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# Putnam VT Large Cap Growth†

## The fund's portfolio

3/31/23 (Unaudited)

† Effective April 30, 2023, the fund changed its name from Putnam VT Growth Opportunities Fund.

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### COMMON STOCKS (98.9%)(a)

	Shares	Value
<b>Aerospace and defense (1.0%)</b>		
TransDigm Group, Inc.	11,333	\$8,352,988
		<u>8,352,988</u>
<b>Automobiles (2.7%)</b>		
Tesla, Inc. (NON)	113,859	23,621,188
		<u>23,621,188</u>
<b>Broadline retail (4.3%)</b>		
Amazon.com, Inc. (NON)	361,155	37,303,700
		<u>37,303,700</u>
<b>Building products (0.9%)</b>		
Johnson Controls International PLC	123,720	7,450,418
		<u>7,450,418</u>
<b>Capital markets (1.4%)</b>		
MSCI, Inc.	21,234	11,884,457
		<u>11,884,457</u>
<b>Chemicals (1.1%)</b>		
Sherwin-Williams Co. (The)	40,408	9,082,506
		<u>9,082,506</u>
<b>Commercial services and supplies (0.8%)</b>		
Waste Connections, Inc.	47,052	6,543,522
		<u>6,543,522</u>

**Consumer staples distribution and retail (2.1%)**

Costco Wholesale Corp.	37,076	18,421,952
		<hr/>
		<b>18,421,952</b>

**Entertainment (2.7%)**

Live Nation Entertainment, Inc. <sup>(NON)</sup>	90,841	6,358,870
Netflix, Inc. <sup>(NON)</sup>	26,206	9,053,649
Universal Music Group NV (Netherlands)	322,002	8,139,895
		<hr/>
		<b>23,552,414</b>

**Financial services (5.4%)**

Mastercard, Inc. Class A	64,825	23,558,053
Visa, Inc. Class A <sup>(S)</sup>	101,922	22,979,334
		<hr/>
		<b>46,537,387</b>

**Food products (1.6%)**

Hershey Co. (The)	53,377	13,579,643
		<hr/>
		<b>13,579,643</b>

**Ground transportation (1.1%)**

Canadian Pacific Railway, Ltd. (Canada) <sup>(S)</sup>	64,706	4,978,480
Union Pacific Corp.	20,744	4,174,937
		<hr/>
		<b>9,153,417</b>

**Health care equipment and supplies (2.2%)**

Dexcom, Inc. <sup>(NON)</sup>	68,764	7,989,002
IDEXX Laboratories, Inc. <sup>(NON)</sup>	9,455	4,728,256
Intuitive Surgical, Inc. <sup>(NON)</sup>	24,784	6,331,568
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		<b>19,048,826</b>

**Health care providers and services (5.6%)**

HCA Healthcare, Inc.	38,636	10,187,540
Humana, Inc.	22,738	11,038,389
UnitedHealth Group, Inc.	56,487	26,695,191
		<hr/>
		<b>47,921,120</b>

**Hotels, restaurants, and leisure (2.5%)**

Booking Holdings, Inc. <sup>(NON)</sup>	4,251	11,275,395
Chipotle Mexican Grill, Inc. <sup>(NON)</sup>	6,070	10,369,320
		<hr/>
		<b>21,644,715</b>

**Interactive media and services (5.6%)**

Alphabet, Inc. Class C <sup>(NON)</sup>	422,825	43,973,800
Meta Platforms, Inc. Class A <sup>(NON)</sup>	20,636	4,373,594

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**48,347,394****IT Services (2.3%)**

Accenture PLC Class A	45,674	13,054,086
Gartner, Inc. <i>(NON)</i>	19,959	6,502,043

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**19,556,129****Life sciences tools and services (2.5%)**

Danaher Corp.	44,346	11,176,966
IQVIA Holdings, Inc. <i>(NON)</i>	28,612	5,690,641
Lonza Group AG (Switzerland)	7,252	4,361,825

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**21,229,432****Personal care products (0.8%)**

Estee Lauder Cos., Inc. (The) Class A	28,135	6,934,152
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**6,934,152****Pharmaceuticals (3.6%)**

AstraZeneca PLC (United Kingdom)	71,920	9,982,501
Eli Lilly and Co.	45,102	15,488,929
Merck & Co., Inc.	46,988	4,999,053

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**30,470,483****Professional services (0.6%)**

CoStar Group, Inc. <i>(NON)</i>	69,397	4,777,983
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**4,777,983****Semiconductors and semiconductor equipment (8.9%)**

Advanced Micro Devices, Inc. <i>(NON)</i>	86,363	8,464,438
Applied Materials, Inc.	76,013	9,336,677
Broadcom, Inc.	25,686	16,478,596
NVIDIA Corp.	151,143	41,982,991

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**76,262,702****Software (19.9%)**

Adobe, Inc. <i>(NON)</i>	5,861	2,258,654
Cadence Design Systems, Inc. <i>(NON)</i>	90,372	18,986,253
Fair Isaac Corp. <i>(NON)</i>	3,354	2,356,822
Intuit, Inc.	26,513	11,820,291
Microsoft Corp.	326,073	94,006,846
Oracle Corp.	123,732	11,497,177
Palo Alto Networks, Inc. <i>(NON)</i>	96,537	19,282,300
Salesforce, Inc. <i>(NON)</i>	53,265	10,641,282

