

Putnam Variable Trust

Putnam VT Research 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 7, 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: \$29.95

Class IB: \$29.81

Total return at net asset value

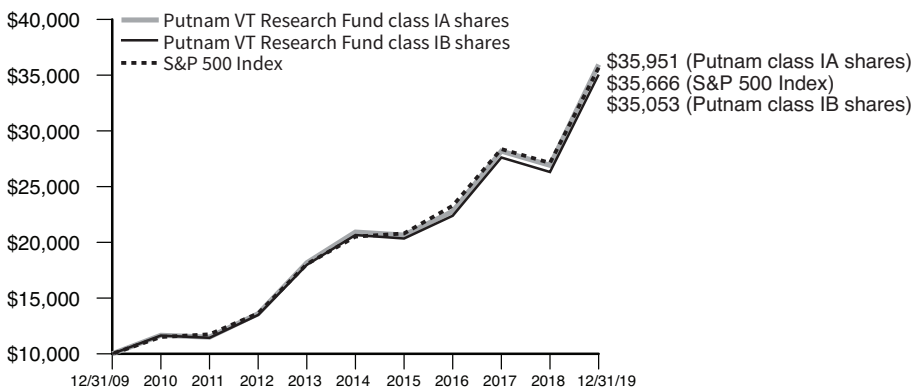
(as of 12/31/19)*	Class IA shares†	Class IB shares†	S&P 500 Index
1 year	33.59%	33.24%	31.49%
5 years	71.83	69.72	73.86
Annualized	11.44	11.16	11.70
10 years	259.51	250.53	256.66
Annualized	13.65	13.36	13.56
Life	350.49	328.22	376.00
Annualized	7.34	7.08	7.62

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

*Recent performance may have benefited from one or more legal settlements.

†Class inception date: September 30, 1998.

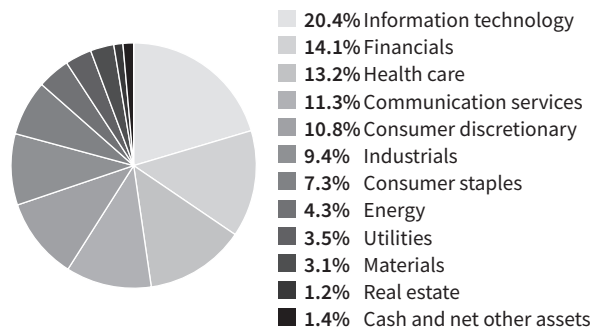
Cumulative total returns of a \$10,000 investment in class IA and class IB shares at net asset value — since 12/31/09



The S&P 500 Index is an unmanaged index of common stock performance.

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

Can you describe the investing environment for the 12-month reporting period ended December 31, 2019?

U.S. stocks continued to rally and reach new highs, despite a number of geopolitical and macroeconomic risks during the period. The S&P 500 Index, a broad measure of stocks, delivered its best annual return since 2013. Markets experienced bouts of volatility, but performance recovered from headwinds, including a global economic slowdown, the ongoing U.S.–China trade dispute, and stalled Brexit negotiations.

At the start of the period, the U.S. Federal Reserve's [the Fed] decision to put interest-rate hikes on hold boosted investor appetite for stocks. Positive corporate earnings also helped U.S. stocks advance through April. The month of May turned tumultuous for stocks due to investor concerns over the escalating global trade conflict. Volatility continued through June and into July when the Fed cut short-term interest rates for the first time since 2008. Stocks were pressured again in August, with trade conflict headlines sending the Dow Jones Industrial Average to its biggest intraday drop of the year.

In the final months of the period, the Fed lowered short-term interest rates two more times. Following its October interest-rate cut, the S&P 500 Index closed at a record high, and expectations of further monetary easing helped buoy stocks. In December, the Fed held interest rates steady and noted a favorable economic outlook for 2020.

How did Putnam VT Research Fund perform against this backdrop?

For the 12-month period, the fund's class IA shares delivered a return of 33.59%, outperforming the benchmark S&P 500 Index, which returned 31.49%.

What were some holdings that helped fund performance?

During the period, we sold our position in Qualcomm, the troubled U.S.-based semiconductor manufacturer. This decision proved to be the top contributor to fund performance relative to the fund's benchmark. Our optimism for Qualcomm, one of world's largest chipmakers for mobile devices, cooled amid rising global trade tensions. As a result, demand among Qualcomm's Chinese customer base declined over the period.

NXP Semiconductors, a global semiconductor manufacturer, also contributed to results. During the period, NXP acquired a next-generation WiFi connectivity product from U.S.-based semiconductor Marvell. The acquisition, which closed on December 2019, will add a scalable, complete NXP connectivity product suite to customers in the industrial, IT, automotive, and communication markets.

Another highlight for the period was Chipotle Mexican Grill, the American chain of quick-serve restaurants. New management and a customer loyalty program contributed to a turnaround to corporate profitability during the period.

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

DXC Technology, an enterprise IT provider, was the fund's top detractor. We were initially encouraged by DXC's focus on margin expansion and share buyback program. However, revenue growth

failed to materialize, and operational challenges reduced investor interest over the period. We sold our position in DXC before period-end.

Another detractor was an out-of-benchmark position in oil and gas conglomerate BP, based in London, England, which faced headwinds over the period. An underweight position in technology giant Apple, which performed better than expected, also dampened overall results.

