

Putnam VT Sustainable Leaders Fund

The fund's portfolio

9/30/22 (Unaudited)

COMMON STOCKS (98.0%)(a)

	Shares	Value
Automobiles (0.7%)		
General Motors Co.	143,900	\$4,617,751
		<u>4,617,751</u>
Banks (3.9%)		
Bank of America Corp.	472,004	14,254,521
First Republic Bank/CA	49,742	6,493,818
Webster Financial Corp.	159,300	7,200,360
		<u>27,948,699</u>
Beverages (2.1%)		
Heineken NV (Netherlands)	169,798	14,885,598
		<u>14,885,598</u>
Biotechnology (3.7%)		
Amgen, Inc.	66,600	15,011,640
Regeneron Pharmaceuticals, Inc. (NON)	16,500	11,366,355
		<u>26,377,995</u>
Capital markets (4.5%)		
BlackRock, Inc.	11,147	6,133,971
Charles Schwab Corp. (The)	180,700	12,986,909
KKR & Co., Inc.	138,100	5,938,300
TPG, Inc.	245,458	6,833,551
		<u>31,892,731</u>
Chemicals (5.9%)		
Eastman Chemical Co.	88,300	6,273,715
Ecolab, Inc.	37,700	5,444,634
Ginkgo Bioworks Holdings, Inc. (NON)	904,307	2,821,438
Koninklijke DSM NV (Netherlands)	55,665	6,313,517
Linde PLC	48,400	13,048,156
Novozymes A/S Class B (Denmark)	159,510	7,955,843
		<u>41,857,303</u>
Electric utilities (3.9%)		

Constellation Energy Corp.	171,700	14,283,723
NextEra Energy, Inc.	168,900	13,243,449
		<hr/>
		27,527,172
Entertainment (1.7%)		
Walt Disney Co. (The) ^(NON)	129,900	12,253,467
		<hr/>
		12,253,467
Equity real estate investment trusts (REITs) (2.8%)		
American Tower Corp. ^(R)	50,800	10,906,760
Boston Properties, Inc. ^(R)	121,000	9,071,370
		<hr/>
		19,978,130
Food and staples retailing (3.0%)		
Walmart, Inc.	165,500	21,465,350
		<hr/>
		21,465,350
Food products (1.9%)		
McCormick & Co., Inc. (non-voting shares)	185,900	13,249,093
		<hr/>
		13,249,093
Health-care equipment and supplies (3.1%)		
Boston Scientific Corp. ^(NON)	371,800	14,399,814
Cooper Cos., Inc. (The)	28,600	7,547,540
		<hr/>
		21,947,354
Health-care providers and services (3.1%)		
UnitedHealth Group, Inc.	42,800	21,615,712
		<hr/>
		21,615,712
Hotels, restaurants, and leisure (5.2%)		
Chipotle Mexican Grill, Inc. ^(NON)	8,900	13,374,564
Hilton Worldwide Holdings, Inc.	126,699	15,282,433
Starbucks Corp.	94,300	7,945,718
		<hr/>
		36,602,715
Independent power and renewable electricity producers (1.0%)		
AES Corp. (The)	326,100	7,369,860
		<hr/>
		7,369,860
Internet and direct marketing retail (4.2%)		
Amazon.com, Inc. ^(NON)	265,900	30,046,700
		<hr/>
		30,046,700

IT Services (2.3%)

PayPal Holdings, Inc. <i>(NON)</i>	29,200	2,513,244
Visa, Inc. Class A	79,400	14,105,410
		<hr/>
		16,618,654

Life sciences tools and services (4.4%)

Danaher Corp.	56,200	14,515,898
Thermo Fisher Scientific, Inc.	32,700	16,585,113
		<hr/>
		31,101,011

Machinery (5.8%)

Deere & Co.	35,600	11,886,484
Fortive Corp.	254,500	14,837,350
Ingersoll Rand, Inc.	339,300	14,678,118
		<hr/>
		41,401,952

Multiline retail (1.2%)

Target Corp.	57,800	8,576,942
		<hr/>
		8,576,942

Personal products (0.9%)

Unilever PLC (United Kingdom)	143,996	6,350,747
		<hr/>
		6,350,747

Pharmaceuticals (4.7%)

Eli Lilly and Co.	63,600	20,565,060
Merck & Co., Inc.	147,700	12,719,924
		<hr/>
		33,284,984

Road and rail (1.6%)

Union Pacific Corp.	59,700	11,630,754
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		11,630,754

Semiconductors and semiconductor equipment (3.4%)

Applied Materials, Inc.	76,400	6,259,452
ASML Holding NV (NY Reg Shares) (Netherlands)	13,900	5,773,365
NVIDIA Corp.	30,400	3,690,256
Texas Instruments, Inc.	51,800	8,017,604
		<hr/>
		23,740,677

Software (14.2%)

Adobe, Inc. <i>(NON)</i>	40,800	11,228,160
Intuit, Inc.	20,800	8,056,256
Microsoft Corp.	249,400	58,085,260
Roper Technologies, Inc.	31,500	11,328,660

salesforce.com, Inc. <i>(NON)</i>	84,100	12,096,944
		<u>100,795,280</u>
Specialty retail (1.0%)		
Home Depot, Inc. (The)	25,000	6,898,500
		<u>6,898,500</u>
Technology hardware, storage, and peripherals (7.1%)		
Apple, Inc.	364,788	50,413,702
		<u>50,413,702</u>
Textiles, apparel, and luxury goods (0.7%)		
Levi Strauss & Co. Class A	324,670	4,697,974
		<u>4,697,974</u>
Total common stocks (cost \$575,909,372)		\$695,146,807

