actions taken by government and quasi-governmental authorities and regulators throughout the world in response to the COVID-19 pandemic, including significant fiscal and monetary policy changes, may affect the value, volatility, and liquidity of some securities and other assets. Given the significant uncertainty surrounding the magnitude, duration, reach, costs and effects of the COVID-19 pandemic, as well as actions that have been or could be taken by governmental authorities or other third parties, it is difficult to predict its potential impacts on the fund's investments. The effects of the COVID-19 pandemic also are likely to exacerbate other risks that apply to the fund, including the risks disclosed in this prospectus, which could negatively impact the fund's performance and lead to losses on your investment in the fund.
- **Management and operational risk.** The fund is actively managed and its performance will reflect, in part, our ability to make investment decisions that seek to achieve the fund's investment objective. 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. As a result, the fund may underperform its benchmark or other funds with a similar investment goal and may realize losses. In addition, we, or the fund's other service providers, may experience disruptions or operating errors that could negatively impact the fund. Although service providers are required to have appropriate operational risk management policies and procedures, and to take appropriate precautions to avoid and mitigate risks that could lead to disruptions and operating errors, it may not be possible to identify all of the operational risks that may affect the fund or to develop processes and controls to completely eliminate or mitigate their occurrence or effects.
- **Other investments.** In addition to the main investment strategies described above, the fund may make other types of investments, such as investments in preferred securities, assignments of and participations in fixed and floating rate loans, and zero-coupon bonds. These practices may be subject to other

risks, as described under *Miscellaneous Investments, Investment Practices and Risks* in the SAI.

- **Temporary defensive strategies.** In response to adverse market, economic, political or other conditions, we may take temporary defensive positions, such as investing some or all of the fund's assets in cash and cash equivalents, that differ from the fund's usual investment strategies. However, we may choose not to use these temporary defensive strategies for a variety of reasons, even in very volatile market conditions. These strategies may cause the fund to miss out on investment opportunities, and may prevent the fund from achieving its goal. Additionally, while temporary defensive strategies are mainly designed to limit losses, such strategies may not work as intended.
- **Changes in policies.** The Trustees may change the fund's goal, investment strategies and other policies set forth in this prospectus without shareholder approval, except as otherwise provided in the prospectus or SAI.
- **Portfolio turnover rate.** The fund's portfolio turnover rate measures how frequently the fund buys and sells investments. A portfolio turnover rate of 100%, for example, would mean that the fund sold and replaced securities valued at 100% of the fund's assets within a one-year period.

  The fund expects to engage in frequent trading.

  High turnover may also cause a fund to pay more brokerage commissions and to incur other transaction costs (including imputed transaction costs), which may detract from performance. The fund's portfolio turnover rate and the amount of brokerage commissions it pays and transaction costs it incurs will vary over time based on market conditions.
- **Portfolio holdings.** The SAI includes a description of the fund's policies with respect to the disclosure of its portfolio holdings. For more specific information on the fund's portfolio, you may visit the Putnam Investments website, putnam.com/individual/annuities, where the fund's top 10 holdings and related portfolio information may be viewed monthly beginning approximately 15 days after the end of each month, and full portfolio holdings may be viewed monthly beginning on the 8th business day after the end of each month. This information will remain available on the website at least until the fund files a Form N-CSR or publicly available Form N-PORT with the SEC for the period that includes the date of the information, after which such information can be found on the SEC's website at http://www.sec.gov.

Who oversees and manages the fund?

The fund's Trustees

As a shareholder of a mutual fund, you have certain rights and protections, including representation by a Board of Trustees. The Putnam Funds' Board of Trustees oversees the general conduct of the fund's business and represents the interests of the Putnam fund shareholders. At least 75% of the members of the Putnam Funds' Board of Trustees are independent, which means they are not officers of the fund or affiliated with Putnam Investment Management, LLC (Putnam Management).

