

# Putnam Variable Trust

## **Putnam VT Small Cap Growth Fund**

### **Annual report**

**12 | 31 | 19**

#### **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 reports like this one 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.

# Message from the Trustees

February 12, 2020

Dear Shareholder:

Global financial markets overcame a number of uncertainties in 2019. Both stock and bond markets experienced bouts of volatility, but performance recovered despite macroeconomic headwinds and risks. Stock markets worldwide delivered solid returns for the calendar year, with all three major U.S. equity indexes reaching record highs in December. The year was also beneficial for bond investors, as global fixed-income markets posted strong returns, thanks in part to policy easing from central banks.

Although no one can predict the direction of the markets in the months ahead, Putnam's experienced investment professionals actively seek to position their fund portfolios for all types of conditions. They take a research-intensive approach to investing that includes risk management strategies designed to serve investors through changing markets. In all environments, we believe investors should remain focused on time-tested approaches, such as maintaining a well-diversified portfolio, thinking about long-term goals, and speaking regularly with a financial advisor.

Thank you for investing with Putnam.

Respectfully yours,



**Robert L. Reynolds**

President and Chief Executive Officer  
Putnam Investments



**Kenneth R. Leibler**

Chair, Board of Trustees

## Performance summary (as of 12/31/19)

### Investment objective

Capital appreciation

**Net asset value** December 31, 2019

Class IA: \$16.43

Class IB: \$16.17

### Total return at net asset value

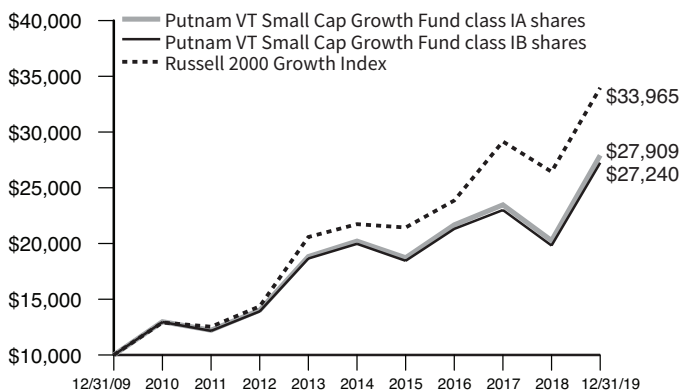
(as of 12/31/19)	Class IA shares*	Class IB shares*	Russell 2000 Growth Index
1 year	37.73%	37.45%	28.48%
5 years	38.09	36.42	56.28
Annualized	6.67	6.41	9.34
10 years	179.09	172.40	239.65
Annualized	10.81	10.54	13.01
Life	372.93	353.75	472.42
Annualized	9.77	9.50	11.04

For a portion of the periods, the fund had expense limitations, without which returns would have been lower.

\* Class inception date: May 1, 2003.

Before September 17, 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.

### Cumulative total returns of a \$10,000 investment in class IA and class IB shares at net asset value — since 12/31/09

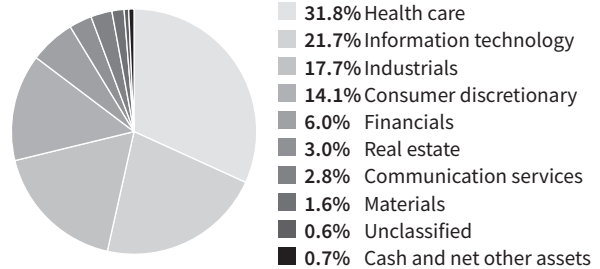


The Russell 2000 Growth Index is an unmanaged index of those companies in the small-cap Russell 2000 Index chosen for their growth orientation.

Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Russell® is a trademark of Frank Russell Company.

**Data represent past performance. Past performance does not guarantee future results. More recent returns may be less or more than those shown. Investment return and principal value will fluctuate, and you may have a gain or a loss when you sell your shares. Performance information does not reflect any deduction for taxes a shareholder may owe on fund distributions or on the redemption of fund shares. All total return figures are at net asset value and exclude contract charges and expenses, which are added to the variable annuity contracts to determine total return at unit value. Had these charges and expenses been reflected, performance would have been lower. For more recent performance, contact your variable annuity provider who can provide you with performance that reflects the charges and expenses at your contract level.**

### Portfolio composition



Allocations are shown as a percentage of the fund's net assets. Cash and net other assets, if any, represent the market value weights of cash, derivatives, short-term securities, and other unclassified assets in the portfolio. Summary information may differ from the portfolio schedule included in the financial statements due to the inclusion of derivative securities, any interest accruals, the exclusion of as-of-trades, if any, the use of different classifications of securities for presentation purposes, and rounding. Holdings and allocations may vary over time.

The unclassified sector includes securities not able to be classified by sector.

## Report from your fund's manager

### **Bill, please describe the markets during the reporting period.**

Equity markets continued to rally and reached new highs despite many developments that could have sent investors fleeing. The S&P 500 Index, a broad measure of stocks, advanced 31.49% during the 12-month reporting period. The fund's benchmark, the Russell 2000 Growth Index, gained 28.48%.

Ongoing concerns about the global economic slowdown and U.S.–China trade tensions caused the Federal Reserve [Fed] to lower interest rates in the second half of 2019. Combined with the impact of positive corporate earnings, U.S. equities, including small-cap stocks, advanced.

Small-cap and large-cap stocks rallied after the Fed had lowered interest rates three times from July to October. In December, the Fed held rates steady and noted a favorable economic outlook for 2020. Stocks also got a boost following a mid-December “phase one” trade deal between the United States and China, which helped ease trade war fears.

### **How did Putnam VT Small Cap Growth Fund perform in this environment?**

For the 12-month period, the fund's class IA shares returned 37.73%, outperforming the fund's benchmark, the Russell 2000 Growth Index, which returned 28.48%.

### **What were some holdings that contributed to performance during the period?**

Palomar Holdings, a U.S. company that provides insurance services, was the fund's top contributor. Palomar specializes in earthquake insurance and uses newer technology in its underwriting practices compared with many older insurance carriers. Palomar did well in the second half of 2019 after the July earthquake in the Ridgecrest area of California. This raised awareness of Palomar's offerings and led to increased demand for its products. The quake also showed that the company appeared to be well structured to handle the risks it insured.

Another top performer was Insulet, a Massachusetts-based medical device company. Insulet manufactures and sells the popular Omnipod device for diabetic patients, which allows for more free movement than older generations of insulin delivery. The product continues to resonate with patients, and that has led to strong revenue growth throughout 2019. The future remains bright for Insulet, in our view. We believe that diabetic patients should continue to see even better treatment options as product innovations come to market over the next several years.

### **What were some holdings that detracted from performance?**

The fund's top detractor for the period was Merit Medical Systems. The stock suffered a major downdraft after reporting disappointing earnings. After a string of acquisitions, Merit appeared to struggle to integrate its acquired companies. Profit improvement also did not materialize as expected. Coupled with a departure of Merit's chief financial officer earlier in 2019, our faith in the company's outlook diminished. We sold our position before year-end.

Several other holdings in the health-care sector detracted from results. These included Emergent BioSolutions based in Maryland, Ligand Pharmaceuticals based in California, and Tabula Rasa

HealthCare based in New Jersey. These companies have underperformed the Russell 2000 Growth's gains since the beginning of 2019 because of weak earnings outlooks.

### **As the fund begins a new fiscal year, what is your outlook?**

As we enter 2020, we remain optimistic in our outlook for U.S. markets overall and for the small-cap growth space. 2019 was a strong performance year despite trade issues with China and a general slowing of the manufacturing sector in the United States. We are optimistic that the trade-tension related slowdown will ease. President Trump signed an initial trade deal with China on January 15, 2020, bringing some relief to markets and cooling tensions between the world's two largest economies. The pact is intended to open Chinese markets to more American companies.

We are mindful of the election year volatility that may surface in 2020. A deeply polarized American electorate will head to the polls in November to determine the outcome of the next presidential election. Still, we think the U.S. economy remains on a rather firm foundation as we begin 2020. We believe the job market and consumer spending will continue to be resilient.

