

Putnam VT Large Cap Value Fund

The fund's portfolio

9/30/23 (Unaudited)

COMMON STOCKS (96.1%)(a)

	Shares	Value
Aerospace and defense (2.5%)		
Northrop Grumman Corp.	50,789	\$22,356,810
RTX Corp.	235,290	16,933,821
		<u>39,290,631</u>
Air freight and logistics (1.6%)		
FedEx Corp.	96,722	25,623,592
		<u>25,623,592</u>
Automobiles (1.5%)		
General Motors Co.	690,281	22,758,565
		<u>22,758,565</u>
Banks (6.8%)		
Bank of America Corp.	1,323,310	36,232,228
Citigroup, Inc.	716,445	29,467,383
JPMorgan Chase & Co.	113,087	16,399,877
PNC Financial Services Group, Inc. (The)	182,142	22,361,573
		<u>104,461,061</u>
Beverages (2.0%)		
Coca-Cola Co. (The)	319,267	17,872,567
Keurig Dr Pepper, Inc.	446,874	14,107,812
		<u>31,980,379</u>
Biotechnology (3.4%)		
AbbVie, Inc.	105,947	15,792,460
Regeneron Pharmaceuticals, Inc. (NON)	45,558	37,492,412
		<u>53,284,872</u>
Building products (1.0%)		
Johnson Controls International PLC	286,035	15,219,922
		<u>15,219,922</u>
Capital markets (4.1%)		
Charles Schwab Corp. (The)	467,624	25,672,558

Goldman Sachs Group, Inc. (The)	95,592	30,930,703
State Street Corp.	113,326	7,588,309
		<hr/>
		64,191,570
Chemicals (4.1%)		
Corteva, Inc.	366,737	18,762,265
DuPont de Nemours, Inc.	247,861	18,487,952
Eastman Chemical Co.	134,023	10,282,245
PPG Industries, Inc.	128,759	16,712,918
		<hr/>
		64,245,380
Construction materials (1.2%)		
CRH PLC (Ireland)	330,508	18,088,703
		<hr/>
		18,088,703
Consumer finance (0.8%)		
Capital One Financial Corp.	126,932	12,318,751
		<hr/>
		12,318,751
Consumer staples distribution and retail (4.3%)		
BJ's Wholesale Club Holdings, Inc. <i>(NON)</i>	154,425	11,021,312
Target Corp.	119,710	13,236,335
Walmart, Inc.	273,702	43,773,161
		<hr/>
		68,030,808
Containers and packaging (0.6%)		
Ball Corp.	189,423	9,429,477
		<hr/>
		9,429,477
Electric utilities (3.9%)		
Constellation Energy Corp.	188,862	20,601,067
Exelon Corp.	420,321	15,883,931
NRG Energy, Inc.	630,773	24,297,376
		<hr/>
		60,782,374
Electronic equipment, instruments, and components (0.6%)		
Vontier Corp.	314,236	9,716,177
		<hr/>
		9,716,177
Financial services (1.2%)		
Apollo Global Management, Inc.	215,193	19,315,724
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		19,315,724
Health care equipment and supplies (1.2%)		
Abbott Laboratories	190,249	18,425,616
		<hr/>

18,425,616

Health care providers and services (5.1%)

Cigna Corp.	92,388	26,429,435
Elevance Health, Inc.	42,878	18,669,939
McKesson Corp.	80,534	35,020,210
		<hr/>
		80,119,584

Hotels, restaurants, and leisure (1.1%)

Hilton Worldwide Holdings, Inc.	111,067	16,680,042
		<hr/>
		16,680,042

Household durables (2.3%)

PulteGroup, Inc.	488,632	36,183,200
		<hr/>
		36,183,200

Household products (1.7%)

Procter & Gamble Co. (The)	186,265	27,168,613
		<hr/>
		27,168,613

Industrial conglomerates (1.1%)

Honeywell International, Inc.	94,781	17,509,842
		<hr/>
		17,509,842

Insurance (3.5%)

American International Group, Inc.	348,277	21,105,586
Assured Guaranty, Ltd.	234,123	14,169,124
AXA SA (France)	648,094	19,196,756
		<hr/>
		54,471,466