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

At the end of 2019, the world's largest economies, including those in China, Europe, and Japan, introduced stimulus packages to help boost their struggling economies. When coupled with a reduction in global trade tensions, we believe economic activity could accelerate in 2020.

While the U.S.–China trade conflict is likely to continue, in our view, we are encouraged by the U.S.–China "phase one" trade deal announced in December 2019. We will continue to monitor the portfolio in the context of macroeconomic and geopolitical risks. Our active stock selection process focuses on stock-specific risk, rather than solely on macroeconomic trends. Given this strategy, the fund has the flexibility to invest across sectors, regions, and investment styles. We expect to find pockets of opportunity in the global technology, semiconductor, e-commerce, and consumer discretionary sectors, but will continue to evaluate our holdings based on a company's individual merits.

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: Growth stocks may be more susceptible to earnings disappointments, and value stocks may fail to rebound. 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. You can lose money by investing in the fund.

Your fund's managers



Portfolio Manager **Kathryn B. Lakin** is Director of Equity Research. She joined Putnam in 2012 and has been in the investment industry since 2008.

Jacquelyne J. Cavanaugh; William C. Rives, CFA; Andrew N. O'Brien, CFA; and Walter D. Scully, CPA, are also Portfolio Managers 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. 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
Total annual operating expenses for the fiscal year ended 12/31/18	0.81%	1.06%
Annualized expense ratio for the six-month period ended 12/31/19*	0.80%	1.05%

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 12/31/19		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*†	\$4.26	\$5.59	\$4.08	\$5.35
Ending value (after expenses)	\$1,113.00	\$1,111.90	\$1,021.17	\$1,019.91

*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 Research Fund

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT Research 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 7, 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

COMMON STOCKS (98.4%)*	Shares	Value
Aerospace and defense (2.4%)		
Boeing Co. (The)	583	\$189,918
General Dynamics Corp.	951	167,709
Northrop Grumman Corp.	607	208,790
Raytheon Co.	1,032	226,772
TransDigm Group, Inc.	215	120,400
United Technologies Corp.	1,521	227,785
		1,141,374
Airlines (0.3%)		
Air Canada (Canada) †	3,650	136,353
		136,353
Automobiles (1.1%)		
General Motors Co.	14,297	523,270
		523,270
Banks (6.2%)		
Bank of America Corp.	25,742	906,633
Citigroup, Inc.	10,546	842,520
JPMorgan Chase & Co.	4,084	569,310
PNC Financial Services Group, Inc. (The)	2,674	426,851
Wells Fargo & Co.	3,824	205,731
		2,951,045
Beverages (2.1%)		
Coca-Cola Co. (The)	14,775	817,796
PepsiCo, Inc.	1,292	176,578
		994,374
Biotechnology (2.6%)		
AbbVie, Inc.	4,913	434,997
Amgen, Inc.	1,354	326,409
Biogen, Inc. †	395	117,208
Gilead Sciences, Inc.	1,459	94,806
Regeneron Pharmaceuticals, Inc. †	273	102,506
Vertex Pharmaceuticals, Inc. †	720	157,644
		1,233,570
Building products (1.0%)		
Fortune Brands Home & Security, Inc.	4,643	303,374
Johnson Controls International PLC	4,109	167,277
		470,651
Capital markets (4.1%)		
Apollo Global Management, Inc.	5,146	245,516
BlackRock, Inc.	578	290,561
E*Trade Financial Corp.	4,307	195,409
Goldman Sachs Group, Inc. (The)	2,242	515,503
Intercontinental Exchange, Inc.	2,471	228,691
KKR & Co., Inc. Class A	6,289	183,450
Quilter PLC (United Kingdom)	23,652	50,456
Raymond James Financial, Inc.	2,473	221,235
		1,930,821
Chemicals (1.6%)		
Albemarle Corp.	500	36,520
Dow, Inc.	2,524	138,139
DuPont de Nemours, Inc.	1,079	69,272
Eastman Chemical Co.	780	61,823
Ecolab, Inc.	310	59,827
Linde PLC	474	100,915
Sherwin-Williams Co. (The)	469	273,680
		740,176
Commercial services and supplies (0.2%)		
Waste Connections, Inc.	870	78,987
		78,987
Construction materials (0.1%)		
Summit Materials, Inc. Class A †	1,448	34,607
		34,607