The Trustees periodically review the fund's investment performance and the quality of other services such as administration, custody, and investor services. At least annually, the Trustees review the fees paid to Putnam Management and its affiliates for providing or overseeing these services, as well as the overall level of the fund's operating expenses. In carrying out their responsibilities, the Trustees are assisted by an administrative staff, auditors and legal counsel that are selected by the Trustees and are independent of Putnam Management and its affiliates.

Contacting the fund's Trustees

Address correspondence to:
The Putnam Funds Trustees
100 Federal Street
Boston, MA 02110

The fund's investment manager

The Trustees have retained Putnam Management, which has managed mutual funds since 1937, to be the fund's investment manager, responsible for making investment decisions for the fund and managing the fund's other affairs and business.

The basis for the Trustees' approval of the fund's management contract and the sub-management contract described below is discussed in the fund's semiannual report to shareholders dated June 30, 2020.

The fund pays a monthly management fee to Putnam Management. The fee is calculated by applying a rate to the fund's average net assets for the month. The rate is based on the monthly average of the aggregate net assets of all open-end funds sponsored by Putnam Management (excluding net assets of funds that are invested in, or that are invested in by, other Putnam funds to the extent necessary to avoid "double counting" of those assets), and generally declines as the aggregate net assets increase.

The fund paid Putnam Management a management fee (after any applicable waivers) of 0.15% of average net assets for the fund's last fiscal year.

Putnam Management's address is 100 Federal Street, Boston, MA 02110.

Putnam Management has retained its affiliate PIL to make investment decisions for such fund assets as may be designated from time to time for its management by Putnam Management. PIL is not currently managing any fund assets. If PIL were to manage any fund assets, Putnam Management (and not the fund) would pay a quarterly sub-management fee to PIL for its services at the annual rate of 0.25% of the average net asset value (NAV) of any fund assets managed by PIL. PIL, which provides a full range of international investment advisory services to institutional clients, is located at 16 St James's Street, London, England, SW1A 1ER.

Pursuant to this arrangement, Putnam investment professionals who are based in foreign jurisdictions may serve as portfolio managers of the fund or provide other investment services, consistent with local regulations.

- **Portfolio managers.** The officers of Putnam Management identified below are jointly and primarily responsible for the day-to-day management of the fund's portfolio.

Portfolio managers	Joined fund	Employer	Positions over past five years
Michael Salm	2007	**Putnam Management** 1997 – Present	Co-Chief Investment Officer, Fixed Income Previously, Co-Head of Fixed Income
Brett Kozlowski	2018	**Putnam Management** 2008 – Present	Co-Head of Structured Credit Previously, Portfolio Manager
Jatin Misra	2017	**Putnam Management** 2004 – Present	Co-Head of Structured Credit Previously, Analyst

The SAI provides information about these individuals' compensation, other accounts managed by these individuals and these individuals' ownership of securities in the fund.

How to buy and sell fund shares

The Trust has an underwriting agreement relating to the fund with Putnam Retail Management, 100 Federal Street, Boston, Massachusetts 02110. Putnam Retail Management presently offers shares of the fund continuously to separate accounts of various insurers. The underwriting agreement presently provides that Putnam Retail Management accepts orders for shares at NAV and no sales commission or load is charged.

Shares are sold or redeemed at the NAV per share next determined after receipt of an order. Orders for purchases or sales of shares of the fund must be received by Putnam Retail Management before the close of regular trading on the NYSE in order to receive that day's NAV. No fee is charged to a separate account when it redeems fund shares.

Please check with your insurance company to determine whether the fund is available under your variable annuity contract or variable life insurance policy. The fund may not be available in your state due to various insurance regulations. This prospectus should be read in conjunction with the prospectus of the separate account of the specific insurance product which accompanies this prospectus.

