

Putnam Variable Trust Putnam VT Sustainable Future Fund

Annual report

12 | 31 | 18

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 8, 2019

Dear Shareholder:

Global financial markets encountered challenges in the final months of 2018. December was difficult for stock markets worldwide, and most major indexes finished the year with losses. Among the issues that contributed to the downturn were uncertainty about monetary policy, a slowing Chinese economy, and the U.S.–China trade dispute. Fixed-income markets were less volatile than stocks, and higher quality bonds benefited from a flight to safety amid the turmoil.

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: maintain a well-diversified portfolio, think about long-term goals, and speak 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 12/31/18)

Investment objective

Long-term capital appreciation

Net asset value December 31, 2018

Class IA: \$16.87

Class IB: \$16.81

Total return at net asset value

(as of 12/31/18)	Class IA shares*	Class IB shares*	Russell Midcap Growth Index	Russell 3000 Value — Russell Midcap Growth Linked Benchmark†
1 year	-4.64%	-4.94%	-4.75%	-7.95%
5 years	27.66	26.00	43.02	33.29
Annualized	5.00	4.73	7.42	5.91
10 years	249.59	240.50	308.80	189.08
Annualized	13.33	13.03	15.12	11.20
Life	296.04	280.93	385.47	253.21
Annualized	9.18	8.91	10.61	8.39

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

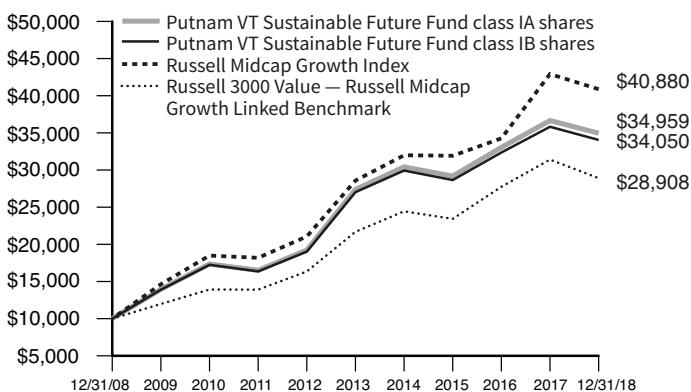
* Class inception date: May 1, 2003.

Before 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.

As of April 30, 2018, the Russell Midcap Growth Index replaced the Russell 3000 Value Index as the primary benchmark for this fund. In Putnam Investment Management, LLC's opinion, the securities tracked by the Russell Midcap Growth Index more accurately reflect the types of securities that generally will be held by the fund.

† The Russell 3000 Value — Russell Midcap Growth Linked Benchmark represents performance of the Russell 3000 Value Index from the inception date of the fund, May 1, 2003, through April 29, 2018, and performance of the Russell Midcap Growth Index from April 30, 2018 and thereafter.

Cumulative total returns of a \$10,000 investment in class IA and class IB shares at net asset value — since 12/31/08



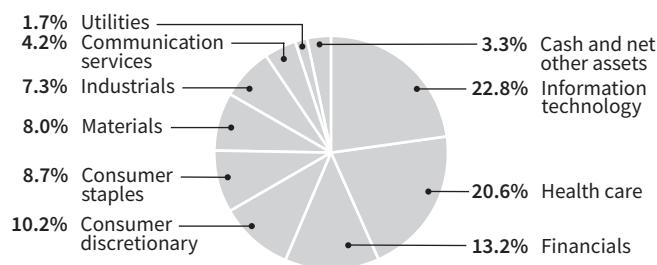
The Russell Midcap Growth Index is an unmanaged index of those companies in the Russell Midcap Index chosen for their growth orientation.

The Russell 3000 Value Index is an unmanaged index of those companies in the broad-market Russell 3000 Index chosen for their value 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.

Report from your fund's managers

How was the environment for investing in U.S. stocks during the 12-month reporting period ended December 31, 2018?