COMMON STOCKS (98.4%)* cont.	Shares	Value
Consumer finance (0.2%)		
Oportun Financial Corp. (acquired various dates between 2/6/15 and 11/6/19, cost \$128,275) (Private) † Δ Δ F	4,489	\$96,154
		96,154
Containers and packaging (0.5%)		
Avery Dennison Corp.	516	67,503
Ball Corp.	1,437	92,931
Packaging Corp. of America	641	71,786
		232,220
Diversified financial services (0.4%)		
Berkshire Hathaway, Inc. Class B †	859	194,564
		194,564
Diversified telecommunication services (0.8%)		
Verizon Communications, Inc.	6,486	398,240
		398,240
Electric utilities (2.3%)		
American Electric Power Co., Inc.	4,469	422,365
Exelon Corp.	3,449	157,240
NextEra Energy, Inc.	1,301	315,050
Southern Co. (The)	3,090	196,833
		1,091,488
Electrical equipment (0.8%)		
Eaton Corp. PLC	4,057	384,279
		384,279
Entertainment (4.4%)		
Activision Blizzard, Inc.	14,301	849,765
Live Nation Entertainment, Inc. †	5,672	405,378
Netflix, Inc. †	1,296	419,347
World Wrestling Entertainment, Inc. Class A S	6,407	415,622
		2,090,112
Equity real estate investment trusts (REITs) (1.0%)		
Gaming and Leisure Properties, Inc.	10,566	454,866
		454,866
Food and staples retail (1.8%)		
BJ's Wholesale Club Holdings, Inc. †	3,629	82,523
Costco Wholesale Corp.	730	214,562
Walmart, Inc.	4,859	577,444
		874,529
Food products (1.4%)		
Hershey Co. (The)	1,476	216,942
Kellogg Co.	998	69,022
McCormick & Co., Inc. (non-voting shares)	1,178	199,942
Tyson Foods, Inc. Class A	1,875	170,700
		656,606
Health-care equipment and supplies (3.3%)		
Abbott Laboratories	4,234	367,765
Baxter International, Inc.	3,150	263,403
Boston Scientific Corp. †	4,966	224,563
Danaher Corp.	1,567	240,503
Intuitive Surgical, Inc. †	319	188,577
Medtronic PLC	2,732	309,945
		1,594,756
Health-care providers and services (2.3%)		
Cigna Corp.	3,365	688,109
CVS Health Corp.	1,481	110,023
UnitedHealth Group, Inc.	1,074	315,735
		1,113,867
Hotels, restaurants, and leisure (2.1%)		
Aramark	2,134	92,616
Chipotle Mexican Grill, Inc. †	275	230,205
Hilton Worldwide Holdings, Inc.	2,271	251,877
Wynn Resorts, Ltd.	1,805	250,660
Yum China Holdings, Inc. (China)	3,597	172,692
		998,050

COMMON STOCKS (98.4%)* cont.	Shares	Value
Household products (2.0%)		
Procter & Gamble Co. (The)	7,638	\$953,986
		953,986
Independent power and renewable electricity producers (0.9%)		
NRG Energy, Inc.	10,440	414,990
		414,990
Industrial conglomerates (1.9%)		
3M Co.	658	116,084
General Electric Co.	14,045	156,742
Honeywell International, Inc.	2,897	512,769
Roper Technologies, Inc.	392	138,858
		924,453
Insurance (3.3%)		
American International Group, Inc.	8,965	460,173
Assured Guaranty, Ltd.	12,516	613,534
AXA SA (France)	3,148	88,666
Prudential PLC (United Kingdom)	20,691	397,132
		1,559,505
Interactive media and services (4.9%)		
Alphabet, Inc. Class A †	1,076	1,441,184
Facebook, Inc. Class A †	4,375	897,969
		2,339,153
Internet and direct marketing retail (3.5%)		
Amazon.com, Inc. †	718	1,326,749
Booking Holdings, Inc. †	175	359,403
		1,686,152
IT Services (5.6%)		
Fidelity National Information Services, Inc.	6,171	858,324
Fiserv, Inc. †	4,391	507,731
Mastercard, Inc. Class A	2,128	635,400
Visa, Inc. Class A	3,644	684,708
		2,686,163
Leisure products (0.4%)		
Hasbro, Inc.	1,804	190,520
		190,520
Life sciences tools and services (0.9%)		
Mettler-Toledo International, Inc. †	120	95,194
Thermo Fisher Scientific, Inc.	1,014	329,418
		424,612
Machinery (0.6%)		
Deere & Co.	821	142,246
Stanley Black & Decker, Inc.	958	158,779
		301,025
Media (1.1%)		
Charter Communications, Inc. Class A †	1,104	535,528
		535,528
Metals and mining (1.0%)		
Anglo American PLC (United Kingdom)	6,617	190,461
Freeport-McMoRan, Inc. (Indonesia)	21,205	278,210
		468,671
Multi-utilities (0.3%)		
Ameren Corp.	2,145	164,736
		164,736
Oil, gas, and consumable fuels (4.3%)		
BP PLC (United Kingdom)	150,259	938,640
Cairn Energy PLC (United Kingdom) †	50,923	138,278
Cenovus Energy, Inc. (Canada)	35,950	365,438
Encana Corp. (Canada)	28,870	135,174
Enterprise Products Partners LP	13,769	387,735
Kosmos Energy, Ltd.	18,049	102,879
		2,068,144