U.S. TREASURY OBLIGATIONS (0.1%)^(a)

	Principal amount	Value
U.S. Treasury Notes		
2.75%, 8/31/23 ⁽ⁱ⁾	\$193,000	\$190,870
2.00%, 8/15/25 ⁽ⁱ⁾	221,000	208,193
0.625%, 12/31/27 ⁽ⁱ⁾	540,000	453,746
		<u> </u>
Total U.S. treasury obligations (cost \$852,809)		\$852,809

SHORT-TERM INVESTMENTS (2.1%)^(a)

	Shares	Value
Putnam Short Term Investment Fund Class P 3.11% ^(AFF)	14,164,661	\$14,164,661
State Street Institutional U.S. Government Money Market Fund, Premier Class 2.94% ^(P)	660,000	660,000

Total short-term investments (cost \$14,824,661) \$14,824,661

TOTAL INVESTMENTS

Total investments (cost \$591,586,842) \$710,824,277

FORWARD CURRENCY CONTRACTS at 9/30/22 (aggregate face value \$41,671,567) (Unaudited)

Counterparty	Currency	Contract type*	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
Bank of America N.A.						
	British Pound	Sell	12/21/22	\$2,065,026	\$2,139,801	\$74,775
	Danish Krone	Sell	12/21/22	4,365,872	4,514,375	148,503
	Euro	Sell	12/21/22	2,233,176	2,291,774	58,598
Barclays Bank PLC						
	British Pound	Sell	12/21/22	521,259	540,444	19,185
HSBC Bank USA, National Association						
	British Pound	Sell	12/21/22	2,171,447	2,251,278	79,831
	Danish Krone	Sell	12/21/22	4,365,872	4,514,703	148,831
	Euro	Sell	12/21/22	5,801,840	5,955,090	153,250
JPMorgan Chase Bank N.A.						
	Euro	Sell	12/21/22	6,521,844	6,692,962	171,118
Morgan Stanley & Co. International PLC						
	Euro	Sell	12/21/22	5,447,458	5,703,849	256,391
UBS AG						
	Euro	Sell	12/21/22	3,968,009	4,066,857	98,848
WestPac Banking Corp.						
	Canadian Dollar	Buy	10/19/22	72	77	(5)
	Canadian Dollar	Sell	10/19/22	72	72	—
	Euro	Sell	12/21/22	2,924,979	3,000,285	75,306
Unrealized appreciation						1,284,636
Unrealized (depreciation)						(5)
Total						\$1,284,631

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

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, 2022 through September 30, 2022 (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, references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures* and references to "OTC", if any, represent over-the-counter.

(a) Percentages indicated are based on net assets of \$709,642,399.

(NON) This security is non-income-producing.

(AFF) Affiliated company. For investments in Putnam Cash Collateral Pool, LLC and Putnam Short Term Investment Fund, the rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period. Transactions during the period with any company which is under common ownership or control were as follows:

Name of affiliate	Fair value as of 12/31/21	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 9/30/22
Short-term investments					
Putnam Cash Collateral Pool, LLC*#	\$3,478,475	\$84,761,378	\$88,239,853	\$17,581	\$—
Putnam Short Term Investment Fund**	10,985,166	71,372,258	68,192,763	77,935	14,164,661
Total Short-term investments	\$14,463,641	\$156,133,636	\$156,432,616	\$95,516	\$14,164,661

* 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. The fund receives cash collateral, which 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 and there were no realized or unrealized gains or losses during the period.

At the close of the reporting period, the fund did not have any securities on loan.

** 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.

- (i) This security was pledged, or purchased with cash that was pledged, to the fund for collateral on certain derivative contracts.
- (P) This security was pledged, or purchased with cash that was pledged, to the fund for collateral on certain derivative contracts. The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.
- (R) Real Estate Investment Trust.

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

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 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. At the close of the reporting period, fair value pricing was used for certain foreign securities in the portfolio. 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.

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 were 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.

For the fund's average contract amount on forward currency contracts, see the appropriate table at the end of these footnotes.

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 did not have a net liability position on open derivative contracts subject to the Master Agreements.

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	\$12,253,467	\$—	\$—
Consumer discretionary	91,440,582	—	—
Consumer staples	34,714,443	21,236,345	—
Financials	59,841,430	—	—
Health care	134,327,056	—	—
Industrials	53,032,706	—	—
Information technology	191,568,313	—	—
Materials	24,766,505	17,090,798	—
Real estate	19,978,130	—	—
Utilities	34,897,032	—	—
Total common stocks	656,819,664	38,327,143	—
U.S. treasury obligations	—	852,809	—
Short-term investments	660,000	14,164,661	—
Totals by level	\$657,479,664	\$53,344,613	\$—

Other financial instruments:	Valuation inputs		
	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$1,284,631	\$—
Totals by level	\$—	\$1,284,631	\$—

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

Forward currency contracts (contract amount)	\$41,300,000
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For additional information regarding the fund please see the fund's most recent annual or semiannual shareholder report filed on the Securities and Exchange Commission's Web site, www.sec.gov, or visit Putnam's Individual Investor Web site at www.putnaminvestments.com