The reporting period began after the close of 2017, a year in which major stock indexes posted dozens of record closes with historically low levels of volatility. Most sectors advanced in 2017 despite a number of political and economic uncertainties. In 2018, however, a series of market ups and downs began to challenge investor confidence. Investors were less willing to shrug off risks, which included slightly less robust growth in Europe, a slowing economy in China, and an escalating U.S.–China trade conflict. The final months of 2018 brought heightened volatility and annual losses for many major indexes.

How did Putnam VT Sustainable Future Fund perform in this environment?

For the 12-month period, the fund's IA shares posted a decline of -4.64%, performing slightly better than the fund's primary benchmark, the Russell Midcap Growth Index, which posted a loss of -4.75%.

What were some holdings that helped fund performance?

A top contributor to performance for the period was our investment in McCormick & Company, a producer of spices and sauces across a range of brand names. The stock performed well for several reasons, including growing demand from consumers worldwide for a wider range of seasonings for food preparation. Also, a recent acquisition expanded its product line and helped the company deliver record financial results. From a sustainability perspective, McCormick has a long history of commitment to supporting farming communities as well as its own workforce development.

Our investment in Everbridge was also beneficial. This company offers services to help businesses with critical event management. For example, it provides incident response technology, preparedness training, and alert systems for communicating during emergencies in real time with employees and community residents.

Could you discuss some stocks or strategies that detracted from the fund's performance?

A top detractor was DXC Technology, an information technology company. Formerly known as CSC, the company merged with Hewlett Packard's services business in March 2017 to create DXC. The stock struggled during the period as investors became concerned that the company, which focused on streamlining operations and cutting costs, was not offering strong growth potential.

Another disappointment was our investment in KION, a company that specializes in materials handling equipment. KION provides businesses such as retail warehouses with equipment that improves efficiency while also offering important energy and safety benefits. The stock, which was not part of the fund's benchmark, declined during the period due to cost escalation and supply chain issues in several key areas.

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

As always in the later stages of an economic cycle, we are assessing downside risks, particularly with more cyclical stocks and sectors. At the same time, we are alert to opportunities to add to high-quality holdings at favorable valuations when volatility provides opportunity

to do so. With our research-driven investment process, we always consider fundamentals, valuation, and sustainability analysis for the companies we examine. We continue to see evidence that sustainability issues are increasingly intertwined with fundamental issues and company valuation, regardless of the macroeconomic backdrop. Looking ahead, we believe that our range of investment opportunities will continue to expand as we are seeing many more companies, across multiple sectors and stages of growth, increasing their focus on relevant, strategic sustainability performance.

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: 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, changing investment sentiment and market conditions, government actions, geopolitical events, or changes, and factors related to a specific issuer, industry, or sector. These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings. Growth stocks may be more susceptible to earnings disappointments, technological obsolescence, falling prices and profits, and the market may not favor growth-style investing. Investments in small and/or midsize companies increase the risk of greater price fluctuations. International investing involves currency, economic, and political risks. Emerging-market securities carry illiquidity and volatility risks. The fund's sustainable investment strategy limits the types and number of investment opportunities available to the fund and, as a result, the fund may underperform other funds that do not have a sustainable focus. The fund's environmental, social, and/or corporate governance (ESG) investment strategy may result in the fund investing in securities or industry sectors that underperform the market as a whole or underperform other funds screened for ESG standards. In evaluating an investment opportunity, we may make investment decisions based on information and data that is incomplete or inaccurate. In addition, an Impact Company's products or services may change over time. As a result of these possibilities, the fund may temporarily hold securities that are inconsistent with the fund's sustainable investment criteria. You can lose money by investing in the fund.

Your fund's manager



Portfolio Manager **Katherine Collins, CFA, MTS**, is Head of Sustainable Investing. She joined Putnam in 2017 and has been in the investment industry since 1990.

Stephanie Henderson is Assistant Portfolio Manager of the fund.

Your fund's managers also manage 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 7/1/18 to 12/31/18. 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
Total annual operating expenses for the fiscal year ended 12/31/17	0.78%	1.03%
Annualized expense ratio for the six-month period ended 12/31/18*	0.82%	1.07%

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.