The fund currently does not foresee any disadvantages to policy owners arising out of the fact that the fund offers its shares to separate accounts of various insurance companies to serve as the investment medium for their variable products. Nevertheless, the Trustees intend to monitor events in order to identify any material irreconcilable conflicts which may possibly arise, and to determine what action, if any, should be taken in response to such conflicts. If such a conflict were to occur, one or more insurance companies' separate accounts might be required to withdraw their investments in the fund and shares of another fund may be substituted. This might force the fund to sell portfolio securities at disadvantageous prices. In addition, the Trustees may refuse to sell shares of the fund to any separate account or may suspend or terminate the offering of shares of the fund if such action is required by law or regulatory authority or is in the best interests of the shareholders of the fund.

The fund typically expects to send you payment for your shares one business day after your request is received in good order. However, it is possible that payment of redemption proceeds may take up to seven days. Under unusual circumstances, the Trust may suspend redemptions or postpone payment for more than seven days, as permitted by federal securities law. Under normal market conditions, the fund typically expects to satisfy redemption requests by using holdings of cash and cash equivalents or selling portfolio assets to generate cash. Under stressed market conditions, the fund may also satisfy redemption requests by borrowing under the fund's lines of credit or interfund lending arrangements. For additional information regarding the fund's lines of credit and interfund lending arrangements, please see the SAI.

To the extent consistent with applicable laws and regulations, the fund reserves the right to satisfy all or a portion of a redemption request by distributing securities or other property in lieu of cash ("in-kind" redemptions), under both normal and stressed market conditions. The fund generally expects to use in-kind redemptions only in stressed market conditions or stressed conditions specific to the fund, such as redemption requests that represent a large percentage of the fund's net assets in order to minimize the effect of the large redemption on the fund and its remaining shareholders. Any in-kind redemption will be effected through a pro rata distribution of all publicly traded portfolio securities or securities for which quoted bid prices are available, subject to certain exceptions. The securities distributed in an in-kind redemption will be valued in the same manner as they are valued for purposes of computing the fund's net asset value. Once distributed in-kind to an investor, securities may increase or decrease in value before the investor is able to convert them into cash. Any transaction costs or other expenses involved in liquidating securities received in an in-kind redemption will be borne by the redeeming investor. The fund has committed, in connection with an election under Rule 18f-1 under the Investment Company Act of 1940, to pay all redemptions of fund shares by a single shareholder during any 90-day period in cash, up to the lesser of (i) $250,000 or (ii) 1% of the fund's net assets measured as of the beginning of such 90-day period. For information regarding procedures for in-kind redemptions, please contact Putnam Retail Management.

How does the fund price its shares?

The price of the fund's shares is based on its NAV. The NAV per share of each class equals the total value of its assets, less its liabilities, divided by the number of its outstanding shares. Shares are only valued as of the scheduled close of regular trading on the NYSE each day the exchange is open.

The fund values its investments for which market quotations are readily available at market value. It values all other investments and assets at their fair value, which may differ from recent market prices. Market quotations are not considered to be readily available for many debt securities. These securities are generally valued at fair value on the basis of valuations provided by an independent pricing service approved by the fund's Trustees or dealers selected by Putnam Management. Pricing services and dealers determine valuations for normal institutional-size trading units of such securities using information with respect to transactions in the bond being valued, market transactions for comparable securities and various relationships, generally recognized by institutional traders, between securities. To the extent a pricing service or dealer is unable to value a security or provides a valuation that Putnam Management does not believe accurately reflects the security's fair value, the security will be valued at fair value by Putnam Management.

Distribution plan and payments to dealers

The Trust has adopted a Distribution Plan with respect to class IB shares to compensate Putnam Retail Management for services provided and expenses incurred by it as principal underwriter of the class IB shares, including the payments to insurance companies and their affiliated dealers mentioned below. The plan provides for payments by the fund to Putnam Retail Management at the annual rate (expressed as a percentage of average net assets) of up to 0.35% on class IB shares. The Trustees currently limit payments on class IB shares to 0.25% of average net assets. Because these fees are paid out of the fund's assets on an ongoing basis, they will increase the cost of your investment.

