

Putnam VT Small Cap Growth Fund

The fund's portfolio

3/31/23 (Unaudited)

COMMON STOCKS (99.6%)(a)

	Shares	Value
Automobile components (0.6%)		
Fox Factory Holding Corp.(NON)	1,305	\$158,388
		158,388
Banks (1.4%)		
Bancorp, Inc. (The)(NON)	13,695	381,406
		381,406
Beverages (0.9%)		
Celsius Holdings, Inc.(NON)	2,660	247,220
		247,220
Biotechnology (4.7%)		
Apellis Pharmaceuticals, Inc.(NON)	2,635	173,805
Ascendis Pharma A/S ADR (Denmark)(NON)	1,475	158,150
Cytokinetix, Inc.(NON)(S)	5,250	184,748
Halozyne Therapeutics, Inc.(NON)	7,810	298,264
Insmmed, Inc.(NON)	4,700	80,135
IVERIC bio, Inc.(NON)	5,320	129,436
Prothena Corp. PLC (Ireland)(NON)	1,480	71,736
Xenon Pharmaceuticals, Inc. (Canada)(NON)	4,255	152,286
		1,248,560
Building products (1.0%)		
Simpson Manufacturing Co., Inc.	2,393	262,369
		262,369
Capital markets (1.4%)		
Hamilton Lane, Inc. Class A	3,550	262,629
StepStone Group, Inc. Class A	3,985	96,716
		359,345
Chemicals (1.7%)		
Livent Corp.(NON)	5,235	113,704

Perimeter Solutions SA (Luxembourg) ^(NON)	10,272	82,998
Valvoline, Inc.	7,425	259,430
		456,132
Commercial services and supplies (3.0%)		
Casella Waste Systems, Inc. Class A ^(NON)	5,060	418,260
Clean Harbors, Inc. ^(NON)	1,160	165,370
Montrose Environmental Group, Inc. ^(NON)	5,783	206,280
		789,910
Communications equipment (0.2%)		
Clearfield, Inc. ^{(NON)(S)}	1,301	60,601
		60,601
Construction and engineering (6.0%)		
Comfort Systems USA, Inc.	2,905	424,014
Dycom Industries, Inc. ^(NON)	1,235	115,658
EMCOR Group, Inc.	2,775	451,187
WillScot Mobile Mini Holdings Corp. ^(NON)	13,092	613,753
		1,604,612
Construction materials (1.1%)		
Eagle Materials, Inc.	1,905	279,559
		279,559
Consumer staples distribution and retail (2.6%)		
BJ's Wholesale Club Holdings, Inc. ^(NON)	3,890	295,912
Chefs' Warehouse, Inc. (The) ^(NON)	3,650	124,283
Performance Food Group Co. ^(NON)	4,400	265,496
		685,691
Diversified telecommunication services (1.7%)		
Iridium Communications, Inc.	7,445	461,069
		461,069
Electrical equipment (0.4%)		
Atkore, Inc. ^(NON)	660	92,717
		92,717
Electronic equipment, instruments, and components (2.1%)		
Napco Security Technologies, Inc. ^{(NON)(S)}	4,574	171,891
Novanta, Inc. ^(NON)	2,405	382,611
		554,502

Energy equipment and services (2.1%)

ChampionX Corp.	13,650	370,325
Liberty Energy, Inc.	15,246	195,301
		<hr/>
		565,626

Ground transportation (3.5%)

Saia, Inc. <i>(NON)</i>	1,050	285,684
TFI International, Inc. (Canada)	5,310	633,625
		<hr/>
		919,309

Health care equipment and supplies (7.0%)

Axonics, Inc. <i>(NON)</i>	3,560	194,234
InMode, Ltd. (Israel) <i>(NON)</i>	13,439	429,510
Lantheus Holdings, Inc. <i>(NON)</i>	7,880	650,573
Merit Medical Systems, Inc. <i>(NON)</i>	5,825	430,759
Treace Medical Concepts, Inc. <i>(NON)</i>	6,340	159,705
		<hr/>
		1,864,781

Health care providers and services (3.0%)

Encompass Health Corp.	2,170	117,397
HealthEquity, Inc. <i>(NON)</i>	2,285	134,152
Option Care Health, Inc. <i>(NON)</i>	11,955	379,810
Progyny, Inc. <i>(NON)</i>	4,910	157,709
		<hr/>
		789,068

Health care technology (1.0%)

Evolent Health, Inc. Class A <i>(NON)</i>	8,225	266,901
		<hr/>
		266,901

Hotels, restaurants, and leisure (6.6%)

Brinker International, Inc. <i>(NON)</i>	4,240	161,120
Churchill Downs, Inc.	2,115	543,661
Everi Holdings, Inc. <i>(NON)</i>	17,250	295,838
Planet Fitness, Inc. Class A <i>(NON)</i>	5,830	452,816
Texas Roadhouse, Inc.	2,735	295,544
		<hr/>
		1,748,979

Household durables (1.1%)

Century Communities, Inc.	1,355	86,612
Installed Building Products, Inc.	1,900	216,657
		<hr/>
		303,269