*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 12/31/18		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 12/31/18	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$3.94	\$5.14	\$4.18	\$5.45
Ending value (after expenses)	\$908.50	\$907.20	\$1,021.07	\$1,019.81

*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 12/31/18. 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 Sustainable Future Fund

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT Sustainable Future Fund (formerly known as Putnam VT Multi-Cap Value Fund), (one of the funds constituting Putnam Variable Trust, referred to hereafter as the "Fund") as of December 31, 2018, the related statement of operations for the year ended December 31, 2018, the statement of changes in net assets for each of the two years in the period ended December 31, 2018, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2018 (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, 2018, 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, 2018 and the financial highlights for each of the five years in the period ended December 31, 2018 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, 2018 by correspondence with the custodian and transfer agent. We believe that our audits provide a reasonable basis for our opinion.

PricewaterhouseCoopers LLP
Boston, Massachusetts
February 8, 2019

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 12/31/18

COMMON STOCKS (96.8%)*	Shares	Value
Banks (5.5%)		
Bank of America Corp.	3,010	\$74,166
First Republic Bank	9,430	819,467
Webster Financial Corp.	14,530	716,184
		1,609,817
Beverages (1.3%)		
Keurig Dr Pepper, Inc.	14,240	365,114
		365,114
Biotechnology (2.4%)		
Bluebird Bio, Inc. †	960	95,232
Clovis Oncology, Inc. † [§]	3,200	57,472
Galapagos NV ADR (Belgium) † [§]	1,770	162,380
Vertex Pharmaceuticals, Inc. †	2,250	372,848
		687,932
Building products (0.4%)		
Owens Corning	2,767	121,693
		121,693
Capital markets (4.8%)		
BlackRock, Inc.	1,646	646,582
E*Trade Financial Corp.	2,890	126,813
MSCI, Inc.	3,440	507,159
Raymond James Financial, Inc.	1,730	128,729
		1,409,283
Chemicals (6.4%)		
Chr Hansen Holding A/S (Denmark)	6,250	553,019
Ecolab, Inc.	2,130	313,856
Novozymes A/S (Denmark)	22,130	987,895
		1,854,770
Commercial services and supplies (1.1%)		
Interface, Inc.	22,380	318,915
		318,915
Containers and packaging (1.6%)		
Ball Corp. [§]	10,160	467,157
		467,157
Diversified financial services (1.2%)		
Eurazeo SA (France)	4,930	349,080
		349,080
Electric utilities (1.7%)		
NextEra Energy, Inc.	2,930	509,293
		509,293
Electrical equipment (0.9%)		
Sunrun, Inc. †	25,150	273,884
		273,884
Food products (3.7%)		
McCormick & Co., Inc. (non-voting shares) [§]	7,770	1,081,895
		1,081,895
Health-care equipment and supplies (12.2%)		
Becton Dickinson and Co. (BD)	5,557	1,252,100
Danaher Corp.	10,480	1,080,698
Edwards Lifesciences Corp. †	3,250	497,803
Penumbra, Inc. † [§]	5,980	730,756
		3,561,357
Health-care providers and services (1.0%)		
HealthEquity, Inc. †	4,630	276,180
		276,180
Health-care technology (2.0%)		
Teladoc Health, Inc. † [§]	12,020	595,831
		595,831
Hotels, restaurants, and leisure (6.3%)		
Chipotle Mexican Grill, Inc. †	2,260	975,845
Vail Resorts, Inc.	4,060	855,929
		1,831,774
Insurance (1.7%)		
Prudential PLC (United Kingdom)	27,200	486,061
		486,061