*The views expressed in this report are exclusively those of Putnam Management and are subject to change. They are not meant as investment advice. Please note that the holdings discussed in this report may not have been held by the fund for the entire period. Portfolio composition is subject to review in accordance with the fund's investment strategy and may vary in the future.*

**Consider these risks before investing:** Investments in small and/or midsize companies increase the risk of greater price fluctuations. Growth stocks may be more susceptible to earnings disappointments, and the market may not favor growth-style investing. 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. These risks are generally greater for small and midsize companies. From time to time, the fund may invest a significant portion of its assets in companies in one or more related industries or sectors, which would make the fund more vulnerable to adverse developments affecting those industries or sectors. You can lose money by investing in the fund.

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## Your fund's manager



Portfolio Manager **William J. Monroe, CFA**, joined Putnam in 2012 and has been in the investment industry since 1996.

Your fund's manager also manages other accounts advised by Putnam Management or an affiliate, including retail mutual fund counterparts to the funds in Putnam Variable Trust.

## Understanding your fund's expenses

As an investor in a variable annuity product that invests in a registered investment company, you pay ongoing expenses, such as management fees, distribution fees (12b-1 fees), and other expenses. In the most recent six-month period, your fund's expenses were limited; had expenses not been limited, they would have been higher. Using the following information, you can estimate how these expenses affect your investment and compare them with the expenses of other funds. You may also pay one-time transaction expenses, which are not shown in this section and would result in higher total expenses. Charges and expenses at the insurance company separate account level are not reflected. For more information, see your fund's prospectus or talk to your financial representative.

### Review your fund's expenses

The two left-hand columns of the Expenses per \$1,000 table show the expenses you would have paid on a \$1,000 investment in your fund from 7/1/19 to 12/31/19. They also show how much a \$1,000 investment would be worth at the close of the period, *assuming actual returns and expenses*. To estimate the ongoing expenses you paid over the period, divide your account value by \$1,000, then multiply the result by the number in the first line for the class of shares you own.

### Compare your fund's expenses with those of other funds

The two right-hand columns of the Expenses per \$1,000 table show your fund's expenses based on a \$1,000 investment, *assuming a hypothetical 5% annualized return*. You can use this information to compare the ongoing expenses (but not transaction expenses or total costs) of investing in the fund with those of other funds. All shareholder reports of mutual funds and funds serving as variable annuity vehicles will provide this information to help you make this comparison. Please note that you cannot use this information to estimate your actual ending account balance and expenses paid during the period.

### Expense ratios

	Class IA	Class IB
Net expenses for the fiscal year ended 12/31/18*†	0.89%	1.14%
Total annual operating expenses for the fiscal year ended 12/31/18*	0.99%	1.24%
Annualized expense ratio for the six-month period ended 12/31/19#	0.89%	1.14%

Fiscal-year expense information in this table is taken from the most recent prospectus, is subject to change, and may differ from that shown for the annualized expense ratio and in the financial highlights of this report.

Expenses are shown as a percentage of average net assets.

\*Restated to reflect current fees.

†Reflects Putnam Management's contractual obligation to limit certain fund expenses through 4/30/20.

#For the fund's most recent fiscal half year; may differ from expense ratios based on one-year data in the financial highlights.

### Expenses per \$1,000

	Expenses and value for a \$1,000 investment, assuming actual returns for the 6 months ended 12/31/19		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 12/31/19	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$4.60	\$5.90	\$4.53	\$5.80
Ending value (after expenses)	\$1,052.50	\$1,052.00	\$1,020.72	\$1,019.46

\*Expenses for each share class are calculated using the fund's annualized expense ratio for each class, which represents the ongoing expenses as a percentage of average net assets for the six months ended 12/31/19. The expense ratio may differ for each share class.

†Expenses based on actual returns are calculated by multiplying the expense ratio by the average account value for the period; then multiplying the result by the number of days in the period; and then dividing that result by the number of days in the year. Expenses based on a hypothetical 5% return are calculated by multiplying the expense ratio by the average account value for the six-month period; then multiplying the result by the number of days in the six-month period; and then dividing that result by the number of days in the year.

## **Report of Independent Registered Public Accounting Firm**

To the Trustees of Putnam Variable Trust  
and Shareholders of Putnam VT Small Cap Growth Fund

### ***Opinion on the Financial Statements***

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT Small Cap Growth Fund (one of the funds constituting Putnam Variable Trust, referred to hereafter as the "Fund") as of December 31, 2019, the related statement of operations for the year ended December 31, 2019, the statement of changes in net assets for each of the two years in the period ended December 31, 2019, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2019 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Fund as of December 31, 2019, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period ended December 31, 2019 and the financial highlights for each of the five years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America.

### ***Basis for Opinion***

These financial statements are the responsibility of the Fund's management. Our responsibility is to express an opinion on the Fund's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Fund in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of December 31, 2019 by correspondence with the custodian, transfer agent and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

PricewaterhouseCoopers LLP  
Boston, Massachusetts  
February 12, 2020

We have served as the auditor of one or more investment companies in the Putnam Investments family of mutual funds since at least 1957. We have not been able to determine the specific year we began serving as auditor.

## The fund's portfolio 12/31/19

<b>COMMON STOCKS (99.3%)*</b>	<b>Shares</b>	<b>Value</b>
<b>Aerospace and defense (4.5%)</b>		
HEICO Corp. Class A	6,515	\$583,288
Mercury Systems, Inc. †	9,665	667,948
		<b>1,251,236</b>
<b>Biotechnology (10.5%)</b>		
ACADIA Pharmaceuticals, Inc. †	3,275	140,105
Acceleron Pharma, Inc. †	4,820	255,556
Ascendis Pharma A/S ADR (Denmark) † \$	2,460	342,235
Biohaven Pharmaceutical Holding Co., Ltd. †	3,395	184,824
Emergent BioSolutions, Inc. †	7,520	405,704
Global Blood Therapeutics, Inc. †	3,170	251,983
Immunomedics, Inc. †	7,120	150,659
Insmed, Inc. †	7,040	168,115
Ligand Pharmaceuticals, Inc. †	1,920	200,237
Mirati Therapeutics, Inc. †	1,745	224,861
PTC Therapeutics, Inc. †	4,370	209,891
Veracyte, Inc. †	5,263	146,943
Vericel Corp. †	7,430	129,282
Y-mAbs Therapeutics, Inc. †	4,395	137,344
		<b>2,947,739</b>
<b>Building products (3.9%)</b>		
CSW Industrials, Inc.	5,495	423,115
Trex Co., Inc. † \$	7,500	674,100
		<b>1,097,215</b>
<b>Capital markets (2.8%)</b>		
Evercore, Inc. Class A	1,715	128,213
Hamilton Lane, Inc. Class A	11,005	655,898
		<b>784,111</b>
<b>Chemicals (1.6%)</b>		
Ingevity Corp. †	5,145	449,570
		<b>449,570</b>
<b>Commercial services and supplies (3.1%)</b>		
Brink's Co. (The)	6,125	555,415
Harsco Corp. †	13,775	316,963
		<b>872,378</b>
<b>Construction and engineering (0.4%)</b>		
NV5 Global, Inc. †	2,120	106,954
		<b>106,954</b>
<b>Diversified consumer services (2.8%)</b>		
Bright Horizons Family Solutions, Inc. †	3,800	571,102
Chegg, Inc. † \$	6,020	228,218
		<b>799,320</b>
<b>Electronic equipment, instruments, and components (2.4%)</b>		
Novanta, Inc. †	7,535	666,395
		<b>666,395</b>
<b>Equity real estate investment trusts (REITs) (1.4%)</b>		
Terreno Realty Corp.	7,215	390,620
		<b>390,620</b>
<b>Health-care equipment and supplies (9.9%)</b>		
Antares Pharma, Inc. †	31,665	148,826
CONMED Corp.	4,140	462,976
Haemonetics Corp. †	2,110	242,439
Inmode, Ltd. (Israel) † \$	4,076	159,779
Insulet Corp. †	1,770	303,024
Mesa Laboratories, Inc.	580	144,652
Novocure, Ltd. (Jersey) †	3,330	280,619
Quidel Corp. †	7,710	578,481
Tactile Systems Technology, Inc. † \$	4,560	307,846
Tandem Diabetes Care, Inc. †	2,665	158,861
		<b>2,787,503</b>