COMMON STOCKS (98.4%)* cont.	Shares	Value
Pharmaceuticals (4.0%)		
Bristol-Myers Squibb Co. †	2,792	\$179,218
Eli Lilly & Co.	1,745	229,345
Johnson & Johnson	3,398	495,666
Merck & Co., Inc.	5,875	534,331
Pfizer, Inc.	7,593	297,494
Zoetis, Inc.	1,445	191,246
		1,927,300
Professional services (0.2%)		
CoStar Group, Inc. †	156	93,335
		93,335
Road and rail (1.2%)		
Norfolk Southern Corp.	1,055	204,807
Union Pacific Corp.	2,086	377,128
		581,935
Semiconductors and semiconductor equipment (4.3%)		
Cree, Inc. †	4,666	215,336
NVIDIA Corp.	1,799	423,305
NXP Semiconductors NV	3,955	503,313
ON Semiconductor Corp. †	16,493	402,099
Texas Instruments, Inc.	3,890	499,048
		2,043,101
Software (7.3%)		
Adobe, Inc. †	2,180	718,986
Dassault Systemes SA (France)	1,544	253,811
Microsoft Corp.	14,294	2,254,164
Salesforce.com, Inc. †	1,399	227,533
		3,454,494
Specialty retail (2.8%)		
Advance Auto Parts, Inc.	502	80,400
Burlington Stores, Inc. †	312	71,145
CarMax, Inc. †	2,215	194,189
Home Depot, Inc. (The)	3,444	752,101
TJX Cos., Inc. (The)	3,146	192,095
Ulta Beauty, Inc. †	183	46,325
		1,336,255
Technology hardware, storage, and peripherals (3.2%)		
Apple, Inc.	5,120	1,503,488
		1,503,488
Textiles, apparel, and luxury goods (0.9%)		
Levi Strauss & Co. Class A	5,650	108,989
NIKE, Inc. Class B	3,119	315,986
		424,975
Trading companies and distributors (0.8%)		
Fastenal Co.	1,855	68,542
United Rentals, Inc. †	1,128	188,117
Yellow Cake PLC 144A (United Kingdom) †	46,066	122,647
		379,306
Total common stocks (cost \$38,116,276)		\$46,876,786
	Principal amount/ shares	Value
SHORT-TERM INVESTMENTS (2.7%)*		
Putnam Cash Collateral Pool, LLC 1.81% †	Shares	503,850
Putnam Short Term Investment Fund 1.72% †	Shares	752,996
U.S. Treasury Bills 1.574%, 5/21/20 #	\$38,000	37,774
Total short-term investments (cost \$1,294,617)		\$1,294,620
Total investments (cost \$39,410,893)		\$48,171,406

Key to holding's abbreviations

OTC Over-the-counter

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 \$47,649,580.

† This security is non-income-producing.

ΔΔ This security is restricted with regard to public resale. The total fair value of this security and any other restricted securities (excluding 144A securities), if any, held at the close of the reporting period was \$96,154, or 0.2% of net assets.

This security, in part or in entirety, was pledged and segregated with the broker to cover margin requirements for futures contracts at the close of the reporting period. Collateral at period end totaled \$30,811 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 8).

d 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.

F This security is valued by Putnam Management at fair value following procedures approved by the Trustees. Securities are classified as Level 3 for ASC 820 based on the securities' valuation inputs (Note 1).

L 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.

S Security on loan, in part or in entirety, at the close of the reporting period (Note 1).

At the close of the reporting period, the fund maintained liquid assets totaling \$64,836 to cover certain derivative contracts.

Unless otherwise noted, the rates quoted in Short-term investments security descriptions represent the weighted average yield to maturity.

144A after the name of an issuer represents securities exempt from registration under Rule 144A of the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration, normally to qualified institutional buyers.

The dates shown on debt obligations are the original maturity dates.

FORWARD CURRENCY CONTRACTS at 12/31/19 (aggregate face value \$2,622,995)

Counterparty	Currency	Contract type*	Delivery date	Value	Aggregate face value	Unrealized appreciation/(depreciation)
Bank of America N.A.						
	Canadian Dollar	Sell	1/15/20	\$131,311	\$128,616	\$(2,695)
Barclays Bank PLC						
	British Pound	Sell	3/18/20	590,795	577,902	(12,893)
Citibank, N.A.						
	Euro	Sell	3/18/20	229,563	227,265	(2,298)
Goldman Sachs International						
	British Pound	Sell	3/18/20	705,875	689,671	(16,204)
	Canadian Dollar	Sell	1/15/20	1,771	1,735	(36)
HSBC Bank USA, National Association						
	Chinese Yuan (Offshore)	Sell	2/19/20	181,992	179,430	(2,562)
JPMorgan Chase Bank N.A.						
	British Pound	Sell	3/18/20	344,974	337,472	(7,502)
	Canadian Dollar	Sell	1/15/20	491,048	479,428	(11,620)
	Norwegian Krone	Buy	3/18/20	1,151	1,101	50
State Street Bank and Trust Co.						
	Israeli Shekel	Buy	1/15/20	377	375	2
Unrealized appreciation						52
Unrealized (depreciation)						(55,810)
Total						\$(55,758)

* The exchange currency for all contracts listed is the United States Dollar.

FUTURES

CONTRACTS OUTSTANDING at 12/31/19	Number of contracts	Notional amount	Value	Expiration date	Unrealized appreciation/(depreciation)
S&P 500 Index					
E-Mini (Long)	5	\$807,695	\$807,775	Mar-20	\$4,627
Unrealized appreciation					4,627
Unrealized (depreciation)					—
Total					\$4,627

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 12/31/19

Swap counterparty/ Notional amount	Value	Upfront premium received (paid)	Termination date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
Goldman Sachs International						
\$650,212	\$658,162	\$—	12/15/20	1 month USD-LIBOR- BBA minus 0.58% — Monthly	Russell 2000 Total Return Index — Monthly	\$(7,678)
Upfront premium received		—				—
Upfront premium (paid)		—				(7,678)
Total		\$—		Total		\$(7,678)