Interactive media and services (1.9%)

Meta Platforms, Inc. Class A ^(NON)	99,345	29,824,362
		<hr/>
		29,824,362

Life sciences tools and services (2.5%)

Danaher Corp.	74,721	18,538,280
Thermo Fisher Scientific, Inc.	41,255	20,882,043
		<hr/>
		39,420,323

Machinery (1.3%)

Ingersoll Rand, Inc.	313,996	20,007,825
		<hr/>
		20,007,825

Media (2.1%)

Charter Communications, Inc. Class A ^(NON)	42,198	18,559,524
Comcast Corp. Class A	337,069	14,945,639
		<hr/>

33,505,163

Metals and mining (1.7%)

Freeport-McMoRan, Inc. (Indonesia)	729,808	27,214,540
		<hr/>
		27,214,540

Multi-utilities (1.2%)

Ameren Corp.	250,474	18,742,969
		<hr/>
		18,742,969

Office REITs (0.7%)

Vornado Realty Trust ^{(R)(S)}	466,563	10,581,649
		<hr/>
		10,581,649

Oil, gas, and consumable fuels (8.7%)

ConocoPhillips	250,267	29,981,987
Exxon Mobil Corp.	473,547	55,679,657
Shell PLC (United Kingdom)	809,820	26,103,475
Valero Energy Corp.	156,593	22,190,794
		<hr/>
		133,955,913

Passenger airlines (0.9%)

Southwest Airlines Co.	541,070	14,646,765
		<hr/>
		14,646,765

Personal care products (0.4%)

Kenvue, Inc.	322,280	6,471,382
		<hr/>
		6,471,382

Pharmaceuticals (4.3%)

AstraZeneca PLC ADR (United Kingdom)	366,982	24,852,021
Merck & Co., Inc.	281,837	29,015,119
Sanofi (France)	125,970	13,516,856
		<hr/>
		67,383,996

Semiconductors and semiconductor equipment (2.7%)

NXP Semiconductors NV	66,591	13,312,873
Qualcomm, Inc.	266,168	29,560,618
		<hr/>
		42,873,491

Software (5.7%)

Microsoft Corp.	157,926	49,865,135
Oracle Corp.	371,547	39,354,258
		<hr/>
		89,219,393

Specialized REITs (1.6%)

American Tower Corp. ^(R)	47,176	7,758,093
Gaming and Leisure Properties, Inc. ^(R)	363,879	16,574,688
		<u>24,332,781</u>
Specialty retail (1.5%)		
O'Reilly Automotive, Inc. ^(NON)	26,063	23,687,618
		<u>23,687,618</u>
Tobacco (0.9%)		
Altria Group, Inc.	352,292	14,813,879
		<u>14,813,879</u>
Trading companies and distributors (1.7%)		
United Rentals, Inc.	58,734	26,111,374
		<u>26,111,374</u>
Wireless telecommunication services (0.7%)		
T-Mobile US, Inc. ^(NON)	82,920	11,612,946
		<u>11,612,946</u>
Total common stocks (cost \$1,063,258,510)		<u>\$1,503,702,718</u>

U.S. TREASURY OBLIGATIONS (0.0%)^(a)

	Principal amount	Value
U.S. Treasury Notes		
1.625%, 5/15/31 ⁽ⁱ⁾	\$140,000	\$114,517
1.125%, 2/28/25 ⁽ⁱ⁾	205,000	193,707
0.75%, 4/30/26 ⁽ⁱ⁾	136,000	122,917
0.50%, 3/31/25 ⁽ⁱ⁾	131,000	122,399
		<u> </u>
Total U.S. treasury obligations (cost \$553,540)		<u>\$553,540</u>

SHORT-TERM INVESTMENTS (4.5%)(a)