<b>COMMON STOCKS (99.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>
<b>Health-care providers and services (4.4%)</b>		
Amedisys, Inc. †	3,200	\$534,144
HealthEquity, Inc. †	2,370	175,546
R1 RCM, Inc. †	22,325	289,779
US Physical Therapy, Inc. \$	2,150	245,853
		<b>1,245,322</b>
<b>Health-care technology (1.9%)</b>		
Phreesia, Inc. † \$	7,835	208,724
Tabula Rasa HealthCare, Inc. † \$	2,870	139,712
Teladoc Health, Inc. † \$	2,355	197,161
		<b>545,597</b>
<b>Hotels, restaurants, and leisure (6.6%)</b>		
Churchill Downs, Inc.	3,205	439,726
Luckin Coffee, Inc. ADR (China) † \$	6,655	261,941
Planet Fitness, Inc. Class A † \$	9,045	675,481
Wingstop, Inc. \$	5,385	464,349
		<b>1,841,497</b>
<b>Household durables (0.6%)</b>		
TopBuild Corp. †	1,550	159,774
		<b>159,774</b>
<b>Insurance (3.2%)</b>		
Kinsale Capital Group, Inc.	4,500	457,470
Palomar Holdings, Inc. †	8,841	446,382
		<b>903,852</b>
<b>IT Services (1.4%)</b>		
Evo Payments, Inc. Class A †	14,650	386,907
		<b>386,907</b>
<b>Life sciences tools and services (3.8%)</b>		
Codexis, Inc. †	11,005	175,970
Medpace Holdings, Inc. †	5,710	479,983
Repligen Corp. †	4,540	419,950
		<b>1,075,903</b>
<b>Machinery (3.1%)</b>		
Albany International Corp. Class A	5,725	434,642
RBC Bearings, Inc. †	2,751	435,593
		<b>870,235</b>
<b>Media (2.8%)</b>		
Cable One, Inc.	530	788,889
		<b>788,889</b>
<b>Miscellaneous (0.6%)</b>		
EverArc Holdings, Ltd. (British Virgin Islands) †	12,706	171,531
		<b>171,531</b>
<b>Pharmaceuticals (1.0%)</b>		
Horizon Therapeutics PLC †	7,930	287,066
		<b>287,066</b>
<b>Real estate management and development (1.6%)</b>		
Colliers International Group, Inc. (Canada)	5,815	452,733
		<b>452,733</b>
<b>Road and rail (1.3%)</b>		
Saia, Inc. †	3,850	358,512
		<b>358,512</b>
<b>Semiconductors and semiconductor equipment (3.9%)</b>		
Brooks Automation, Inc.	5,470	229,521
Cabot Microelectronics Corp.	1,300	187,616
Entegris, Inc.	9,375	469,594
Nova Measuring Instruments, Ltd. (Israel) †	5,280	199,742
		<b>1,086,473</b>
<b>Software (14.1%)</b>		
Everbridge, Inc. † \$	7,140	557,491
Five9, Inc. †	3,530	231,497
j2 Global, Inc. \$	5,391	505,191
LivePerson, Inc. †	7,285	269,545
Mimecast, Ltd. †	3,065	132,960
Paylocity Holding Corp. †	4,425	534,629
Ping Identity Holding Corp. † \$	10,195	247,739
PROS Holdings, Inc. †	5,230	313,382

<b>COMMON STOCKS (99.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>		
<b>Software cont.</b>				
Q2 Holdings, Inc. †	1,850	\$149,998		
QAD, Inc. Class A	4,287	218,337		
SPS Commerce, Inc. †	5,620	311,460		
Verra Mobility Corp. † <sup>§</sup>	34,764	486,348		
		<b>3,958,577</b>		
<b>Specialty retail (4.2%)</b>				
Boot Barn Holdings, Inc. †	6,488	288,911		
Five Below, Inc. †	6,875	879,033		
		<b>1,167,944</b>		
<b>Trading companies and distributors (1.5%)</b>				
SiteOne Landscape Supply, Inc. † <sup>§</sup>	4,490	407,019		
		<b>407,019</b>		
<b>Total common stocks (cost \$23,200,779)</b>		<b>\$27,860,872</b>		
<b>WARRANTS (—%)* †</b>				
	<b>Expiration date</b>	<b>Strike price</b>	<b>Warrants</b>	<b>Value</b>
EverArc Holdings, Ltd. (British Virgin Islands)	12/1/22	\$12.00	12,860	\$129
<b>Total warrants (cost \$129)</b>				<b>\$129</b>
<b>SHORT-TERM INVESTMENTS (20.2%)*</b>			<b>Shares</b>	<b>Value</b>
Putnam Cash Collateral Pool, LLC 1.81% <sup>d</sup>			5,262,550	\$5,262,550
Putnam Short Term Investment Fund 1.72% <sup>L</sup>			393,186	393,186
<b>Total short-term investments (cost \$5,655,736)</b>				<b>\$5,655,736</b>
<b>Total investments (cost \$28,856,644)</b>				<b>\$33,516,737</b>

#### Key to holding's abbreviations

ADR American Depositary Receipts: represents ownership of foreign securities on deposit with a custodian bank

#### Notes to the fund's portfolio

Unless noted otherwise, the notes to the fund's portfolio are for the close of the fund's reporting period, which ran from January 1, 2019 through December 31, 2019 (the reporting period). Within the following notes to the portfolio, references to "Putnam Management" represent Putnam Investment Management, LLC, the fund's manager, an indirect wholly-owned subsidiary of Putnam Investments, LLC and references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures*.

\* Percentages indicated are based on net assets of \$28,062,992.

† This security is non-income-producing.

<sup>d</sup> Affiliated company. See Notes 1 and 5 to the financial statements regarding securities lending. The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.

<sup>L</sup> Affiliated company (Note 5). The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.

<sup>§</sup> Security on loan, in part or in entirety, at the close of the reporting period (Note 1).

ASC 820 establishes a three-level hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of the fund's investments. The three levels are defined as follows:

Level 1: Valuations based on quoted prices for identical securities in active markets.

Level 2: Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3: Valuations based on inputs that are unobservable and significant to the fair value measurement.

The following is a summary of the inputs used to value the fund's net assets as of the close of the reporting period:

<b>Investments in securities:</b>	<b>Valuation inputs</b>		
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Common stocks*:			
Communication services	\$788,889	\$—	\$—
Consumer discretionary	3,968,535	—	—
Financials	1,687,963	—	—
Health care	8,889,130	—	—
Industrials	4,963,549	—	—
Information technology	6,098,352	—	—
Materials	449,570	—	—
Miscellaneous	171,531	—	—
Real estate	843,353	—	—
<b>Total common stocks</b>	<b>27,860,872</b>	<b>—</b>	<b>—</b>
Warrants	—	129	—
Short-term investments	393,186	5,262,550	—
<b>Totals by level</b>	<b>\$28,254,058</b>	<b>\$5,262,679</b>	<b>\$—</b>

\* Common stock classifications are presented at the sector level, which may differ from the fund's portfolio presentation.

The accompanying notes are an integral part of these financial statements.



