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# Putnam VT Large Cap Growth Fund†

## The fund's portfolio

9/30/23 (Unaudited)

† Prior to April 30, 2023, the fund was known as Putnam VT Growth Opportunites Fund.

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### COMMON STOCKS (98.1%)(a)

	Shares	Value
<b>Aerospace and defense (0.7%)</b>		
TransDigm Group, Inc. (NON)	7,560	\$6,374,063
		<u>6,374,063</u>
<b>Automobiles (2.9%)</b>		
Tesla, Inc. (NON)	104,824	26,229,061
		<u>26,229,061</u>
<b>Broadline retail (6.4%)</b>		
Amazon.com, Inc. (NON)	460,273	58,509,904
		<u>58,509,904</u>
<b>Building products (0.7%)</b>		
Johnson Controls International PLC	119,623	6,365,140
		<u>6,365,140</u>
<b>Capital markets (1.0%)</b>		
MSCI, Inc.	17,278	8,864,996
		<u>8,864,996</u>
<b>Chemicals (0.9%)</b>		
Sherwin-Williams Co. (The)	33,531	8,552,082
		<u>8,552,082</u>
<b>Commercial services and supplies (0.7%)</b>		
Waste Connections, Inc.	45,151	6,063,779
		<u>6,063,779</u>

**Consumer staples distribution and retail (2.0%)**

Costco Wholesale Corp.	32,870	18,570,235
		<hr/>
		<b>18,570,235</b>

**Entertainment (2.6%)**

Live Nation Entertainment, Inc. <i>(NON)</i>	71,148	5,908,130
Netflix, Inc. <i>(NON)</i>	28,586	10,794,074
Universal Music Group NV (Netherlands)	272,113	7,076,234
		<hr/>
		<b>23,778,438</b>

**Financial services (5.0%)**

Mastercard, Inc. Class A	60,976	24,141,008
Visa, Inc. Class A <i>(S)</i>	94,005	21,622,090
		<hr/>
		<b>45,763,098</b>

**Ground transportation (1.2%)**

Canadian Pacific Kansas City, Ltd. (Canada) <i>(S)</i>	110,029	8,187,258
Uber Technologies, Inc. <i>(NON)</i>	64,055	2,945,889
		<hr/>
		<b>11,133,147</b>

**Health care equipment and supplies (3.4%)**

Boston Scientific Corp. <i>(NON)</i>	105,794	5,585,923
Dexcom, Inc. <i>(NON)</i>	97,138	9,062,975
IDEXX Laboratories, Inc. <i>(NON)</i>	9,076	3,968,663
Intuitive Surgical, Inc. <i>(NON)</i>	42,511	12,425,540
		<hr/>
		<b>31,043,101</b>

**Health care providers and services (2.7%)**

UnitedHealth Group, Inc.	48,668	24,537,919
		<hr/>
		<b>24,537,919</b>

**Hotels, restaurants, and leisure (2.3%)**

Booking Holdings, Inc. <i>(NON)</i>	3,664	11,299,593
Chipotle Mexican Grill, Inc. <i>(NON)</i>	5,354	9,807,618
		<hr/>
		<b>21,107,211</b>

**Interactive media and services (9.6%)**

Alphabet, Inc. Class C <i>(NON)</i>	430,486	56,759,579
Meta Platforms, Inc. Class A <i>(NON)</i>	102,463	30,760,417
		<hr/>
		<b>87,519,996</b>

**IT Services (0.5%)**

Accenture PLC Class A	14,371	4,413,478
		<hr/>

4,413,478

**Life sciences tools and services (1.3%)**

Danaher Corp.	35,146	8,719,723
IQVIA Holdings, Inc. <i>(NON)</i>	2,004	394,287
Lonza Group AG (Switzerland)	5,118	2,367,827
		<hr/>
		<b>11,481,837</b>

**Pharmaceuticals (3.7%)**

AstraZeneca PLC (United Kingdom)	76,074	10,237,795
Eli Lilly and Co.	43,277	23,245,375
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		<b>33,483,170</b>