		Principal amount/shares	Value
Putnam Cash Collateral Pool, LLC 5.62%(AFF)	Shares	9,657,700	\$9,657,700
Putnam Short Term Investment Fund Class P 5.57%(AFF)	Shares	53,902,960	53,902,960
State Street Institutional U.S. Government Money Market Fund, Premier Class 5.29%(P)	Shares	1,430,000	1,430,000
U.S. Treasury Bills 5.324%, 11/16/23		\$2,100,000	2,086,101
U.S. Treasury Bills 5.314%, 11/9/23		1,800,000	1,789,939
U.S. Treasury Bills 5.017%, 11/2/23		410,000	408,132
U.S. Treasury Bills 5.426%, 12/7/23		400,000	396,102
Total short-term investments (cost \$69,671,336)			\$69,670,934

TOTAL INVESTMENTS

Total investments (cost \$1,133,483,386)	\$1,573,927,192
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FORWARD CURRENCY CONTRACTS at 9/30/23 (aggregate face value \$93,099,972) (Unaudited)

Counterparty	Currency	Contract type*	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
Bank of America N.A.						
	British Pound	Sell	12/20/23	\$2,523,074	\$2,576,173	\$53,099
	Euro	Sell	12/20/23	3,692,189	3,755,320	63,131
Barclays Bank PLC						
	British Pound	Sell	12/20/23	10,849,291	11,072,227	222,936
Goldman Sachs International						
	British Pound	Sell	12/20/23	15,826,954	16,150,122	323,168
	Euro	Sell	12/20/23	2,161,514	2,198,581	37,067
HSBC Bank USA, National Association						
	British Pound	Sell	12/20/23	5,870,285	5,990,789	120,504
JPMorgan Chase Bank N.A.						
	Euro	Sell	12/20/23	2,191,756	2,229,317	37,561
Morgan Stanley & Co. International PLC						
	Euro	Sell	12/20/23	16,388,566	16,685,157	296,591
State Street Bank and Trust Co.						

	British Pound	Sell	12/20/23	9,039,021	9,225,068	186,047
	Euro	Sell	12/20/23	8,316,046	8,457,863	141,817
UBS AG						
	Euro	Sell	12/20/23	14,544,114	14,759,355	215,241
Unrealized appreciation						1,697,162
Unrealized (depreciation)						—
Total						\$1,697,162

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

Key to holding's abbreviations

ADR American Depository Receipts: Represents ownership of foreign securities on deposit with a custodian bank.

Notes to the fund's portfolio

Unless noted otherwise, the notes to the fund's portfolio are for the close of the fund's reporting period, which ran from January 1, 2023 through September 30, 2023 (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 \$1,564,055,165.

(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 12/31/22	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 9/30/23
Short-term investments					
Putnam Cash Collateral Pool, LLC#	\$23,050,283	\$196,246,062	\$209,638,645	\$609,943	\$9,657,700
Putnam Short Term Investment Fund**	83,862,645	155,143,978	185,103,663	1,561,393	53,902,960

**Total Short-term
investments**

\$106,912,928 \$351,390,040 \$394,742,308 \$2,171,336 \$63,560,660

* 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 received cash collateral of \$9,657,700 for securities loaned. The rate quoted in the security description is the annualized 7-day yield at the close of the reporting period. At the close of the reporting period, the value of securities loaned amounted to \$9,523,332.

** 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.
- (S) This security is on loan, in part or in entirety, at the close of the reporting period.

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

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, which has been designated as valuation designee pursuant to Rule 2a-5 under the Investment Company Act of 1940, 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:

	Valuation inputs		
Investments in securities:	Level 1	Level 2	Level 3
Common stocks*:			
Communication services	\$74,942,471	\$—	\$—
Consumer discretionary	99,309,425	—	—
Consumer staples	148,465,061	—	—
Energy	107,852,438	26,103,475	—
Financials	235,561,816	19,196,756	—
Health care	245,117,535	13,516,856	—
Industrials	158,409,951	—	—
Information technology	141,809,061	—	—
Materials	118,978,100	—	—
Real estate	34,914,430	—	—
Utilities	79,525,343	—	—
Total common stocks	1,444,885,631	58,817,087	—
U.S. treasury obligations	—	553,540	—
Short-term investments	1,430,000	68,240,934	—
Totals by level	\$1,446,315,631	\$127,611,561	\$—

	Valuation inputs		
Other financial instruments:	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$1,697,162	\$—
Totals by level	\$—	\$1,697,162	\$—

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

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)	\$103,200,000
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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