COMMON STOCKS (96.8%)* cont.	Shares	Value
Interactive media and services (4.2%)		
Alphabet, Inc. Class A †	860	\$898,666
Eventbrite, Inc. Class A † [§]	11,380	316,478
		1,215,144
Internet and direct marketing retail (1.0%)		
Stitch Fix, Inc. Class A † [§]	17,240	294,632
		294,632
IT Services (5.1%)		
DXC Technology Co.	13,670	726,834
Mastercard, Inc. Class A	3,970	748,941
		1,475,775
Life sciences tools and services (0.9%)		
Bio-Rad Laboratories, Inc. Class A †	1,120	260,086
		260,086
Machinery (4.8%)		
Fortive Corp.	11,410	772,001
KION Group AG (Germany)	4,770	242,273
Xylem, Inc.	5,960	397,651
		1,411,925
Personal products (3.7%)		
Unilever PLC (United Kingdom)	20,695	1,083,734
		1,083,734
Pharmaceuticals (2.2%)		
Jazz Pharmaceuticals PLC †	4,080	505,757
Medicines Co. (The) † [§]	6,560	125,558
		631,315
Semiconductors and semiconductor equipment (4.0%)		
Applied Materials, Inc.	5,500	180,070
ASML Holding NV (Netherlands)	1,420	220,980
First Solar Inc. †	2,600	110,383
NXP Semiconductors NV	4,410	323,165
ON Semiconductor Corp. †	19,520	322,275
		1,156,873
Software (13.8%)		
Adobe, Inc. †	4,260	963,782
DocuSign, Inc. † [§]	9,870	395,590
Everbridge, Inc. † [§]	18,660	1,059,142
Salesforce.com, Inc. †	9,490	1,299,845
Talend SA ADR †	8,100	300,348
		4,018,707
Specialty retail (1.3%)		
TJX Cos., Inc. (The)	8,416	376,532
		376,532
Textiles, apparel, and luxury goods (1.6%)		
adidas AG (Germany)	2,280	476,485
		476,485
Total common stocks (cost \$28,135,201)		\$28,201,244

SHORT-TERM INVESTMENTS (20.0%)	Shares	Value
Putnam Cash Collateral Pool, LLC 2.58% ^d	4,806,245	\$4,806,245
Putnam Short Term Investment Fund 2.58% ^L	1,018,322	1,018,322
Total short-term investments (cost \$5,824,567)		\$5,824,567
Total investments (cost \$33,959,768)		\$34,025,811

Key to holding's abbreviations

ADR American Depository 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, 2018 through December 31, 2018 (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 \$29,143,548.

† This security is non-income-producing.

‡ 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.

§ 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.

¶ 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:

Investments in securities:	Valuation inputs		
	Level 1	Level 2	Level 3
Common stocks*:			
Communication services	\$1,215,144	\$—	\$—
Consumer discretionary	2,979,423	—	—
Consumer staples	2,530,743	—	—
Financials	3,854,241	—	—
Health care	6,012,701	—	—
Industrials	2,126,417	—	—
Information technology	6,651,355	—	—
Materials	2,321,927	—	—
Utilities	509,293	—	—
Total common stocks	28,201,244	—	—
Short-term investments	1,018,322	4,806,245	—
Totals by level	\$29,219,566	\$4,806,245	\$—

* 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

12/31/18

Assets	
Investment in securities, at value, including \$4,740,547 of securities on loan (Note 1):	
Unaffiliated issuers (identified cost \$28,135,201)	\$28,201,244
Affiliated issuers (identified cost \$5,824,567) (Notes 1 and 5)	5,824,567
Foreign currency (cost \$12) (Note 1)	12
Dividends, interest and other receivables	39,192
Foreign tax reclaim	3,300
Total assets	34,068,315
Liabilities	
Payable to custodian	2,951
Payable for shares of the fund repurchased	16,654
Payable for compensation of Manager (Note 2)	15,352
Payable for custodian fees (Note 2)	6,889
Payable for investor servicing fees (Note 2)	3,203
Payable for Trustee compensation and expenses (Note 2)	36,891
Payable for administrative services (Note 2)	320
Payable for distribution fees (Note 2)	1,580
Collateral on securities loaned, at value (Note 1)	4,806,245
Other accrued expenses	34,682
Total liabilities	4,924,767
Net assets	\$29,143,548
Represented by	
Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$21,285,117
Total distributable earnings (Note 1)	7,858,431
Total — Representing net assets applicable to capital shares outstanding	\$29,143,548
Computation of net asset value Class IA	
Net assets	\$21,908,353
Number of shares outstanding	1,298,801
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$16.87
Computation of net asset value Class IB	
Net assets	\$7,235,195
Number of shares outstanding	430,379
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$16.81