Putnam Retail Management compensates insurance companies (or affiliated broker-dealers) whose separate accounts invest in the Trust through class IB shares for providing services to their contract holders investing in the Trust.

Putnam Retail Management makes quarterly payments to dealers at the annual rate of up to 0.25% of the average NAV of class IB shares.

Putnam Retail Management may suspend or modify its payments to dealers. The payments are also subject to the continuation of the Distribution Plan, the terms of service agreements between dealers and Putnam Retail Management, and any applicable limits imposed by the Financial Industry Regulatory Authority (FINRA).

In addition to the payments described above with respect to class IB shares, Putnam Retail Management and its affiliates also pay additional compensation to selected insurance companies (or affiliated broker-dealers) to whom shares of the fund are offered ("Record Owners") and to dealers that sell variable insurance products ("dealers") in recognition of their marketing and/or administrative services support. These payments may create an incentive for a Record Owner firm, dealer firm or their representatives to recommend or offer shares of the fund or other Putnam funds, or insurance products for which the fund serves as an underlying investment, to its customers. These additional payments are made by Putnam Retail Management and its affiliates and do not increase the amount paid by you or the fund as shown under *Fund summary — Fees and expenses*.

The additional payments to Record Owners and dealers by Putnam Retail Management and its affiliates are generally based on one or more of the following factors: average net assets of the fund attributable to that Record Owner or dealer, sales or net sales of the fund attributable to that Record Owner or dealer, or on the basis of a negotiated lump sum payment for services provided. Payments made by Putnam Retail Management and its affiliates for marketing and/or administrative support services to any one Record Owner or dealer are not expected, with certain limited exceptions, to exceed 0.25% of the average assets of the fund attributable to that Record Owner or dealer on an annual basis. These payments are made for marketing and/or administrative support services provided by Record Owners and dealers, including business planning assistance, educating dealer personnel about the fund and shareholder financial planning needs, placement on the dealer's preferred or recommended fund company list, access to sales meetings, sales representatives and management representatives of the dealer and administrative services performed by the Record Owner or dealer. Putnam Retail Management and its affiliates may make other payments (including payments in connection with educational seminars or conferences) or allow other promotional incentives to Record Owners and dealers to the extent permitted by SEC and National Association of Security Dealers, Inc. (as adopted by FINRA) rules and by other applicable laws and regulations.

You can find a list of all Record Owners and dealers to which Putnam made marketing and/or administrative support services payments in 2020 in the SAI, which is on file with the SEC and is also available on Putnam's website at putnam.com. You can also find other details in the SAI about the payments made by Putnam Retail Management and its affiliates and the services provided by your Record Owner or dealer. In addition, you can ask your Record Owner or dealer for information about any payments it receives from Putnam Retail Management and its affiliates and any services provided by your Record Owner or dealer.

Policy on excessive short-term trading

- **Risks of excessive short-term trading.** Excessive short-term trading activity may reduce the fund's performance and harm all fund shareholders by interfering with portfolio management, increasing the fund's expenses and diluting the fund's NAV. Depending on the size and frequency of short-term trades in the fund's shares, the fund may experience increased cash volatility, which could require the fund to maintain undesirably large cash positions or buy or sell portfolio securities it would not have bought or sold otherwise. The need to execute additional portfolio transactions due to these cash flows may also increase the fund's brokerage and administrative costs.
- **Fund policies and limitations.** In order to protect the interests of long-term shareholders of the fund, Putnam Management and the fund's Trustees have adopted policies and procedures intended to discourage excessive short-term trading. The fund seeks to discourage excessive short-term trading by using fair value pricing procedures to value investments under some circumstances. In addition, Putnam Management monitors aggregate cash flows in each insurance company separate account that invests in the fund. If high cash flows relative to the size of the account or other information indicate that excessive short-term trading may be taking place in a particular separate account, Putnam Management will contact the insurance company that maintains accounts for the underlying contract holders and seek to have the insurance company enforce the separate account's policies on excessive short-term trading. As noted below, each insurance company's policies on excessive short-term trading will vary, and some insurance companies may not have adopted specific policies on excessive short-term trading.