## Statement of assets and liabilities

12/31/19

<b>Assets</b>	
Investment in securities, at value, including \$5,064,707 of securities on loan (Note 1):	
Unaffiliated issuers (identified cost \$23,200,908)	\$27,861,001
Affiliated issuers (identified cost \$5,655,736) (Notes 1 and 5)	5,655,736
Dividends, interest and other receivables	73,561
Receivable for shares of the fund sold	2,149
Receivable for investments sold	171,031
<b>Total assets</b>	<b>33,763,478</b>
<b>Liabilities</b>	
Payable for investments purchased	274,409
Payable for shares of the fund repurchased	8,997
Payable for compensation of Manager (Note 2)	13,987
Payable for custodian fees (Note 2)	18,078
Payable for investor servicing fees (Note 2)	3,203
Payable for Trustee compensation and expenses (Note 2)	79,406
Payable for administrative services (Note 2)	268
Payable for distribution fees (Note 2)	3,133
Collateral on securities loaned, at value (Note 1)	5,262,550
Other accrued expenses	36,455
<b>Total liabilities</b>	<b>5,700,486</b>
<b>Net assets</b>	<b>\$28,062,992</b>
<b>Represented by</b>	
Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$24,041,722
Total distributable earnings (Note 1)	4,021,270
<b>Total — Representing net assets applicable to capital shares outstanding</b>	<b>\$28,062,992</b>
<b>Computation of net asset value Class IA</b>	
Net assets	\$13,123,174
Number of shares outstanding	798,701
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$16.43
<b>Computation of net asset value Class IB</b>	
Net assets	\$14,939,818
Number of shares outstanding	924,168
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$16.17

The accompanying notes are an integral part of these financial statements.

## Statement of operations

Year ended 12/31/19

### Investment income

Dividends (net of foreign tax of \$364)	\$70,775
Securities lending (net of expenses) (Notes 1 and 5)	21,880
Interest (including interest income of \$14,615 from investments in affiliated issuers) (Note 5)	14,615
<b>Total investment income</b>	<b>107,270</b>

### Expenses

Compensation of Manager (Note 2)	164,524
Investor servicing fees (Note 2)	18,583
Custodian fees (Note 2)	15,120
Trustee compensation and expenses (Note 2)	268
Distribution fees (Note 2)	35,706
Administrative services (Note 2)	769
Auditing and tax fees	33,002
Other	12,500
Fees waived and reimbursed by Manager (Note 2)	(8,253)
<b>Total expenses</b>	<b>272,219</b>
Expense reduction (Note 2)	(1,098)
<b>Net expenses</b>	<b>271,121</b>
<b>Net investment loss</b>	<b>(163,851)</b>

### Realized and unrealized gain (loss)

<b>Net realized gain (loss) on:</b>	
Securities from unaffiliated issuers (Notes 1 and 3)	(365,010)
Foreign currency transactions (Note 1)	(37)
<b>Total net realized loss</b>	<b>(365,047)</b>
<b>Change in net unrealized appreciation (depreciation) on:</b>	
Securities from unaffiliated issuers	8,537,729
<b>Total change in net unrealized appreciation</b>	<b>8,537,729</b>
<b>Net gain on investments</b>	<b>8,172,682</b>
<b>Net increase in net assets resulting from operations</b>	<b>\$8,008,831</b>

The accompanying notes are an integral part of these financial statements.

## Statement of changes in net assets

	Year ended 12/31/19	Year ended 12/31/18
<b>Increase (decrease) in net assets</b>		
<b>Operations:</b>		
Net investment income (loss)	\$(163,851)	\$16,045
Net realized gain (loss) on investments and foreign currency transactions	(365,047)	3,145,898
Change in net unrealized appreciation (depreciation) of investments and assets and liabilities in foreign currencies	8,537,729	(6,557,370)
<b>Net increase (decrease) in net assets resulting from operations</b>	<b>8,008,831</b>	<b>(3,395,427)</b>
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(5,067)	(25,559)
Class IB	—	—
Net realized short-term gain on investments		
Class IA	(183,870)	(952,423)
Class IB	(221,518)	(1,125,013)
From net realized long-term gain on investments		
Class IA	(1,230,624)	(862,293)
Class IB	(1,482,604)	(1,018,549)
Increase from capital share transactions (Note 4)	1,488,423	1,219,011
<b>Total increase (decrease) in net assets</b>	<b>6,373,571</b>	<b>(6,160,253)</b>
<b>Net assets:</b>		
Beginning of year	21,689,421	27,849,674
<b>End of year</b>	<b>\$28,062,992</b>	<b>\$21,689,421</b>

The accompanying notes are an integral part of these financial statements.

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

Period ended	INVESTMENT OPERATIONS:				LESS DISTRIBUTIONS:			RATIOS AND SUPPLEMENTAL DATA:					
	Net asset value, beginning of period	Net investment income (loss) <sup>a</sup>	Net realized and unrealized gain (loss) on investments	Total from investment operations	From net investment income	From net realized gain on investments	Total distributions	Net asset value, end of period	Total return at net asset value (%) <sup>b,c</sup>	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) <sup>c,d</sup>	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%)
<b>Class IA</b>													
12/31/19	\$13.58	(.07)	4.88	4.81	(.01)	(1.95)	(1.96)	\$16.43	37.73	\$13,123	.89 <sup>e</sup>	(.48) <sup>e</sup>	46
12/31/18	18.48	.03	(2.19)	(2.16)	(.04)	(2.70)	(2.74)	13.58	(13.64)	9,859	.89 <sup>e</sup>	.19 <sup>e</sup>	138
12/31/17	18.69	.08	1.36	1.44	(.13)	(1.52)	(1.65)	18.48	8.26	12,954	.90 <sup>e</sup>	.43 <sup>e</sup>	157
12/31/16	16.70	.13	2.41	2.54	(.17)	(.38)	(.55)	18.69	15.77	13,646	.90 <sup>e,f</sup>	.78 <sup>e,f</sup>	124
12/31/15	20.83	.20	(1.45)	(1.25)	(.13)	(2.75)	(2.88)	16.70	(7.37)	12,731	.89	1.09	21
<b>Class IB</b>													
12/31/19	\$13.41	(.11)	4.82	4.71	—	(1.95)	(1.95)	\$16.17	37.45	\$14,940	1.14 <sup>e</sup>	(.73) <sup>e</sup>	46
12/31/18	18.28	(.01)	(2.16)	(2.17)	—	(2.70)	(2.70)	13.41	(13.84)	11,830	1.14 <sup>e</sup>	(.06) <sup>e</sup>	138
12/31/17	18.52	.03	1.34	1.37	(.09)	(1.52)	(1.61)	18.28	7.93	14,896	1.15 <sup>e</sup>	.19 <sup>e</sup>	157
12/31/16	16.54	.09	2.40	2.49	(.13)	(.38)	(.51)	18.52	15.52	14,449	1.15 <sup>e,f</sup>	.53 <sup>e,f</sup>	124
12/31/15	20.65	.15	(1.44)	(1.29)	(.07)	(2.75)	(2.82)	16.54	(7.61)	13,626	1.14	.83	21

Before September 17, 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.

- <sup>a</sup> Per share net investment income (loss) has been determined on the basis of the weighted average number of shares outstanding during the period.
- <sup>b</sup> Total return assumes dividend reinvestment.
- <sup>c</sup> The charges and expenses at the insurance company separate account level are not reflected.
- <sup>d</sup> Includes amounts paid through expense offset and/or brokerage/service arrangements, if any (Note 2). Also excludes acquired fund fees and expenses, if any.
- <sup>e</sup> Reflects an involuntary contractual expense limitation in effect during the period. As a result of such limitation, the expenses of each class reflect a reduction of the following amounts (Note 2):

	Percentage of average net assets
12/31/19	0.03%
12/31/18	0.14
12/31/17	0.11
12/31/16	0.06

- <sup>f</sup> 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.

The accompanying notes are an integral part of these financial statements.

## Notes to financial statements 12/31/19

Within the following Notes to financial statements, references to “State Street” represent State Street Bank and Trust Company, references to “the SEC” represent the Securities and Exchange Commission, references to “Putnam Management” represent Putnam Investment Management, LLC, the fund’s manager, an indirect wholly-owned subsidiary of Putnam Investments, LLC and references to “OTC”, if any, represent over-the-counter. Unless otherwise noted, the “reporting period” represents the period from January 1, 2019 through December 31, 2019.

Putnam VT Small Cap Growth Fund (the fund) is a diversified series of Putnam Variable Trust (the Trust), a Massachusetts business trust registered under the Investment Company Act of 1940, as amended, as an open-end management investment company. The goal of the fund is to seek capital appreciation. The fund invests mainly in common stocks of small U.S. companies, with a focus on growth stocks. Growth stocks are issued by companies whose earnings are expected to grow faster than those of similar firms, and whose business growth and other characteristics may lead to an increase in stock price. Under normal circumstances, Putnam Management invests at least 80% of the fund’s net assets in companies of a size similar to those in the Russell 2000 Growth Index. This policy may be changed only after 60 days’ notice to shareholders. As of August 31, 2018, the index was composed of companies having market capitalizations of between approximately \$32.78 million and \$8.31 billion. Putnam Management 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.