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

Statement of operations

Year ended 12/31/18

Investment income

Dividends (net of foreign tax of \$5,356)	\$543,209
Interest (including interest income of \$33,519 from investments in affiliated issuers) (Note 5)	33,878
Securities lending (net of expenses) (Notes 1 and 5)	16,688
Total investment income	593,775

Expenses

Compensation of Manager (Note 2)	194,003
Investor servicing fees (Note 2)	24,616
Custodian fees (Note 2)	13,294
Trustee compensation and expenses (Note 2)	1,652
Distribution fees (Note 2)	21,679
Administrative services (Note 2)	972
Auditing and tax fees	28,422
Legal	37,096
Other	15,625
Fees waived and reimbursed by Manager (Note 2)	(26,289)
Total expenses	311,070
Expense reduction (Note 2)	(2,117)
Net expenses	308,953
Net investment income	284,822

Realized and unrealized gain (loss)

Net realized gain (loss) on:	
Securities from unaffiliated issuers (Notes 1 and 3)	7,973,517
Foreign currency transactions (Note 1)	(4,871)
Futures contracts (Note 1)	(94,841)
Total net realized gain	7,873,805
Change in net unrealized depreciation on:	
Securities from unaffiliated issuers	(9,419,948)
Assets and liabilities in foreign currencies	(72)
Futures contracts	(4,388)
Total change in net unrealized depreciation	(9,424,408)
Net loss on investments	(1,550,603)
Net decrease in net assets resulting from operations	\$(1,265,781)

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

Statement of changes in net assets

	Year ended 12/31/18	Year ended 12/31/17
Decrease in net assets		
Operations:		
Net investment income	\$284,822	\$283,615
Net realized gain on investments and foreign currency transactions	7,873,805	965,236
Net unrealized appreciation (depreciation) of investments and assets and liabilities in foreign currencies	(9,424,408)	2,707,944
Net increase (decrease) in net assets resulting from operations	(1,265,781)	3,956,795
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(229,692)	(299,953)
Class IB	(50,406)	(80,525)
From net realized long-term gain on investments		
Class IA	(886,986)	(1,295,544)
Class IB	(289,243)	(450,939)
Decrease from capital share transactions (Note 4)	(5,460,732)	(3,240,864)
Total decrease in net assets	(8,182,840)	(1,411,030)
Net assets:		
Beginning of year	37,326,388	38,737,418
End of year (Note 1)	\$29,143,548	\$37,326,388

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) ^a	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 (%) ^{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 (%)
Class IA													
12/31/18	\$18.48	.16 ^f	(1.00)	(.84)	(.16)	(.61)	(.77)	\$16.87	(4.64)	\$21,908	.82 ^e	.87 ^{e,f}	99
12/31/17	17.62	.14	1.72	1.86	(.19)	(.81)	(1.00)	18.48	10.94	27,976	.78	.81	61
12/31/16	17.85	.22	1.90	2.12	(.17)	(2.18)	(2.35)	17.62	13.23	28,724	.79 ^e	1.32 ^e	84
12/31/15	21.87	.25	(.84)	(.59)	(.23)	(3.20)	(3.43)	17.85	(4.06)	25,790	.77	1.30	82
12/31/14	19.87	.24	1.95	2.19	(.19)	—	(.19)	21.87	11.08	29,925	.79	1.15	78
Class IB													
12/31/18	\$18.42	.12 ^f	(1.01)	(.89)	(.11)	(.61)	(.72)	\$16.81	(4.94)	\$7,235	1.07 ^e	.62 ^{e,f}	99
12/31/17	17.56	.10	1.72	1.82	(.15)	(.81)	(.96)	18.42	10.71	9,350	1.03	.55	61
12/31/16	17.79	.18	1.89	2.07	(.12)	(2.18)	(2.30)	17.56	12.93	10,013	1.04 ^e	1.07 ^e	84
12/31/15	21.79	.20	(.83)	(.63)	(.17)	(3.20)	(3.37)	17.79	(4.27)	9,294	1.02	1.03	82
12/31/14	19.81	.18	1.94	2.12	(.14)	—	(.14)	21.79	10.76	11,892	1.04	.90	78

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 and brokerage/service arrangements, if any (Note 2). Also excludes acquired fund fees and expenses, if any.
- ^e 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 the following amounts as a percentage of average net assets (Note 2).