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	\$5,363,033	\$—	\$—
Consumer discretionary	5,159,222	—	—
Consumer staples	3,479,495	—	—
Energy	2,068,144	—	—
Financials	6,635,935	—	96,154
Health care	6,294,105	—	—
Industrials	4,491,698	—	—
Information technology	9,687,246	—	—
Materials	1,475,674	—	—
Real estate	454,866	—	—
Utilities	1,671,214	—	—
Total common stocks	46,780,632	—	96,154
Short-term investments	752,996	541,624	—
Totals by level	\$47,533,628	\$541,624	\$96,154

Other financial instruments:	Valuation inputs		
	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$(55,758)	\$—
Futures contracts	4,627	—	—
Total return swap contracts	—	(7,678)	—
Totals by level	\$4,627	\$(63,436)	\$—

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

At the start and close of the reporting period, Level 3 investments in securities represented less than 1% of the fund's net assets and were not considered a significant portion of the fund's portfolio.

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

Statement of assets and liabilities

12/31/19

Assets	
Investment in securities, at value, including \$498,139 of securities on loan (Note 1):	
Unaffiliated issuers (identified cost \$38,154,047)	\$46,914,560
Affiliated issuers (identified cost \$1,256,846) (Notes 1 and 5)	1,256,846
Cash	8,357
Foreign currency (cost \$614) (Note 1)	621
Dividends, interest and other receivables	54,615
Receivable for shares of the fund sold	362
Receivable for investments sold	316,263
Receivable for variation margin on futures contracts (Note 1)	1,617
Unrealized appreciation on forward currency contracts (Note 1)	52
Total assets	48,553,293
Liabilities	
Payable for investments purchased	119,246
Payable for shares of the fund repurchased	63,656
Payable for compensation of Manager (Note 2)	21,863
Payable for custodian fees (Note 2)	25,557
Payable for investor servicing fees (Note 2)	5,466
Payable for Trustee compensation and expenses (Note 2)	51,022
Payable for administrative services (Note 2)	453
Payable for distribution fees (Note 2)	5,583
Unrealized depreciation on OTC swap contracts (Note 1)	7,678
Unrealized depreciation on forward currency contracts (Note 1)	55,810
Collateral on securities loaned, at value (Note 1)	503,850
Other accrued expenses	43,529
Total liabilities	903,713
Net assets	\$47,649,580
Represented by	
Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$33,685,026
Total distributable earnings (Note 1)	13,964,554
Total — Representing net assets applicable to capital shares outstanding	\$47,649,580
Computation of net asset value Class IA	
Net assets	\$21,027,383
Number of shares outstanding	702,130
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$29.95
Computation of net asset value Class IB	
Net assets	\$26,622,197
Number of shares outstanding	893,126
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$29.81

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 \$3,034)	\$804,595
Interest (including interest income of \$11,707 from investments in affiliated issuers) (Note 5)	13,429
Securities lending (net of expenses) (Notes 1 and 5)	3,862
Total investment income	821,886

Expenses

Compensation of Manager (Note 2)	250,379
Investor servicing fees (Note 2)	31,889
Custodian fees (Note 2)	17,589
Trustee compensation and expenses (Note 2)	486
Distribution fees (Note 2)	63,899
Administrative services (Note 2)	1,318
Auditing and tax fees	33,653
Other	21,552
Total expenses	420,765
Expense reduction (Note 2)	(2,611)
Net expenses	418,154
Net investment income	403,732

Realized and unrealized gain (loss)

Net realized gain (loss) on:

Securities from unaffiliated issuers (Notes 1 and 3)	5,080,667
Foreign currency transactions (Note 1)	(988)
Forward currency contracts (Note 1)	63,680
Futures contracts (Note 1)	31,635
Swap contracts (Note 1)	(104,668)
Written options (Note 1)	(135)
Total net realized gain	5,070,191

Change in net unrealized appreciation (depreciation) on:

Securities from unaffiliated issuers	7,601,255
Assets and liabilities in foreign currencies	(24)
Forward currency contracts	(89,849)
Futures contracts	26,548
Swap contracts	(18,974)
Total change in net unrealized appreciation	7,518,956
Net gain on investments	12,589,147
Net increase in net assets resulting from operations	\$12,992,879

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
Increase (decrease) in net assets		
Operations:		
Net investment income	\$403,732	\$353,722
Net realized gain on investments and foreign currency transactions	5,070,191	5,025,190
Change in net unrealized appreciation (depreciation) of investments and assets and liabilities in foreign currencies	7,518,956	(7,144,935)
Net increase (decrease) in net assets resulting from operations	12,992,879	(1,766,023)
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(283,891)	—
Class IB	(291,315)	—
Net realized short-term gain on investments		
Class IA	(365,597)	—
Class IB	(460,522)	—
From net realized long-term gain on investments		
Class IA	(1,831,446)	—
Class IB	(2,306,968)	—
Decrease from capital share transactions (Note 4)	(1,105,489)	(6,971,746)
Total increase (decrease) in net assets	6,347,651	(8,737,769)
Net assets:		
Beginning of year	41,301,929	50,039,698
End of year	\$47,649,580	\$41,301,929