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**170,849,625****Specialized REITs (1.6%)**

American Tower Corp. <sup>(R)</sup>	67,836	13,861,608
		<u>13,861,608</u>
<b>Specialty retail (1.2%)</b>		
Home Depot, Inc. (The)	17,946	5,296,224
O'Reilly Automotive, Inc. <sup>(NON)</sup>	6,018	5,109,162
		<u>10,405,386</u>
<b>Technology hardware, storage, and peripherals (12.2%)</b>		
Apple, Inc.	633,322	104,434,798
		<u>104,434,798</u>
<b>Textiles, apparel, and luxury goods (3.2%)</b>		
Lululemon Athletica, Inc. (Canada) <sup>(NON)</sup>	33,259	12,112,595
Nike, Inc. Class B	126,631	15,530,026
		<u>27,642,621</u>
<b>Wireless telecommunication services (1.1%)</b>		
T-Mobile US, Inc. <sup>(NON)</sup>	62,759	9,090,017
		<u>9,090,017</u>
<b>Total common stocks (cost \$442,965,951)</b>		<b>\$847,960,583</b>

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**PURCHASED OPTIONS OUTSTANDING (—%)<sup>(a)</sup>**

<b>Counterparty</b>	<b>Expiration date/ strike price</b>	<b>Notional amount</b>	<b>Contract amount</b>	<b>Value</b>
<b>Citibank, N.A.</b>				
Moderna, Inc. (Call)	Jun-23/\$261.50	\$18,460,623	\$120,202	\$20,989
				<u>\$20,989</u>
<b>Total purchased options outstanding (cost \$2,163,636)</b>				<b>\$20,989</b>

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**SHORT-TERM INVESTMENTS (1.8%)<sup>(a)</sup>**

	<b>Shares</b>	<b>Value</b>
Putnam Cash Collateral Pool, LLC 5.03% <sup>(AFF)</sup>	6,274,936	\$6,274,936
Putnam Short Term Investment Fund Class P 4.88% <sup>(AFF)</sup>	9,397,737	9,397,737
State Street Institutional U.S. Government Money Market Fund, Premier Class 4.70% <sup>(P)</sup>	70,000	70,000
<b>Total short-term investments (cost \$15,742,673)</b>		<b>\$15,742,673</b>

**TOTAL INVESTMENTS**

<b>Total investments (cost \$460,872,260)</b>	<b>\$863,724,245</b>
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**WRITTEN OPTIONS OUTSTANDING at 3/31/23 (premiums \$1,557,013) (Unaudited)**

<b>Counterparty</b>	<b>Expiration date/ strike price</b>	<b>Notional amount</b>	<b>Contract amount</b>	<b>Value</b>
<b>Citibank, N.A.</b>				
Moderna, Inc. (Call)	Jun-23/\$281.60	\$18,460,623	\$120,202	\$10,109
<b>Total</b>				<b>\$10,109</b>

**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 March 31, 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 \$857,107,013.

(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 of 3/31/23
<b>Short-term investments</b>					
Putnam Cash Collateral Pool, LLC*#	\$—	\$32,391,957	\$26,117,021	\$20,343	\$6,274,936
Putnam Short Term Investment Fund**	19,387,831	22,743,504	32,733,598	134,950	9,397,737
<b>Total Short-term investments</b>	<b>\$19,387,831</b>	<b>\$55,135,461</b>	<b>\$58,850,619</b>	<b>\$155,293</b>	<b>\$15,672,673</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 \$6,274,936 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 \$6,236,788.

\*\* 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.

(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.

**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 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.

**Options contracts:** The fund used options contracts to gain exposure to securities.

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 options 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.

For the fund's average contract amount on options 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.

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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 of the close of the reporting period:

Investments in securities:	Valuation inputs		
	Level 1	Level 2	Level 3
<b>Common stocks*:</b>			
Communication services	\$72,849,930	\$8,139,895	\$—
Consumer discretionary	120,617,610	—	—
Consumer staples	38,935,747	—	—
Financials	58,421,844	—	—
Health care	104,325,535	14,344,326	—
Industrials	36,278,328	—	—
Information technology	371,103,254	—	—
Materials	9,082,506	—	—
Real estate	13,861,608	—	—
<b>Total common stocks</b>	<b>825,476,362</b>	<b>22,484,221</b>	<b>—</b>
Purchased options outstanding	—	20,989	—
Short-term investments	70,000	15,672,673	—



<b>Totals by level</b>	\$825,546,362	\$38,177,883	\$—
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**Valuation inputs**

<b>Other financial instruments:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Written options outstanding	\$—	\$(10,109)	\$—
<b>Totals by level</b>	<b>\$—</b>	<b>\$(10,109)</b>	<b>\$—</b>

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:

Purchased equity option contracts (contract amount)	\$120,000
Written equity option contracts (contract amount)	\$120,000

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)