The fund offers class IA and class IB shares of beneficial interest. Class IA shares are offered at net asset value and are not subject to a distribution fee. Class IB shares are offered at net asset value and pay an ongoing distribution fee, which is identified in Note 2.

In the normal course of business, the fund enters into contracts that may include agreements to indemnify another party under given circumstances. The fund’s maximum exposure under these arrangements is unknown as this would involve future claims that may be, but have not yet been, made against the fund. However, the fund’s management team expects the risk of material loss to be remote.

The fund has entered into contractual arrangements with an investment adviser, administrator, distributor, shareholder servicing agent and custodian, who each provide services to the fund. Unless expressly stated otherwise, shareholders are not parties to, or intended beneficiaries of these contractual arrangements, and these contractual arrangements are not intended to create any shareholder right to enforce them against the service providers or to seek any remedy under them against the service providers, either directly or on behalf of the fund.

Under the fund’s Amended and Restated Agreement and Declaration of Trust, any claims asserted against or on behalf of the Putnam Funds, including claims against Trustees and Officers, must be brought in state and federal courts located within the Commonwealth of Massachusetts.

### Note 1 — Significant accounting policies

The following is a summary of significant accounting policies consistently followed by the fund in the preparation of its financial statements. The preparation of financial statements is in conformity with accounting principles generally accepted in the United States of America and requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities in the financial statements and the reported amounts of increases and decreases in net assets from operations. Actual results could differ from those estimates. Subsequent events after the Statement of assets and liabilities date through the date that the financial statements were issued have been evaluated in the preparation of the financial statements.

Investment income, realized and unrealized gains and losses and expenses of the fund are borne pro-rata based on the relative net assets of each class to the total net assets of the fund, except that each class bears expenses unique to that class (including the distribution fees applicable to such classes). Each class votes as a class only with respect to its own distribution plan or other matters on which a class vote is required by law or determined by the Trustees. If the fund were liquidated, shares of each class would receive their pro-rata share of the net assets of the fund. In addition, the Trustees declare separate dividends on each class of shares.

**Security valuation** Portfolio securities and other investments are valued using policies and procedures adopted by the Board of Trustees. The Trustees have formed a Pricing Committee to oversee the implementation of these procedures

and have delegated responsibility for valuing the fund’s assets in accordance with these procedures to Putnam Management. Putnam Management has established an internal Valuation Committee that is responsible for making fair value determinations, evaluating the effectiveness of the pricing policies of the fund and reporting to the Pricing Committee.

Investments for which market quotations are readily available are valued at the last reported sales price on their principal exchange, or official closing price for certain markets, and are classified as Level 1 securities under Accounting Standards Codification 820 *Fair Value Measurements and Disclosures* (ASC 820). If no sales are reported, as in the case of some securities that are traded OTC, a security is valued at its last reported bid price and is generally categorized as a Level 2 security.

Investments in open-end investment companies (excluding exchange-traded funds), if any, which can be classified as Level 1 or Level 2 securities, are valued based on their net asset value. The net asset value of such investment companies equals the total value of their assets less their liabilities and divided by the number of their outstanding shares.

Many securities markets and exchanges outside the U.S. close prior to the scheduled close of the New York Stock Exchange and therefore the closing prices for securities in such markets or on such exchanges may not fully reflect events that occur after such close but before the scheduled close of the New York Stock Exchange. Accordingly, on certain days, the fund will fair value certain foreign equity securities taking into account multiple factors including movements in the U.S. securities markets, currency valuations and comparisons to the valuation of American Depository Receipts, exchange-traded funds and futures contracts. The foreign equity securities, which would generally be classified as Level 1 securities, will be transferred to Level 2 of the fair value hierarchy when they are valued at fair value. The number of days on which fair value prices will be used will depend on market activity and it is possible that fair value prices will be used by the fund to a significant extent. Securities quoted in foreign currencies, if any, are translated into U.S. dollars at the current exchange rate. Short-term securities with remaining maturities of 60 days or less are valued using an independent pricing service approved by the Trustees, and are classified as Level 2 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 in accordance with policies and procedures approved by the Trustees. Certain investments, including certain restricted and illiquid securities and derivatives, are also valued at fair value following procedures approved by the Trustees. These valuations consider such factors as significant market or specific security events such as interest rate or credit quality changes, various relationships with other securities, discount rates, U.S. Treasury, U.S. swap and credit yields, index levels, convexity exposures, recovery rates, sales and other multiples and resale restrictions. These securities are classified as Level 2 or as Level 3 depending on the priority of the significant inputs.

To assess the continuing appropriateness of fair valuations, the Valuation Committee reviews and affirms the reasonableness of such valuations on a regular basis after considering all relevant information that is reasonably available. Such valuations and procedures are reviewed periodically by the Trustees. The fair value of securities is generally determined as the amount that the fund could reasonably expect to realize from an orderly disposition of such securities over a reasonable period of time. By its nature, a fair value price is a good faith estimate of the value of a security in a current sale and does not reflect an actual market price, which may be different by a material amount.

**Security transactions and related investment income** Security transactions are recorded on the trade date (the date the order to buy or sell is executed). Gains or losses on securities sold are determined on the identified cost basis.

Interest income, net of any applicable withholding taxes, is recorded on the accrual basis. Dividend income, net of any applicable withholding taxes, is recognized on the ex-dividend date except that certain dividends from foreign securities, if any, are recognized as soon as the fund is informed of the ex-dividend date. Non-cash dividends, if any, are recorded at the fair value of the securities received. Dividends representing a return of capital or capital gains, if any, are reflected as a reduction of cost and/or as a realized gain.

**Foreign currency translation** The accounting records of the fund are maintained in U.S. dollars. The fair value of foreign securities, currency holdings, and other assets and liabilities is recorded in the books and records of the fund after

translation to U.S. dollars based on the exchange rates on that day. The cost of each security is determined using historical exchange rates. Income and withholding taxes are translated at prevailing exchange rates when earned or incurred. The fund does not isolate that portion of realized or unrealized gains or losses resulting from changes in the foreign exchange rate on investments from fluctuations arising from changes in the market prices of the securities. Such gains and losses are included with the net realized and unrealized gain or loss on investments. Net realized gains and losses on foreign currency transactions represent net realized exchange gains or losses on disposition of foreign currencies, currency gains and losses realized between the trade and settlement dates on securities transactions and the difference between the amount of investment income and foreign withholding taxes recorded on the fund's books and the U.S. dollar equivalent amounts actually received or paid. Net unrealized appreciation and depreciation of assets and liabilities in foreign currencies arise from changes in the value of assets and liabilities other than investments at the period end, resulting from changes in the exchange rate.

**Securities lending** The fund may lend securities, through its agent, to qualified borrowers in order to earn additional income. The loans are collateralized by cash in an amount at least equal to the fair value of the securities loaned. The fair value of securities loaned is determined daily and any additional required collateral is allocated to the fund on the next business day. The remaining maturities of the securities lending transactions are considered overnight and continuous. The risk of borrower default will be borne by the fund's agent; the fund will bear the risk of loss with respect to the investment of the cash collateral. Income from securities lending, net of expenses, is included in investment income on the Statement of operations. Cash collateral is invested in Putnam Cash Collateral Pool, LLC, a limited liability company managed by an affiliate of Putnam Management. Investments in Putnam Cash Collateral Pool, LLC are valued at its closing net asset value each business day. There are no management fees charged to Putnam Cash Collateral Pool, LLC. At the close of the reporting period, the fund received cash collateral of \$5,262,550 and the value of securities loaned amounted to \$5,163,269. Certain of these securities were sold prior to the close of the reporting period and are included in Receivable for investments sold on the Statement of assets and liabilities.