**Real estate management and development (0.5%)**

CoStar Group, Inc. <i>(NON)</i>	60,786	4,673,836
		<hr/>
		<b>4,673,836</b>

**Semiconductors and semiconductor equipment (10.7%)**

Advanced Micro Devices, Inc. <i>(NON)</i>	98,798	10,158,410
Applied Materials, Inc.	37,053	5,129,988
Broadcom, Inc.	31,299	25,996,323
NVIDIA Corp.	128,431	55,866,201
		<hr/>
		<b>97,150,922</b>

**Software (22.0%)**

Adobe, Inc. <i>(NON)</i>	15,562	7,935,064
Cadence Design Systems, Inc. <i>(NON)</i>	72,985	17,100,386
HubSpot, Inc. <i>(NON)</i>	13,807	6,799,948
Intuit, Inc.	13,737	7,018,783
Microsoft Corp.	349,542	110,367,887
Oracle Corp.	143,371	15,185,856
Palo Alto Networks, Inc. <i>(NON)</i>	51,483	12,069,675
Salesforce, Inc. <i>(NON)</i>	61,296	12,429,603
Synopsys, Inc. <i>(NON)</i>	24,879	11,418,715
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		<b>200,325,917</b>

**Specialized REITs (1.3%)**

American Tower Corp. <i>(R)</i>	69,562	11,439,471
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		<b>11,439,471</b>

**Specialty retail (2.2%)**

Home Depot, Inc. (The)	48,955	14,792,243
O'Reilly Automotive, Inc. <i>(NON)</i>	5,829	5,297,745
		<hr/>
		<b>20,089,988</b>

**Technology hardware, storage, and peripherals (11.1%)**

Apple, Inc.	590,269	101,059,955
		<u>101,059,955</u>

**Textiles, apparel, and luxury goods (2.7%)**

Lululemon Athletica, Inc. (Canada) <sup>(NON)</sup>	32,751	12,629,113
LVMH Moët Hennessy Louis Vuitton SA (France)	6,564	4,952,057
Nike, Inc. Class B	77,425	7,403,376
		<u>24,984,546</u>

**Total common stocks (cost \$428,298,620) **\$893,515,290****

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**SHORT-TERM INVESTMENTS (3.2%)<sup>(a)</sup>**

	<b>Shares</b>	<b>Value</b>
Putnam Cash Collateral Pool, LLC 5.62% <sup>(AFF)</sup>	11,776,050	\$11,776,050
Putnam Short Term Investment Fund Class P 5.57% <sup>(AFF)</sup>	17,280,431	17,280,431
		<u>\$29,056,481</u>

**TOTAL INVESTMENTS**

**Total investments (cost \$457,355,101) **\$922,571,771****

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**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 \$910,914,744.

(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
<b>Short-term investments</b>					
Putnam Cash Collateral Pool, LLC*#	\$—	\$126,167,141	\$114,391,091	\$267,828	\$11,776,050
Putnam Short Term Investment Fund**	19,387,831	100,079,157	102,186,557	438,258	17,280,431
<b>Total Short-term investments</b>	<b>\$19,387,831</b>	<b>\$226,246,298</b>	<b>\$216,577,648</b>	<b>\$706,086</b>	<b>\$29,056,481</b>

\* 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 \$11,776,050 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 \$11,479,820.

\*\* 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.

(R) Real Estate Investment Trust.

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

**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.

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. Short-term securities with remaining maturities of 60 days or less are valued using an independent pricing service approved by the Trustees, and are classified as Level 2 securities.

To the extent a pricing service or dealer is unable to value a security or provides a valuation that Putnam Management does not believe accurately reflects the security's fair value, the security will be valued at fair value by Putnam Management, 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.

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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	\$104,222,200	\$7,076,234	\$—
Consumer discretionary	145,968,653	4,952,057	—
Consumer staples	18,570,235	—	—
Financials	54,628,094	—	—
Health care	87,940,405	12,605,622	—
Industrials	29,936,129	—	—
Information technology	402,950,272	—	—
Materials	8,552,082	—	—
Real estate	16,113,307	—	—
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<b>Total common stocks</b>	<b>868,881,377</b>	<b>24,633,913</b>	<b>—</b>
Short-term investments	—	29,056,481	—
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<b>Totals by level</b>	<b>\$868,881,377</b>	<b>\$53,690,394</b>	<b>\$—</b>

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](http://www.sec.gov), or visit Putnam's Individual Investor Web site at [www.putnaminvestments.com](http://www.putnaminvestments.com)