	Percentage of average net assets
12/31/18	0.07%
12/31/16	<0.01

- ^f Reflects a dividend received by the fund from a single issuer which amounted to the following amounts:

	Per share	Percentage of average net assets
Class IA	\$0.10	0.51%
Class IB	0.09	0.51

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

Notes to financial statements 12/31/18

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, 2018 through December 31, 2018.

Putnam VT Sustainable Future 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. Prior to April 30, 2018, the fund was known as Putnam VT Multi-Cap Value Fund. The goal of the fund is to seek long-term capital appreciation. The fund invests mainly in common stocks of U.S. companies of any size, with a focus on companies whose products and services that Putnam Management believes provide solutions that directly contribute to sustainable social, environmental and economic development (Impact Companies). Stocks of this type of company are typically, but not always, considered to be growth stocks. Growth stocks are stocks of 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. Putnam Management considers, among other factors, a company’s impact on sustainable environmental, social and economic development (as described below), valuation, financial strength, growth potential, competitive position in its industry, projected future earnings, cash flows and dividends when deciding whether to buy or sell investments. We may also invest in non-U.S. companies. Putnam Management believes that companies whose products and services produce positive environmental, social and economic development impact also often demonstrate strong financial growth and profitability. Accordingly, in selecting investments, Putnam Management considers the extent to which a company’s products or services may provide solutions that directly impact sustainable environmental, social and economic development. Environmental impact may include, for example, reduction of carbon emissions and improved water quality. Social impact may include, for example, fair labor practices and responsible supply chain management. Economic development may include, for example, stakeholder analysis and shared value approaches to business practices. It is likely that the metrics and measurements that we use to evaluate environmental, social and economic development impacts will continue to evolve over time.

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.

All premiums/discounts are amortized/accreted on a yield-to-maturity basis.

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.

Futures contracts The fund uses futures contracts to equitize cash.

The potential risk to the fund is that the change in value of futures contracts may not correspond to the change in value of the hedged instruments. In addition, losses may arise from changes in the value of the underlying instruments, if there is an illiquid secondary market for the contracts, if interest or exchange rates move unexpectedly or if the counterparty to the contract is unable to perform. With futures, there is minimal counterparty credit risk to the fund since futures are exchange traded and the exchange's clearinghouse, as counterparty to all exchange traded futures, guarantees the futures against default. Risks may exceed amounts recognized on the Statement of assets and liabilities. When the contract is closed, the fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

Futures contracts are valued at the quoted daily settlement prices established by the exchange on which they trade. The fund and the broker agree to exchange an amount of cash equal to the daily fluctuation in the value of the futures contract. Such receipts or payments are known as "variation margin."

Futures contracts outstanding at period end, if any, are listed after the fund's portfolio.

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 \$4,806,245 and the value of securities loaned amounted to \$4,740,547.

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.

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. 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 \$7,727 to decrease undistributed net investment income and \$7,727 to increase accumulated net realized gain.

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	\$2,594,744
Unrealized depreciation	(2,551,557)
Net unrealized appreciation	43,187
Undistributed ordinary income	239,203
Undistributed short-term gain	583,502
Undistributed long-term gain	6,992,612
Cost for federal income tax purposes	\$33,982,624

For the fiscal year ended December 31, 2017, the fund had undistributed net investment income of \$242,206.

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 43.8% 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:

0.710%	of the first \$5 billion,
0.660%	of the next \$5 billion,
0.610%	of the next \$10 billion,
0.560%	of the next \$10 billion,
0.510%	of the next \$50 billion,
0.490%	of the next \$50 billion,
0.480%	of the next \$100 billion and
0.475%	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 0.551% of the fund’s average net assets.