**Interfund lending** The fund, along with other Putnam funds, may participate in an interfund lending program pursuant to an exemptive order issued by the SEC. This program allows the fund to borrow from or lend to other Putnam funds that permit such transactions. Interfund lending transactions are subject to each fund's investment policies and borrowing and lending limits. Interest earned or paid on the interfund lending transaction will be based on the average of certain current market rates. During the reporting period, the fund did not utilize the program.

**Lines of credit** The fund participates, along with other Putnam funds, in a \$317.5 million unsecured committed line of credit and a \$235.5 million unsecured uncommitted line of credit, both provided by State Street. Borrowings may be made for temporary or emergency purposes, including the funding of shareholder redemption requests and trade settlements. Interest is charged to the fund based on the fund's borrowing at a rate equal to 1.25% plus the higher of (1) the Federal Funds rate and (2) the overnight LIBOR for the committed line of credit and the Federal Funds rate plus 1.30% for the uncommitted line of credit. A closing fee equal to 0.04% of the committed line of credit and 0.04% of the uncommitted line of credit has been paid by the participating funds. In addition, a commitment fee of 0.21% per annum on any unutilized portion of the committed line of credit is allocated to the participating funds based on their relative net assets and paid quarterly. During the reporting period, the fund had no borrowings against these arrangements.

**Federal taxes** It is the policy of the fund to distribute all of its taxable income within the prescribed time period and otherwise comply with the provisions of the Internal Revenue Code of 1986, as amended (the Code), applicable to regulated investment companies.

The fund is subject to the provisions of Accounting Standards Codification 740 *Income Taxes* (ASC 740). ASC 740 sets forth a minimum threshold for financial statement recognition of the benefit of a tax position taken or expected to be taken in a tax return. The fund did not have a liability to record for any unrecognized tax benefits in the accompanying financial statements. No provision has been made for federal taxes on income, capital gains or unrealized appreciation on securities held nor for excise tax on income and capital gains. Each of the fund's federal tax returns for the prior three fiscal years remains subject to examination by the Internal Revenue Service.

The fund may also be subject to taxes imposed by governments of countries in which it invests. Such taxes are generally based on either income or gains earned or repatriated. The fund accrues and applies such taxes to net investment income,

net realized gains and net unrealized gains as income and/or capital gains are earned. In some cases, the fund may be entitled to reclaim all or a portion of such taxes, and such reclaim amounts, if any, are reflected as an asset on the fund's books. In many cases, however, the fund may not receive such amounts for an extended period of time, depending on the country of investment.

Under the Regulated Investment Company Modernization Act of 2010, the fund will be permitted to carry forward capital losses incurred for an unlimited period and the carry forwards will retain their character as either short-term or long-term capital losses. At December 31, 2019, the fund had the following capital loss carryovers available, to the extent allowed by the Code, to offset future net capital gain, if any:

Loss carryover		
Short-term	Long-term	Total
\$1,055,629	\$605,150	\$1,660,779

**Distributions to shareholders** Distributions to shareholders from net investment income are recorded by the fund on the ex-dividend date. Distributions from capital gains, if any, are recorded on the ex-dividend date and paid at least annually. The amount and character of income and gains to be distributed are determined in accordance with income tax regulations, which may differ from generally accepted accounting principles. These differences include temporary and/or permanent differences from losses on wash sale transactions, from nontaxable dividends and from net operating loss. Reclassifications are made to the fund's capital accounts to reflect income and gains available for distribution (or available capital loss carryovers) under income tax regulations. At the close of the reporting period, the fund reclassified \$166,490 to decrease accumulated net investment loss and \$166,490 to increase accumulated net realized loss.

Tax cost of investments includes adjustments to net unrealized appreciation (depreciation) which may not necessarily be final tax cost basis adjustments, but closely approximate the tax basis unrealized gains and losses that may be realized and distributed to shareholders. The tax basis components of distributable earnings and the federal tax cost as of the close of the reporting period were as follows:

Unrealized appreciation	\$5,531,635
Unrealized depreciation	(873,886)
Net unrealized appreciation	4,657,749
Capital loss carryforward	(1,660,779)
Undistributed long-term gain	955,329
Undistributed short-term gain	68,974
Cost for federal income tax purposes	\$28,858,988

**Expenses of the Trust** Expenses directly charged or attributable to any fund will be paid from the assets of that fund. Generally, expenses of the Trust will be allocated among and charged to the assets of each fund on a basis that the Trustees deem fair and equitable, which may be based on the relative assets of each fund or the nature of the services performed and relative applicability to each fund.

**Beneficial interest** At the close of the reporting period, insurance companies or their separate accounts were record owners of all but a de minimis number of the shares of the fund. Approximately 56.4% of the fund is owned by accounts of one insurance company.

#### **Note 2 — Management fee, administrative services and other transactions**

The fund pays Putnam Management a management fee (based on the fund's average net assets and computed and paid monthly) at annual rates that may vary based on the average of the aggregate net assets of all open-end mutual 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). Such annual rates may vary as follows:

0.780%	of the first \$5 billion,
0.730%	of the next \$5 billion,
0.680%	of the next \$10 billion,
0.630%	of the next \$10 billion,
0.580%	of the next \$50 billion,
0.560%	of the next \$50 billion,
0.550%	of the next \$100 billion and
0.545%	of any excess thereafter.

For the reporting period, the management fee represented an effective rate (excluding the impact from any expense waivers in effect) of 0.619% of the fund's average net assets.

Putnam Management has contractually agreed, through April 30, 2021, to waive fees and/or reimburse the fund's expenses to the extent necessary to limit the cumulative expenses of the fund, exclusive of brokerage, interest, taxes, investment-related expenses, extraordinary expenses, acquired fund fees and expenses and payments under the fund's investor servicing contract, investment management contract and distribution plan, on a fiscal year-to-date basis to an annual rate of 0.20% of the fund's average net assets over such fiscal year-to-date period. During the reporting period, the fund's expenses were reduced by \$8,253 as a result of this limit.

Putnam Investments Limited (PIL), an affiliate of Putnam Management, is authorized by the Trustees to manage a separate portion of the assets of the fund as determined by Putnam Management from time to time. PIL did not manage any portion of the assets of the fund during the reporting period. If Putnam Management were to engage the services of PIL, Putnam Management would pay a quarterly sub-management fee to PIL for its services at an annual rate of 0.35% of the average net assets of the portion of the fund managed by PIL.

The fund reimburses Putnam Management an allocated amount for the compensation and related expenses of certain officers of the fund and their staff who provide administrative services to the fund. The aggregate amount of all such reimbursements is determined annually by the Trustees.

Custodial functions for the fund's assets are provided by State Street. Custody fees are based on the fund's asset level, the number of its security holdings and transaction volumes.

Putnam Investor Services, Inc., an affiliate of Putnam Management, provides investor servicing agent functions to the fund. Putnam Investor Services, Inc. was paid a monthly fee for investor servicing at an annual rate of 0.07% of the fund's average daily net assets. During the reporting period, the expenses for each class of shares related to investor servicing fees were as follows:

Class IA	\$8,587
Class IB	9,996
<b>Total</b>	<b>\$18,583</b>

The fund has entered into expense offset arrangements with Putnam Investor Services, Inc. and State Street whereby Putnam Investor Services, Inc.'s and State Street's fees are reduced by credits allowed on cash balances. The fund also reduced expenses through brokerage/service arrangements. For the reporting period, the fund's expenses were reduced by \$146 under the expense offset arrangements and by \$952 under the brokerage/service arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$18, as a quarterly retainer, has been allocated to the fund, and an additional fee for each Trustees meeting attended. Trustees also are reimbursed for expenses they incur relating to their services as Trustees.

The fund has adopted a Trustee Fee Deferral Plan (the Deferral Plan) which allows the Trustees to defer the receipt of all or a portion of Trustees fees payable on or

after July 1, 1995. The deferred fees remain invested in certain Putnam funds until distribution in accordance with the Deferral Plan.