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	Non-recurring reimbursements	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														
12/31/19	\$25.60	.28	7.65	7.93	(.41)	(3.17)	(3.58)	—	\$29.95	33.59	\$21,027	.78	1.03	77
12/31/18	26.81	.24	(1.45)	(1.21)	—	—	—	—	25.60	(4.51)	18,198	.81	.88	76
12/31/17	21.87	.20	4.95 ^e	5.15	(.21)	—	(.21)	— ^{f,g}	26.81	23.70 ^e	22,460	.81	.83	94
12/31/16	20.19	.22	1.83	2.05	(.37)	—	(.37)	—	21.87	10.32	20,597	.82 ^h	1.10 ^h	80
12/31/15	20.76	.20	(.45)	(.25)	(.32)	—	(.32)	—	20.19	(1.29)	20,684	.81	.98	90
Class IB														
12/31/19	\$25.49	.21	7.61	7.82	(.33)	(3.17)	(3.50)	—	\$29.81	33.24	\$26,622	1.03	.78	77
12/31/18	26.75	.17	(1.43)	(1.26)	—	—	—	—	25.49	(4.71)	23,104	1.06	.63	76
12/31/17	21.83	.14	4.93 ^e	5.07	(.15)	—	(.15)	— ^{f,g}	26.75	23.34 ^e	27,580	1.06	.58	94
12/31/16	20.15	.17	1.82	1.99	(.31)	—	(.31)	—	21.83	10.03	25,802	1.07 ^h	.85 ^h	80
12/31/15	20.71	.15	(.45)	(.30)	(.26)	—	(.26)	—	20.15	(1.50)	26,949	1.06	.73	90

^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/or brokerage/service arrangements, if any (Note 2). Also excludes acquired fund fees and expenses, if any.

^e Reflects a non-recurring litigation payment received by the fund from Household International which amounted to the following amounts per share outstanding on May 8, 2017:

	Per share
Class IA	\$0.33
Class IB	0.33

This payment resulted in an increase to total returns of 1.52% for the period ended December 31, 2017.

^f Amount represents less than \$0.01 per share.

^g Reflects a non-recurring reimbursement pursuant to a settlement between the Securities and Exchange Commission (the SEC) and Countrywide Financial which amounted to less than \$0.01 per share outstanding on November 29, 2017.

^h 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 Research 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 (growth or value stocks or both) of large U.S. companies that Putnam Management believes have favorable investment potential. For example, the fund may purchase stocks of companies with stock prices that reflect a value lower than that which Putnam Management places on the company. Putnam Management may also consider other factors that Putnam Management believes will cause the stock price to rise and 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.

Market quotations are not considered to be readily available for certain debt obligations (including short-term investments with remaining maturities of 60 days or less) and other investments; such investments are valued on the basis of valuations furnished by an independent pricing service approved by the Trustees or dealers selected by Putnam Management. Such services or dealers determine valuations for normal institutional-size trading units of such securities using methods based on market transactions for comparable securities and various relationships, generally recognized by institutional traders, between securities (which consider such factors as security prices, yields, maturities and ratings). These securities will generally be categorized as Level 2.

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.

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 and including amortization and accretion of premiums and discounts on debt securities, 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.

Options contracts The fund uses options contracts to hedge against changes in values of securities it owns, owned or expects to own.

The potential risk to the fund is that the change in value of options 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. Realized gains and losses on purchased options are included in realized gains and losses on investment securities. If a written call option is exercised, the premium originally received is recorded as an addition to sales proceeds. If a written put option is exercised, the premium originally received is recorded as a reduction to the cost of investments.

Exchange-traded options are valued at the last sale price or, if no sales are reported, the last bid price for purchased options and the last ask price for written options. OTC traded options are valued using prices supplied by dealers.

Options on swaps are similar to options on securities except that the premium paid or received is to buy or grant the right to enter into a previously agreed upon interest rate or credit default contract. Forward premium swap option contracts include premiums that have extended settlement dates. The delayed settlement of the premiums is factored into the daily valuation of the option contracts. In the case of interest rate cap and floor contracts, in return for a premium, ongoing payments between two parties are based on interest rates exceeding a specified rate, in the case of a cap contract, or falling below a specified rate in the case of a floor contract.

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

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.

Forward currency contracts The fund buys and sells forward currency contracts, which are agreements between two parties to buy and sell currencies at a set price on a future date. These contracts are used to hedge foreign exchange risk.

The U.S. dollar value of forward currency contracts is determined using current forward currency exchange rates supplied by a quotation service. The fair value of the contract will fluctuate with changes in currency exchange rates. The contract is marked to market daily and the change in fair value is recorded as an unrealized gain or loss. 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 when the contract matures or by delivery of the currency. The fund could be exposed to risk if the value of the currency changes unfavorably, if the counterparties to the contracts are unable to meet the terms of their contracts or if the fund is unable to enter into a closing position. Risks may exceed amounts recognized on the Statement of assets and liabilities.

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

Total return swap contracts The fund entered into OTC and/or centrally cleared total return swap contracts, which are arrangements to exchange a market-linked return for a periodic payment, both based on a notional principal amount, to gain exposure to a basket of securities.