  As noted above, the fund's shareholders are separate accounts sponsored by various insurance companies. Because Putnam Management currently does not have comprehensive access to trading records of individual contract holders, it is difficult (and in some cases impossible) for Putnam Management to determine if a particular contract holder is engaging in excessive short-term trading. In certain circumstances, there currently are also operational or technological constraints on Putnam Management's ability to monitor trading activity. In addition, even in circumstances when Putnam Management has access to sufficient information to permit a review of trading, its detection methods may not capture all excessive short-term trading.

  As a result of these limitations, the fund's ability to monitor and deter excessive short-term trading ultimately depends on the capabilities, policies and cooperation of the insurance companies that sponsor the separate accounts. Some of the separate accounts have adopted transfer fees, limits on exchange activity, or other measures to attempt to address the potential for excessive short-term trading, while other separate accounts currently have not. For more information about any measures applicable to your investment, please see the prospectus of the separate account of the specific insurance product that accompanies this prospectus. The measures used by Putnam Management or a separate account may or may not be effective in deterring excessive short-term trading. In addition, the terms of the particular insurance contract may also limit the ability of the insurance company to address excessive short-term trading. As a result, the fund can give no assurances that market timing and excessive short-term trading will not occur in the fund.

  In compliance with Rule 22c-2 under the Investment Company Act of 1940, as amended, Putnam Retail Management and Putnam Investor Services, on behalf of the fund, have entered into written agreements with the fund's financial intermediaries, under which the intermediary must, upon request, provide the fund with certain shareholder identity and trading information so that the fund can enforce its market timing policies.
- **Account monitoring.** In instances where trading records of individual contract holders are made available to Putnam Management, Putnam Management measures excessive short-term trading by the number of "round trip" transactions above a specified dollar amount within a specified period of time. A "round trip" transaction is defined as a transfer into a fund followed, or preceded, by a transfer out of the same fund. A transfer is defined as a transaction requested by the contract owner to reallocate part or all of their contract value among the funds available in the contract. Generally, if a contract holder has been identified as having completed two "round trip" transactions with values above a specified amount within a rolling 90-day period, Putnam Management will request that the separate account's financial intermediary issue a written warning to the contract holder. Putnam Management's practices for measuring excessive short-term trading activity and requesting warnings to be issued may change from time to time. Certain types of transactions are exempt from monitoring, such as transfers that are executed automatically pursuant to a company-sponsored contractual or systematic program such as transfer of assets as a result of "dollar cost averaging" programs, asset allocation programs or automatic rebalancing programs. Also exempt are annuity payouts, loans, and systematic withdrawal programs; payment of a death benefit; any deduction of fees; or payments such as loan repayments, scheduled contributions, withdrawals or surrenders; retirement plan salary reduction contributions or planned premium payments.
- **Account restrictions.** In addition to these monitoring practices, Putnam Management and the fund reserve the right to reject or restrict transfers for any reason. Continued excessive short-term trading activity by a contract holder following a warning may lead to the termination of the transfer privilege for that contract holder or the insurance company separate account. Putnam Management or the fund may determine that a contract holder's trading activity is excessive or otherwise potentially harmful based on various factors, including trading history in the fund, other Putnam funds or other investment products, and may aggregate activity in multiple accounts in the fund or

other Putnam funds under common ownership or control for purposes of determining whether the activity is excessive. If the fund identifies a contract holder as a potential excessive trader, depending on the capabilities of the intermediary, it may, among other things, require future trades by the contract holder or the insurance company separate account to be submitted by mail rather than by phone or over the Internet, impose limitations on the amount, number, or frequency of future purchases or exchanges, or temporarily or permanently bar the contract holder or insurance company separate account from investing in the fund or other Putnam funds. The fund may take these steps in its discretion even if the contract holder's activity does not fall within the fund's current monitoring parameters.