The fund has adopted an unfunded noncontributory defined benefit pension plan (the Pension Plan) covering all Trustees of the fund who have served as a Trustee for at least five years and were first elected prior to 2004. Benefits under the Pension Plan are equal to 50% of the Trustee's average annual attendance and retainer fees for the three years ended December 31, 2005. The retirement benefit is payable during a Trustee's lifetime, beginning the year following retirement, for the number of years of service through December 31, 2006. Pension expense for the fund is included in Trustee compensation and expenses in the Statement of operations. Accrued pension liability is included in Payable for Trustee compensation and expenses in the Statement of assets and liabilities. The Trustees have terminated the Pension Plan with respect to any Trustee first elected after 2003.

The fund has adopted a distribution plan (the Plan) with respect to its class IB shares pursuant to Rule 12b-1 under the Investment Company Act of 1940. The purpose of the Plan is to compensate Putnam Retail Management Limited Partnership, an indirect wholly-owned subsidiary of Putnam Investments, LLC, for services provided and expenses incurred in distributing shares of the fund. The Plan provides for payment by the fund to Putnam Retail Management Limited Partnership at an annual rate of up to 0.35% of the average net assets attributable to the fund's class IB shares. The Trustees have approved payment by the fund at an annual rate of 0.25% of the average net assets attributable to the fund's class IB shares. The expenses related to distribution fees during the reporting period are included in Distribution fees in the Statement of operations.

### Note 3 — Purchases and sales of securities

During the reporting period, the cost of purchases and the proceeds from sales, excluding short-term investments, were as follows:

	<b>Cost of purchases</b>	<b>Proceeds from sales</b>
Investments in securities (Long-term)	\$11,883,778	\$12,893,727
U.S. government securities (Long-term)	—	—
<b>Total</b>	<b>\$11,883,778</b>	<b>\$12,893,727</b>

The fund may purchase or sell investments from or to other Putnam funds in the ordinary course of business, which can reduce the fund's transaction costs, at prices determined in accordance with SEC requirements and policies approved by the Trustees. During the reporting period, purchases or sales of long-term securities from or to other Putnam funds, if any, did not represent more than 5% of the fund's total cost of purchases and/or total proceeds from sales.

### Note 4 — Capital shares

At the close of the reporting period, there were an unlimited number of shares of beneficial interest authorized. Subscriptions and redemptions are presented at the omnibus level. Transactions in capital shares were as follows:

	<b>Class IA shares</b>				<b>Class IB shares</b>			
	<b>Year ended 12/31/19</b>		<b>Year ended 12/31/18</b>		<b>Year ended 12/31/19</b>		<b>Year ended 12/31/18</b>	
	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>	<b>Shares</b>	<b>Amount</b>
Shares sold	233,654	\$3,653,604	50,927	\$856,025	47,027	\$722,200	47,743	\$778,507
Shares issued in connection with reinvestment of distributions	100,181	1,419,561	117,815	1,840,275	121,984	1,704,122	138,652	2,143,562
	333,835	5,073,165	168,742	2,696,300	169,011	2,426,322	186,395	2,922,069
Shares repurchased	(261,125)	(4,073,147)	(143,823)	(2,402,734)	(126,984)	(1,937,917)	(118,956)	(1,996,624)
<b>Net increase</b>	<b>72,710</b>	<b>\$1,000,018</b>	<b>24,919</b>	<b>\$293,566</b>	<b>42,027</b>	<b>\$488,405</b>	<b>67,439</b>	<b>\$925,445</b>



## Note 5 — Affiliated transactions

Transactions during the reporting period with any company which is under common ownership or control were as follows:

Name of affiliate	Fair value as of 12/31/18	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 12/31/19
<b>Short-term investments</b>					
Putnam Cash Collateral Pool, LLC*	\$3,641,745	\$22,097,784	\$20,476,979	\$84,012	\$5,262,550
Putnam Short Term Investment Fund**	529,629	8,726,406	8,862,849	14,615	393,186
<b>Total Short-term investments</b>	<b>\$4,171,374</b>	<b>\$30,824,190</b>	<b>\$29,339,828</b>	<b>\$98,627</b>	<b>\$5,655,736</b>

\*No management fees are charged to Putnam Cash Collateral Pool, LLC (Note 1). Investment income shown is included in securities lending income on the Statement of operations. There were no realized or unrealized gains or losses during the period.

\*\*Management fees charged to Putnam Short Term Investment Fund have been waived by Putnam Management. There were no realized or unrealized gains or losses during the period.

## Note 6 — Market, credit and other risks

In the normal course of business, the fund trades financial instruments and enters into financial transactions where risk of potential loss exists due to changes in the market (market risk) or failure of the contracting party to the transaction to perform (credit risk). The fund may be exposed to additional credit risk that an institution or other entity with which the fund has unsettled or open transactions will default. Investments in foreign securities involve certain risks, including those related to economic instability, unfavorable political developments, and currency fluctuations.

## Note 7 — Summary of derivative activity

The volume of activity for the reporting period for any derivative type that was held during the period is listed below and was based on an average of the holdings at the end of each fiscal quarter:

Warrants (number of warrants)	3,000
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The following is a summary of the fair value of derivative instruments as of the close of the reporting period:

### Fair value of derivative instruments as of the close of the reporting period

Derivatives not accounted for as hedging instruments under ASC 815	Asset derivatives		Liability derivatives	
	Statement of assets and liabilities location	Fair value	Statement of assets and liabilities location	Fair value
Equity contracts	Investments	\$129	Payables	\$—
<b>Total</b>		<b>\$129</b>		<b>\$—</b>

There were no realized or unrealized gains or losses on derivative instruments for the reporting period.










## Federal tax information (Unaudited)

Pursuant to §852 of the Internal Revenue Code, as amended, the fund hereby designates \$1,090,125 as a capital gain dividend with respect to the taxable year ended December 31, 2019, or, if subsequently determined to be different, the net capital gain of such year.

The fund designated 14.33% of ordinary income distributions as qualifying for the dividends received deduction for corporations.



## About the Trustees

Name Year of birth Position held	Principal occupations during past five years	Other directorships	
<b>Independent Trustees</b>			
<b>Liaquat Ahamed</b> Born 1952 Trustee since 2012	Author; won Pulitzer Prize for <i>Lords of Finance: The Bankers Who Broke the World</i> .	Director of the Rohatyn Group, an emerging-market fund complex that manages money for institutions; a director and Treasurer of the Sun Valley Writers Conference, a literary not-for-profit organization; trustee of the New York Society Library; and a trustee of the Journal of Philosophy.	
<b>Ravi Akhoury</b> Born 1947 Trustee since 2009	Private investor	Director of English Helper, Inc., a private software company; Trustee of the Rubin Museum, serving on the Investment Committee; and previously a Director of RAGE Frameworks, Inc.	
<b>Barbara M. Baumann</b> Born 1955 Trustee since 2010	President of Cross Creek Energy Corporation, a strategic consultant to domestic energy firms and direct investor in energy projects.	Director of Buckeye Partners, L.P., a publicly traded master limited partnership focused on pipeline transport, storage and distribution of petroleum products; director of Devon Energy Corporation, an independent natural gas and oil exploration and production company; Chair of the Board of Trustees of Mount Holyoke College; member of the Finance Committee of the Children's Hospital of Colorado; Treasurer and Chair of the Finance Committee of the Board of The Denver Foundation; Senior Advisor for First Reserve, an energy private equity firm; previously a director of UNS Energy Corporation, a publicly held electric and gas utility in Arizona; and previously a director of SM Energy Corporation, a publicly held U.S. exploration and production company.	
<b>Katinka Domotorffy</b> Born 1975 Trustee since 2012	Voting member of the Investment Committees of the Anne Ray Foundation and Margaret A. Cargill Foundation, part of the Margaret A. Cargill Philanthropies.	Director of the Great Lakes Science Center and of College Now Greater Cleveland.	
<b>Catharine Bond Hill</b> Born 1954 Trustee since 2017	Managing Director of Ithaca S+R, a not-for-profit service that helps the academic community navigate economic and technological change. From 2006 to 2016, the 10th president of Vassar College.	Director of Yale-NUS College; Alumni Fellow to the Yale Corporation; and Trustee of Yale University.	
<b>Paul L. Joskow</b> Born 1947 Trustee since 1997	The Elizabeth and James Killian Professor of Economics, Emeritus at the Massachusetts Institute of Technology (MIT). From 2008 to 2017, the President of the Alfred P. Sloan Foundation, a philanthropic institution focused primarily on research and education on issues related to science, technology, and economic performance.	Trustee of Yale University; a Director of Exelon Corporation, an energy company focused on power services; and a Member Emeritus of the Board of Advisors of the Boston Symphony Orchestra.	
<b>Kenneth R. Leibler</b> Born 1949 Trustee since 2006 Vice Chair from 2016 to 2018, and Chair since 2018	Vice Chairman Emeritus of the Board of Trustees of Beth Israel Deaconess Hospital in Boston.	Director of Eversource Corporation, which operates New England's largest energy delivery system; previously the Chairman of the Boston Options Exchange, an electronic market place for the trading of listed derivatives securities; previously the Chairman and Chief Executive Officer of the Boston Stock Exchange; and previously the President and Chief Operating Officer of the American Stock Exchange.	
<b>Robert E. Patterson</b> Born 1945 Trustee since 1984	Until 2017, Co-Chairman of Cabot Properties, Inc., a private equity firm investing in commercial real estate, and Chairman or Co-Chairman of the Investment Committees for various Cabot Funds. Formerly, a Senior Advisor to these entities.	None	
<b>George Putnam, III</b> Born 1951 Trustee since 1984	Chairman of New Generation Research, Inc., a publisher of financial advisory and other research services, and President of New Generation Advisors, LLC, a registered investment adviser to private funds.	Director of The Boston Family Office, LLC, a registered investment advisor; a Trustee of the Gloucester Marine Genomics Institute; previously a Trustee of the Marine Biological Laboratory; and previously a Trustee of Epiphany School.	