To the extent that the total return of the security, index or other financial measure underlying the transaction exceeds or falls short of the offsetting interest rate obligation, the fund will receive a payment from or make a payment to the counterparty. OTC and/or centrally cleared total return swap contracts are marked to market daily based upon quotations from an independent pricing service or market maker. Any change is recorded as an unrealized gain or loss on OTC total return swaps. Daily fluctuations in the value of centrally cleared total return swaps are settled through a central clearing agent and are recorded in variation margin on the Statement of assets and liabilities and recorded as unrealized gain or loss. Payments received or made are recorded as realized gains or losses. Certain OTC and/or centrally cleared total return swap contracts may include extended effective dates. Payments related to these swap contracts are accrued based on the terms of the contract. The fund could be exposed to credit or market risk due to unfavorable changes in the fluctuation of interest rates or in the price of the underlying security or index, the possibility that there is no liquid market for these agreements or that the counterparty may default on its obligation to perform. The fund's maximum risk of loss from counterparty risk or central clearing risk is the fair value of the contract. This risk may be mitigated for OTC total return swap contracts by having a master netting arrangement between the fund and the counterparty and for centrally cleared total return swap contracts through the daily exchange of variation margin. There is minimal counterparty risk with respect to centrally cleared total return swap contracts due to the clearinghouse guarantee fund and other resources that are available in the event of a clearing member default. Risk of loss may exceed amounts recognized on the Statement of assets and liabilities.

OTC and/or centrally cleared total return swap contracts outstanding, including their respective notional amounts at period end, if any, are listed after the fund's portfolio.

Master agreements The fund is a party to ISDA (International Swaps and Derivatives Association, Inc.) Master Agreements (Master Agreements) with certain counterparties that govern OTC derivative and foreign exchange contracts entered into from time to time. The Master Agreements may contain provisions regarding, among other things, the parties' general obligations, representations, agreements, collateral requirements, events of default and early termination. With respect to certain counterparties, in accordance with the terms of the Master Agreements, collateral posted to the fund is held in a segregated account by the fund's custodian and, with respect to those amounts which can be sold or repledged, is presented in the fund's portfolio.

Collateral pledged by the fund is segregated by the fund's custodian and identified in the fund's portfolio. Collateral can be in the form of cash or debt securities issued by the U.S. Government or related agencies or other securities as agreed to by the fund and the applicable counterparty. Collateral requirements are determined based on the fund's net position with each counterparty.

Termination events applicable to the fund may occur upon a decline in the fund's net assets below a specified threshold over a certain period of time. Termination events applicable to counterparties may occur upon a decline in the counterparty's long-term and short-term credit ratings below a specified level. In each case, upon occurrence, the other party may elect to terminate early and cause settlement of all derivative and foreign exchange contracts outstanding, including the payment of any losses and costs resulting from such early termination, as reasonably determined by the terminating party. Any decision by one or more of

the fund's counterparties to elect early termination could impact the fund's future derivative activity.

At the close of the reporting period, the fund had a net liability position of \$63,438 on open derivative contracts subject to the Master Agreements. There was no collateral posted by the fund at period end for these agreements.

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 \$503,850 and the value of securities loaned amounted to \$498,139.

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, from foreign currency gains and losses, from realized gains and losses on passive

foreign investment companies, from income on swap contracts and from partnership income. 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 \$15,253 to decrease undistributed net investment income, \$866 to increase paid-in capital and \$14,387 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	\$9,533,455
Unrealized depreciation	(864,569)
Net unrealized appreciation	8,668,886
Undistributed ordinary income	256,182
Undistributed long-term gain	3,620,976
Undistributed short-term gain	1,418,534
Cost for federal income tax purposes	\$39,443,711

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 41.6% 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 0.550% 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 not reduced 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 Putnam Advisory Company, LLC (PAC), an affiliate of Putnam Management, is authorized by the Trustees to manage a separate portion of the assets of the fund, as designated from time to time by Putnam Management or PIL. PAC did not manage any portion of the assets of the fund during the reporting period. If Putnam Management or PIL were to engage the services of PAC, Putnam Management or PIL, as applicable, would pay a quarterly sub-advisory fee to PAC for its services

at the annual rate of 0.35% of the average net assets of the portion of the fund's assets for which PAC is engaged as sub-adviser.

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	\$14,174
Class IB	17,715
Total	\$31,889

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 \$116 under the expense offset arrangements and by \$2,495 under the brokerage/service arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$31, 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)	\$34,345,837	\$40,938,515
U.S. government securities (Long-term)	—	—
Total	\$34,345,837	\$40,938,515

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:

	Class IA shares				Class IB shares			
	Year ended 12/31/19		Year ended 12/31/18		Year ended 12/31/19		Year ended 12/31/18	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	23,328	\$636,974	16,702	\$468,638	37,337	\$1,010,676	47,202	\$1,307,311
Shares issued in connection with reinvestment of distributions	98,255	2,480,934	—	—	121,478	3,058,805	—	—
	121,583	3,117,908	16,702	468,638	158,815	4,069,481	47,202	1,307,311
Shares repurchased	(130,319)	(3,594,584)	(143,720)	(3,988,171)	(172,227)	(4,698,294)	(171,577)	(4,759,524)
Net decrease	(8,736)	\$(476,676)	(127,018)	\$(3,519,533)	(13,412)	\$(628,813)	(124,375)	\$(3,452,213)

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
Short-term investments					
Putnam Cash Collateral Pool, LLC*	\$1,366,675	\$7,781,638	\$8,644,463	\$15,794	\$503,850
Putnam Short Term Investment Fund**	601,065	8,139,617	7,987,686	11,707	752,996
Total Short-term investments	\$1,967,740	\$15,921,255	\$16,632,149	\$27,501	\$1,256,846

*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:

Purchased equity option contracts (contract amount)	\$—*
Written equity option contracts (contract amount)	\$—*
Futures contracts (number of contracts)	3
Forward currency contracts (contract amount)	\$3,200,000
OTC total return swap contracts (notional)	\$610,000

*For the reporting period, there were no holdings at the end of each fiscal quarter and the transactions were considered minimal.