Putnam Management has contractually agreed, through April 30, 2020, 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 \$26,289 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	\$18,545
Class IB	6,071
Total	\$24,616

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:

	Class IA shares				Class IB shares			
	Year ended 12/31/18		Year ended 12/31/17		Year ended 12/31/18		Year ended 12/31/17	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	95,282	\$1,766,657	75,847	\$1,357,647	18,162	\$334,309	33,801	\$592,255
Shares issued in connection with reinvestment of distributions	64,399	1,116,678	92,225	1,595,497	19,610	339,649	30,774	531,464
	159,681	2,883,335	168,072	2,953,144	37,772	673,958	64,575	1,123,719
Shares repurchased	(374,498)	(6,889,196)	(285,019)	(5,060,060)	(115,123)	(2,128,829)	(127,225)	(2,257,667)
Net decrease	(214,817)	\$(4,005,861)	(116,947)	\$(2,106,916)	(77,351)	\$(1,454,871)	(62,650)	\$(1,133,948)

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 \$45 under the expense offset arrangements and by \$2,072 under the brokerage/service arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$26, 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:

	Cost of purchases	Proceeds from sales
Investments in securities (Long-term)	\$32,803,213	\$38,668,084
U.S. government securities (Long-term)	—	—
Total	\$32,803,213	\$38,668,084

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 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 12/31/17	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 12/31/18
Short-term investments					
Putnam Cash Collateral Pool, LLC*	\$1,270,150	\$28,245,890	\$24,709,795	\$48,605	\$4,806,245
Putnam Short Term Investment Fund**	1,405,081	11,518,146	11,904,905	33,519	1,018,322
Total Short-term investments	\$2,675,231	\$39,764,036	\$36,614,700	\$82,124	\$5,824,567

*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:

Futures contracts (number of contracts)	3
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As of the close of the reporting period, the fund did not hold any derivative instruments.

The following is a summary of realized and change in unrealized gains or losses of derivative instruments in the Statement of operations for the reporting period (Note 1):

Amount of realized gain or (loss) on derivatives recognized in net gain or (loss) on investments

Derivatives not accounted for as hedging instruments under ASC 815	Futures	Total
Equity contracts	\$(94,841)	\$(94,841)
Total	\$(94,841)	\$(94,841)

Change in unrealized appreciation or (depreciation) on derivatives recognized in net gain or (loss) on investments







Derivatives not accounted for as hedging instruments under ASC 815	Futures	Total
Equity contracts	\$(4,388)	\$(4,388)
Total	\$(4,388)	\$(4,388)

Federal tax information (Unaudited)

Pursuant to §852 of the Internal Revenue Code, as amended, the fund hereby designates \$7,714,944 as a capital gain dividend with respect to the taxable year ended December 31, 2018, or, if subsequently determined to be different, the net capital gain of such year.