Fund distributions and taxes

The fund normally distributes any net investment income and any net realized capital gains annually. Distributions will be reinvested in additional shares of the fund, unless an election is made on behalf of a separate account to receive some or all of the distributions in cash.

Distributions are reinvested without a sales charge, using the NAV determined on the ex-dividend date. Distributions on each share are determined in the same manner and are paid in the same amount, regardless of class, except for such differences as are attributable to different class expenses.

Generally, holders of variable annuity and variable life 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. In addition, distributions made to a contract holder who is younger than 59½ may be subject to a 10% penalty tax. Investors should ask their own tax advisors for more information on their own tax situation, including possible foreign, state or local taxes.

In order for investors to receive the favorable tax treatment available to holders of variable annuity and variable life insurance contracts, the separate accounts underlying such contracts, as well as the funds in which such accounts invest, must meet certain diversification requirements. The fund intends to diversify its assets in accordance with these requirements. If the fund does not meet such requirements, income allocable to the contracts would be taxable currently to the holders of such contracts. In addition, if the Internal Revenue Service finds an impermissible level of "investor control" over the investment options underlying variable annuity or variable life insurance contracts, the advantageous tax treatment provided with respect to insurance company separate accounts under the Internal Revenue Code of 1986, as amended, will no longer be available. Please see the SAI for further discussion.

The fund intends to qualify as a "regulated investment company" for federal income tax purposes and to meet all other requirements necessary for it to be relieved of federal income taxes on income and gains it timely distributes to the separate accounts. For information concerning federal income tax consequences for the holders of variable annuity contracts and variable life insurance policies, contract holders should consult the prospectus of the applicable separate account.

The fund's investments in certain debt obligations may cause the fund to recognize taxable income in excess of the cash generated by such obligations. Thus, the fund could be required at times to liquidate other investments, including when it is not advantageous to do so, in order to satisfy its distribution requirements.

The fund's use of derivatives, if any, may affect the amount and timing of distributions to shareholders, potentially requiring the fund to liquidate other investments, including when it is not advantageous to do so, in order to satisfy its distribution requirements.

The foregoing discussion is very general and is based on the assumption that the shareholders in the fund will be insurance company separate accounts. For further information, please see *Taxes* in the SAI.

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.

Financial highlights

The financial highlights tables are intended to help you understand the fund's recent financial performance. Certain information reflects financial results for a single fund share. Before April 30, 2018, the fund was managed with a materially different investment strategy and may have achieved materially different results under its current investment strategy from that shown for periods before this date. The total returns represent the rate that an investor would have earned or lost on an investment in the fund, assuming reinvestment of all dividends and distributions. Total returns and expense ratios do not reflect insurance related charges or expenses; if these charges and expenses were reflected, performance would be lower and expenses would be higher. This information has been derived from the fund's financial statements, which have been audited by PricewaterhouseCoopers LLP. The Independent Registered Public Accounting Firm's report and the fund's financial statements are included in the fund's annual report to shareholders, which is available upon request.

Financial highlights (For a common share outstanding throughout the period)