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
Foreign exchange contracts	Receivables	\$52	Payables	\$55,810
Equity contracts	Receivables, Net assets — Unrealized appreciation	4,627*	Payables	7,678
Total		\$4,679		\$63,488

*Includes cumulative appreciation/depreciation of futures contracts as reported in the fund's portfolio. Only current day's variation margin is reported within the Statement of assets and liabilities.

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	Options	Futures	Forward currency contracts	Swaps	Total
Foreign exchange contracts	\$—	\$—	\$63,680	\$—	\$63,680
Equity contracts	254	31,635	—	(104,668)	\$(72,779)
Total	\$254	\$31,635	\$63,680	\$(104,668)	\$(9,099)

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	Forward currency contracts	Swaps	Total
Foreign exchange contracts	\$—	\$(89,849)	\$—	\$(89,849)
Equity contracts	26,548	—	(18,974)	\$7,574
Total	\$26,548	\$(89,849)	\$(18,974)	\$(82,275)

Note 8 — Offsetting of financial and derivative assets and liabilities

The following table summarizes any derivatives, repurchase agreements and reverse repurchase agreements, at the end of the reporting period, that are subject to an enforceable master netting agreement or similar agreement. For securities lending transactions or borrowing transactions associated with securities sold short, if any, see Note 1. For financial reporting purposes, the fund does not offset financial assets and financial liabilities that are subject to the master netting agreements in the Statement of assets and liabilities.

	Bank of America N.A.	Barclays Bank PLC	BofA Securities, Inc.	Citibank, N.A.	Goldman Sachs International	HSBC Bank USA, National Association	JPMorgan Chase Bank N.A.	State Street Bank and Trust Co.	Total
Assets:									
OTC Total return swap contracts**	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Futures contracts [§]	—	—	1,617	—	—	—	—	—	1,617
Forward currency contracts [#]	—	—	—	—	—	—	50	2	52
Total Assets	\$—	\$—	\$1,617	\$—	\$—	\$—	\$50	\$2	\$1,669
Liabilities:									
OTC Total return swap contracts**	\$—	\$—	\$—	\$—	\$7,678	\$—	\$—	\$—	\$7,678
Futures contracts [§]	—	—	—	—	—	—	—	—	—
Forward currency contracts [#]	2,695	12,893	—	2,298	16,240	2,562	19,122	—	55,810
Total Liabilities	\$2,695	\$12,893	\$—	\$2,298	\$23,918	\$2,562	\$19,122	\$—	\$63,488
Total Financial and Derivative Net Assets	\$(2,695)	\$(12,893)	\$1,617	\$(2,298)	\$(23,918)	\$(2,562)	\$(19,072)	\$2	\$(61,819)
Total collateral received (pledged)†##	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Net amount	\$(2,695)	\$(12,893)	\$1,617	\$(2,298)	\$(23,918)	\$(2,562)	\$(19,072)	\$2	\$—
<i>Controlled collateral received (including TBA commitments)**</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
<i>Uncontrolled collateral received</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
<i>Collateral (pledged) (including TBA commitments)**</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—

* Excludes premiums, if any. Included in unrealized appreciation and depreciation on OTC swap contracts on the Statement of assets and liabilities.

** Included with Investments in securities on the Statement of assets and liabilities.

† Additional collateral may be required from certain brokers based on individual agreements.

Covered by master netting agreement (Note 1).

Any over-collateralization of total financial and derivative net assets is not shown. Collateral may include amounts related to unsettled agreements.










§ Includes current day's variation margin only as reported on the Statement of assets and liabilities, which is not collateralized. Cumulative appreciation/(depreciation) for futures contracts and centrally cleared swap contracts is represented in the tables listed after the fund's portfolio. Collateral pledged for initial margin on futures contracts, which is not included in the table above, amounted to \$30,811.

Federal tax information (Unaudited)

Pursuant to §852 of the Internal Revenue Code, as amended, the fund hereby designates \$4,033,046 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.

For the reporting period, the fund hereby designates 45.84%, or the maximum amount allowable, of its taxable ordinary income distributions as qualified dividends taxed at the individual net capital gain rates.

About the Trustees

Name Year of birth Position held	Principal occupations during past five years	Other directorships	
Independent Trustees			
Liaquat Ahamed 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.	
Ravi Akhoury 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.	
Barbara M. Baumann 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.	
Katinka Domotorffy 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.	
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, the 10th president of Vassar College.	Director of Yale-NUS College; Alumni Fellow to the Yale Corporation; and Trustee of Yale University.	
Paul L. Joskow 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.	
Kenneth R. Leibler 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.	
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. Formerly, a Senior Advisor to these entities.	None	
George Putnam, III 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	
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, 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

Robert L. Reynolds* 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 and on the Securities and Exchange Commission's (SEC) website at 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.

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.

Fund information

Investment Manager

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

Investment Sub-Advisors

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

The Putnam Advisory Company, LLC

100 Federal Street
Boston, MA 02110

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.