The fund designated 100.00% 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	
Independent Trustees			
Liaquat Ahmed Born 1952 Trustee since 2012	Pulitzer Prize-winning author of <i>Lords of Finance: The Bankers Who Broke the World</i> , whose articles on economics have appeared in such publications as the <i>New York Times</i> , <i>Foreign Affairs</i> , and the <i>Financial Times</i> . Trustee of the Brookings Institution.	The Rohatyn Group, an emerging-market fund complex that manages money for institutions	
Ravi Akhoury Born 1947 Trustee since 2009	Trustee of the Rubin Museum. From 1992 to 2007, was Chairman and CEO of MacKay Shields, a multi-product investment management firm.	English Helper, Inc., a private software company	
Barbara M. Baumann Born 1955 Trustee since 2010	President and Owner of Cross Creek Energy Corporation, a strategic consultant to domestic energy firms and direct investor in energy projects. Current Treasurer of the Board and Chair of the Finance Committee, The Denver Foundation. Member of the Finance Committee, the Children's Hospital of Colorado.	Buckeye Partners, L.P., a publicly traded master limited partnership focused on pipeline transport, storage, and distribution of petroleum products; Devon Energy Corporation, a leading independent natural gas and oil exploration and production company	
Katinka Domotorffy Born 1975 Trustee since 2012	Voting member of the Investment Committees of the Anne Ray Charitable Trust and Margaret A. Cargill Foundation, part of the Margaret A. Cargill Philanthropies. Until 2011, Partner, Chief Investment Officer, and Global Head of Quantitative Investment Strategies at Goldman Sachs Asset Management.	Great Lakes Science Center; College Now Greater Cleveland	
Catharine Bond Hill 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, served as the 10th President of Vassar College. Prior to 2006, was Provost of Williams College.	Director of Yale-NUS College; Alumni Fellow to the Yale Corporation	
Dr. Paul L. Joskow Born 1947 Trustee since 1997	Elizabeth and James Killian Professor of Economics, Emeritus at the Massachusetts Institute of Technology (MIT). Head of the MIT Department of Economics from 1994 to 1998 and Director of the MIT Center for Energy and Environmental Policy Research from 1999 through 2007. From 2008 to 2017, President of the Alfred P. Sloan Foundation, a philanthropic institution focused primarily on research and education issues related to science, technology, and economic performance.	Yale University; Exelon Corporation, an energy company focused on power services; Boston Symphony Orchestra; Prior to April 2013, served as Director of TransCanada Corporation and TransCanada Pipelines Ltd., energy companies focused on natural gas transmission, oil pipelines and power services	
Kenneth R. Leibler Born 1949 Trustee since 2006 Vice Chair from 2016 to 2018, and Chair since 2018	Founder and former Chairman of Boston Options Exchange, an electronic marketplace for the trading of derivative securities. Vice Chair Emeritus of the Board of Trustees of Beth Israel Deaconess Hospital in Boston, Massachusetts, and former Director of Beth Israel Deaconess Care Organization. Until November 2010, Director of Ruder Finn Group, a global communications and advertising firm.	Eversource Corporation, which operates New England's largest energy delivery system	
Robert E. Patterson 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. Past Chairman and Trustee of the Joslin Diabetes Center.	None	
George Putnam, III Born 1951 Trustee since 1984	Chairman of New Generation Research, Inc., a publisher of financial advisory and other research services. Founder and President of New Generation Advisors, LLC, a registered investment advisor to private funds. Director of The Boston Family Office, LLC, a registered investment advisor.	None	

Name Year of birth Position held	Principal occupations during past five years	Other directorships
Manoj P. Singh Born 1952 Trustee since 2017	Until 2015, Chief Operating Officer and Global Managing Director at Deloitte Touche Tohmatsu, Ltd., a global professional services organization. Served 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 focused on health, social and environmental policy, and international development. Trustee of Carnegie Mellon University. Trustee of Rubin Museum of Art. 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. Director of DXC Technology, a global IT services and consulting company



Interested Trustee		
Robert L. Reynolds* Born 1952 Trustee since 2008 and President of the Putnam Funds since 2009	President and Chief Executive Officer of Putnam Investments since 2008 and, since 2014, 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, and of Great-West Lifeco U.S. Inc., a holding company that owns Putnam Investments and Great-West Financial. Prior to joining Putnam Investments, served as Vice Chairman and Chief Operating Officer of Fidelity Investments from 2000 to 2007.	None



*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, 2018, there were 99 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:

Jonathan S. Horwitz (Born 1955)

Executive Vice President, Principal Executive Officer, and Compliance Liaison
Since 2004

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, Putnam Investments and Putnam Management

Michael J. Higgins (Born 1976)

Vice President, Treasurer, and Clerk
Since 2010

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

Susan G. Malloy (Born 1957)

Vice President and Assistant Treasurer
Since 2007
Head of Accounting, Middle Office, & Control Services, Putnam Investments and Putnam Management

Mark C. Trenchard (Born 1962)

Vice President and BSA Compliance Officer
Since 2002
Director of Operational Compliance, Putnam Investments and Putnam Retail Management

Nancy E. Florek (Born 1957)

Vice President, Director of Proxy Voting and Corporate Governance, Assistant Clerk, and Assistant Treasurer
Since 2000

Denere P. Poulack (Born 1968)

Assistant Vice President, Assistant Clerk, and Assistant Treasurer
Since 2004

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, 2018, are available in the Individual Investors section of putnam.com and on the Securities and Exchange Commission's (SEC) website, 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

Each Putnam VT 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-Q. Shareholders may obtain the fund's Form N-Q on the SEC's website at 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.