Insurance (2.2%)

Kinsale Capital Group, Inc.	1,975	592,796
		<hr/>

592,796

Life sciences tools and services (1.8%)

Medpace Holdings, Inc. ^(NON)	2,485	467,304
		467,304

Machinery (3.4%)

Federal Signal Corp.	7,590	411,454
RBC Bearings, Inc. ^{(NON)(S)}	2,086	485,475
		896,929

Metals and mining (0.4%)

MP Materials Corp. ^{(NON)(S)}	4,055	114,310
		114,310

Oil, gas, and consumable fuels (4.2%)

Chord Energy Corp.	2,015	271,219
Civitas Resources, Inc.	3,930	268,576
Denbury, Inc. ^(NON)	1,560	136,703
Magnolia Oil & Gas Corp. Class A ^(S)	12,045	263,545
Matador Resources Co.	3,945	187,979
		1,128,022

Personal care products (0.7%)

BellRing Brands, Inc. ^(NON)	5,370	182,580
		182,580

Pharmaceuticals (1.1%)

Axsome Therapeutics, Inc. ^(NON)	3,295	203,236
Harmony Biosciences Holdings, Inc. ^(NON)	2,970	96,971
		300,207

Professional services (4.8%)

ICF International, Inc.	3,315	363,656
KBR, Inc.	7,770	427,739
WNS Holdings, Ltd. ADR (India) ^(NON)	5,285	492,403
		1,283,798

Real estate management and development (1.8%)

Colliers International Group, Inc. (Canada)	4,500	474,906
		474,906

Retail REITs (0.3%)

Phillips Edison & Co., Inc.	2,150	70,133
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70,133

Semiconductors and semiconductor equipment (6.5%)

Axcelis Technologies, Inc. <i>(NON)</i>	3,410	454,383
Impinj, Inc. <i>(NON)</i>	760	102,995
Nova, Ltd. (Israel) <i>(NON)</i>	5,100	532,797
Onto Innovation, Inc. <i>(NON)</i>	4,635	407,324
Rambus, Inc. <i>(NON)</i>	4,550	233,233

1,730,732

Software (11.6%)

Altair Engineering, Inc. Class A <i>(NON)</i>	2,800	201,908
Descartes Systems Group, Inc. (The) (Canada) <i>(NON)</i>	5,865	472,778
Manhattan Associates, Inc. <i>(NON)</i>	3,325	514,876
Progress Software Corp.	5,236	300,808
SPS Commerce, Inc. <i>(NON)</i>	2,785	424,156
Tenable Holdings, Inc. <i>(NON)</i>	9,520	452,295
Verra Mobility Corp. <i>(NON)</i>	30,343	513,404
Vertex, Inc. Class A <i>(NON)</i>	10,205	211,141

3,091,366

Specialty retail (4.5%)

Boot Barn Holdings, Inc. <i>(NON)</i>	6,098	467,351
Five Below, Inc. <i>(NON)</i>	2,510	516,985
Murphy USA, Inc.	800	206,440

1,190,776

Technology hardware, storage, and peripherals (0.3%)

Avid Technology, Inc. <i>(NON)</i>	2,730	87,305
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87,305

Textiles, apparel, and luxury goods (1.1%)

Crocs, Inc. <i>(NON)</i>	2,405	304,088
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304,088

Trading companies and distributors (1.8%)

Applied Industrial Technologies, Inc.	3,330	473,285
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473,285

Total common stocks (cost \$20,280,204)

\$26,488,551

SHORT-TERM INVESTMENTS (4.9%)(a)

	Shares	Value
Putnam Cash Collateral Pool, LLC 5.03%(AFF)	1,082,973	\$1,082,973
Putnam Short Term Investment Fund Class P 4.88%(AFF)	206,736	206,736
Total short-term investments (cost \$1,289,709)		\$1,289,709

TOTAL INVESTMENTS

Total investments (cost \$21,569,913)	\$27,778,260
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Key to holding's abbreviations

ADR American Depositary 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 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 \$26,585,886.

(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 3/31/23
Short-term investments					
Putnam Cash Collateral Pool, LLC*#	\$3,045,043	\$4,305,508	\$6,267,578	\$36,876	\$1,082,973

Putnam Short Term
Investment Fund**

738,087 933,837 1,465,188 4,729 206,736

**Total Short-term
investments**

\$3,783,130 \$5,239,345 \$7,732,766 \$41,605 \$1,289,709

* 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 \$1,082,973 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 \$1,081,082.

** 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.

(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 Depositary 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. 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.

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	\$461,069	\$—	\$—
Consumer discretionary	3,705,500	—	—
Consumer staples	1,115,491	—	—
Energy	1,693,648	—	—
Financials	1,333,547	—	—
Health care	4,936,821	—	—
Industrials	6,322,929	—	—
Information technology	5,524,506	—	—
Materials	850,001	—	—
Real estate	545,039	—	—
Total common stocks	26,488,551	—	—
Short-term investments	—	1,289,709	—
Totals by level	\$26,488,551	\$1,289,709	\$—

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

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