Name Year of birth Position held	Principal occupations during past five years	Other directorships
<b>Manoj P. Singh</b> Born 1952 Trustee since 2017	Until 2015, Chief Operating Officer and Global Managing Director at Deloitte Touche Tohmatsu, Ltd., a global professional services organization, serving on the Deloitte U.S. Board of Directors and the boards of Deloitte member firms in China, Mexico, and Southeast Asia.	Director of Abt Associates, a global research firm working in the fields of health, social and environmental policy, and international development; Trustee of Carnegie Mellon University; Trustee of the Rubin Museum; Director of Pratham USA, an organization dedicated to children's education in India; member of the advisory board of Altimetrik, a business transformation and technology solutions firm; and Director of DXC Technology, a global IT services and consulting company.



### Interested Trustee

<b>Robert L. Reynolds*</b> Born 1952 Trustee since 2008 and President and Chief Executive Officer of Putnam Investments since 2008	President and Chief Executive Officer of Putnam Investments; President and Chief Executive Officer of Great-West Financial, a financial services company that provides retirement savings plans, life insurance, and annuity and executive benefits products; President and Chief Executive Officer of Great-West Lifeco U.S. Inc., a holding company that owns Putnam Investments and Great-West Financial; and member of Putnam Investments' and Great-West Financial's Board of Directors.	Director of West Virginia University Foundation; director of the Concord Museum; director of Dana-Farber Cancer Institute; Chairman of Massachusetts Competitive Partnership; director of Boston Chamber of Commerce; member of the Chief Executives Club of Boston; member of the National Innovation Initiative; member of the Massachusetts General Hospital President's Council; member of the Council on Competitiveness; and previously the President of the Commercial Club of Boston.
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\*Mr. Reynolds is an "interested person" (as defined in the Investment Company Act of 1940) of the fund and Putnam Investments. He is President and Chief Executive Officer of Putnam Investments, as well as the President of your fund and each of the other Putnam funds.

The address of each Trustee is 100 Federal Street, Boston, MA 02110.

As of December 31, 2019, there were 91 Putnam funds. All Trustees serve as Trustees of all Putnam funds.

Each Trustee serves for an indefinite term, until his or her resignation, retirement at age 75, removal, or death.

## Officers

In addition to Robert L. Reynolds, the other officers of the fund are shown below:

**Robert T. Burns** (Born 1961)  
Vice President and Chief Legal Officer  
Since 2011

General Counsel, Putnam Investments, Putnam Management, and Putnam Retail Management

**James F. Clark** (Born 1974)  
Vice President and Chief Compliance Officer  
Since 2016

Chief Compliance Officer and Chief Risk Officer, Putnam Investments and Chief Compliance Officer, Putnam Management

**Nancy E. Florek** (Born 1957)  
Vice President, Director of Proxy Voting and Corporate Governance, Assistant Clerk, and Assistant Treasurer  
Since 2000

**Michael J. Higgins** (Born 1976)  
Vice President, Treasurer, and Clerk  
Since 2010

**Jonathan S. Horwitz** (Born 1955)  
Executive Vice President, Principal Executive Officer, and Compliance Liaison  
Since 2004

**Richard T. Kircher** (Born 1962)  
Vice President and BSA Compliance Officer  
Since 2019

Assistant Director, Operational Compliance, Putnam Investments and Putnam Retail Management

**Susan G. Malloy** (Born 1957)  
Vice President and Assistant Treasurer  
Since 2007  
Head of Accounting and Middle Office Services, Putnam Investments and Putnam Management

**Denere P. Poulack** (Born 1968)  
Assistant Vice President, Assistant Clerk, and Assistant Treasurer  
Since 2004

**Janet C. Smith** (Born 1965)  
Vice President, Principal Financial Officer, Principal Accounting Officer, and Assistant Treasurer  
Since 2007  
Head of Fund Administration Services, Putnam Investments and Putnam Management

**Mark C. Trenchard** (Born 1962)  
Vice President  
Since 2002  
Director of Operational Compliance, Putnam Investments and Putnam Retail Management

The principal occupations of the officers for the past five years have been with the employers as shown above, although in some cases they have held different positions with such employers. The address of each officer is 100 Federal Street, Boston, MA 02110.

## Other important information

### Proxy voting

Putnam is committed to managing our mutual funds in the best interests of our shareholders. The Putnam funds' proxy voting guidelines and procedures, as well as information regarding how your fund voted proxies relating to portfolio securities during the 12-month period ended June 30, 2019, are available in the Individual Investors section of [putnam.com](http://putnam.com) and on the Securities and Exchange Commission's (SEC) website at [www.sec.gov](http://www.sec.gov). If you have questions about finding forms on the SEC's website, you may call the SEC at 1-800-SEC-0330. You may also obtain the Putnam funds' proxy voting guidelines and procedures at no charge by calling Putnam's Shareholder Services at 1-800-225-1581.

### Fund portfolio holdings

The fund will file a complete schedule of its portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-PORT within 60 days of the end of such fiscal quarter. Shareholders may obtain the fund's Form N-PORT from the SEC's website at [www.sec.gov](http://www.sec.gov).

Prior to its use of Form N-PORT, the fund filed its complete schedule of its portfolio holdings with the SEC on Form N-Q, which is available online at [www.sec.gov](http://www.sec.gov).

## Fund information

### Investment Manager

Putnam Investment Management, LLC  
100 Federal Street  
Boston, MA 02110

### Investment Sub-Advisor

Putnam Investments Limited  
16 St James's Street  
London, England SW1A 1ER

### Marketing Services

Putnam Retail Management  
100 Federal Street  
Boston, MA 02110

### Investor Servicing Agent

Putnam Investments  
Mailing address:  
P.O. Box 219697  
Kansas City, MO 64121-9697  
1-800-225-1581

### Custodian

State Street Bank and Trust Company

### Legal Counsel

Ropes & Gray LLP

### Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP

### Trustees

Kenneth R. Leibler, *Chair*  
Liaquat Ahamed  
Ravi Akhoury  
Barbara M. Baumann  
Katinka Domotorffy  
Catharine Bond Hill  
Paul L. Joskow  
Robert E. Patterson  
George Putnam, III  
Robert L. Reynolds  
Manoj P. Singh

The fund's Statement of Additional Information contains additional information about the fund's Trustees and is available without charge upon request by calling 1-800-225-1581.