INVESTMENT OPERATIONS:					LESS DISTRIBUTIONS:						RATIOS AND SUPPLEMENTAL DATA:			
Period ended	**Net asset value, beginning of period**	Net investment income (loss)[a]	Net realized and unrealized gain (loss) on investments	**Total from investment operations**	From net investment income	From net realized gain on investments	From return of capital	**Total distributions**	**Net asset value, end of period**	**Total return at net asset value (%)[b,c]**	**Net assets, end of period (in thousands)**	Ratio of expenses to average net assets (%)[b,d]	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%)[e]
Class IA														
12/31/20	**$10.18**	.35	(.57)	**(.22)**	(.87)	(.02)	(.02)	**(.91)**	**$9.05**	**(1.29)**	**$26,269**	.50[f]	3.89[f]	895
12/31/19	**9.21**	.36	.85	**1.21**	(.24)	—	—	**(.24)**	**10.18**	**13.36**	**31,822**	.50[f]	3.68[f]	1,171
12/31/18	**9.55**	.35	(.41)	**(.06)**	(.28)	—	—	**(.28)**	**9.21**	**(.62)**	**31,249**	.56[f]	3.80[f]	1,142
12/31/17	**9.59**	.27	(.06)	**.21**	(.25)	—	—	**(.25)**	**9.55**	**2.27**	**35,852**	.66	2.85	1,188
12/31/16	**9.76**	.24	(.20)	**.04**	(.21)	—	—	**(.21)**	**9.59**	**.36**	**40,362**	.64[g]	2.43[g]	1,028
Class IB														
12/31/20	**$10.16**	.33	(.58)	**(.25)**	(.85)	(.02)	(.02)	**(.89)**	**$9.02**	**(1.68)**	**$20,478**	.75[f]	3.64[f]	895
12/31/19	**9.18**	.33	.86	**1.19**	(.21)	—	—	**(.21)**	**10.16**	**13.20**	**26,965**	.75[f]	3.44[f]	1,171
12/31/18	**9.52**	.33	(.41)	**(.08)**	(.26)	—	—	**(.26)**	**9.18**	**(.90)**	**23,232**	.81[f]	3.54[f]	1,142
12/31/17	**9.56**	.25	(.07)	**.18**	(.22)	—	—	**(.22)**	**9.52**	**1.96**	**27,524**	.91	2.60	1,188
12/31/16	**9.72**	.21	(.19)	**.02**	(.18)	—	—	**(.18)**	**9.56**	**.20**	**33,301**	.89[g]	2.18[g]	1,028

Before April 30, 2018, the fund was managed with a materially different investment strategy and may have achieved materially different performance results under its current investment strategy from that shown for periods before this date.

[a] Per share net investment income (loss) has been determined on the basis of the weighted average number of shares outstanding during the period.

[b] The charges and expenses at the insurance company separate account level are not reflected.

[c] Total return assumes dividend reinvestment.

[d] Includes amounts paid through expense offset arrangements, if any. Also excludes acquired fund fees and expenses, if any.

[e] Portfolio turnover includes TBA purchase and sale commitments.

[f] Reflects an involuntary contractual expense limitation in effect during the period. As a result of such limitation, the expenses of each class reflect the following reductions as a percentage of average net assets.

	% of average net assets
December 31, 2020	0.24%
December 31, 2019	0.22
December 31, 2018	0.25

[g] Reflects a voluntary waiver of certain fund expenses in effect during the period. As a result of such waiver, the expenses of each class reflect a reduction of less than 0.01% as a percentage of average net assets.

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For more information about Putnam VT Mortgage Securities Fund

The fund's SAI and annual and semiannual reports to shareholders include additional information about the fund. The SAI, and the auditor's report and the financial statements included in the fund's most recent annual report to shareholders, are incorporated by reference into this prospectus, which means they are part of this prospectus for legal purposes. The fund's annual report discusses the market conditions and investment strategies that significantly affected the fund's performance during its last fiscal year. You may get free copies of these materials, request other information about any Putnam fund, or make shareholder inquiries, by contacting your financial representative, by visiting Putnam's website at putnam.com/individual/annuities, or by calling Putnam toll-free at 1-800-225-1581.

You may access reports and other information about the fund on the EDGAR Database on the Securities and Exchange Commission's website at http://www.sec.gov. You may get copies of this information, with payment of a duplication fee, by electronic request at the following E-mail address: publicinfo@sec.gov. You may need to refer to the fund's file number.

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