

Putnam VT Small Cap Growth Fund

The fund's portfolio

9/30/22 (Unaudited)

COMMON STOCKS (97.5%)(a)

	Shares	Value
Auto components (0.6%)		
Dorman Products, Inc. <i>(NON)</i>	1,905	\$156,439
		156,439
Banks (2.1%)		
Bancorp, Inc. (The) <i>(NON)</i>	9,275	203,865
ServisFirst Bancshares, Inc. <i>(S)</i>	4,025	322,000
		525,865
Beverages (0.4%)		
Celsius Holdings, Inc. <i>(NON)</i>	1,015	92,040
		92,040
Biotechnology (8.1%)		
Apellis Pharmaceuticals, Inc. <i>(NON)</i>	3,235	220,951
Ascendis Pharma A/S ADR (Denmark) <i>(NON)(S)</i>	1,535	158,504
Biohaven Pharmaceutical Holding Co., Ltd. <i>(NON)</i>	2,485	375,657
Cytokinetics, Inc. <i>(NON)</i>	6,525	316,136
Denali Therapeutics, Inc. <i>(NON)</i>	2,005	61,533
Halozyme Therapeutics, Inc. <i>(NON)(S)</i>	10,120	400,145
Insmed, Inc. <i>(NON)</i>	7,585	163,381
Intellia Therapeutics, Inc. <i>(NON)</i>	1,670	93,453
IVERIC bio, Inc. <i>(NON)</i>	3,600	64,584
Xenon Pharmaceuticals, Inc. (Canada) <i>(NON)</i>	3,955	142,776
		1,997,120
Building products (0.6%)		
Advanced Drainage Systems, Inc.	1,180	146,757
		146,757
Capital markets (0.6%)		
Hamilton Lane, Inc. Class A	2,635	157,072
		157,072

Chemicals (1.1%)

Livent Corp. <i>(NON)</i>	5,445	166,889
Perimeter Solutions SA (Luxembourg) <i>(NON)(S)</i>	12,908	103,393
		<hr/>
		270,282

Commercial services and supplies (3.0%)

Casella Waste Systems, Inc. Class A <i>(NON)</i>	5,675	433,513
Montrose Environmental Group, Inc. <i>(NON)</i>	8,923	300,259
		<hr/>
		733,772

Communications equipment (0.3%)

Clearfield, Inc. <i>(NON)</i>	760	79,526
		<hr/>
		79,526

Construction and engineering (4.2%)

Dycom Industries, Inc. <i>(NON)</i>	1,265	120,845
EMCOR Group, Inc.	2,345	270,801
WillScot Mobile Mini Holdings Corp. <i>(NON)</i>	15,902	641,328
		<hr/>
		1,032,974

Electronic equipment, instruments, and components (1.3%)

Novanta, Inc. <i>(NON)(S)</i>	2,865	331,337
		<hr/>
		331,337

Energy equipment and services (1.8%)

ChampionX Corp.	13,005	254,508
Liberty Energy, Inc. <i>(NON)</i>	14,541	184,380
		<hr/>
		438,888

Equity real estate investment trusts (REITs) (1.3%)

Phillips Edison & Co., Inc.	4,050	113,603
Ryman Hospitality Properties, Inc. <i>(NON)</i>	2,750	202,373
		<hr/>
		315,976

Food and staples retailing (3.0%)

BJ's Wholesale Club Holdings, Inc. <i>(NON)</i>	6,555	477,270
Performance Food Group Co. <i>(NON)</i>	6,125	263,069
		<hr/>
		740,339

Food products (0.5%)

Simply Good Foods Co. (The) <i>(NON)</i>	4,050	129,560
		<hr/>
		129,560

Health-care equipment and supplies (9.3%)

AtriCure, Inc. <i>(NON)</i>	2,515	98,337
Axonics, Inc. <i>(NON)</i>	3,965	279,295
InMode, Ltd. (Israel) <i>(NON)(S)</i>	13,949	406,055
Lantheus Holdings, Inc. <i>(NON)</i>	9,265	651,607
Merit Medical Systems, Inc. <i>(NON)(S)</i>	6,550	370,141
Omnicell, Inc. <i>(NON)</i>	1,415	123,147
Shockwave Medical, Inc. <i>(NON)</i>	875	243,311
STAAR Surgical Co. <i>(NON)</i>	1,820	128,401
		<hr/>
		2,300,294

Health-care providers and services (3.7%)

Option Care Health, Inc. <i>(NON)</i>	13,160	414,145
R1 RCM, Inc. <i>(NON)</i>	27,133	502,774
		<hr/>
		916,919

Health-care technology (0.3%)

Evolent Health, Inc. Class A <i>(NON)</i>	2,055	73,836
		<hr/>
		73,836

Hotels, restaurants, and leisure (4.5%)

Churchill Downs, Inc.	2,435	448,405
Everi Holdings, Inc. <i>(NON)</i>	20,310	329,428
Planet Fitness, Inc. Class A <i>(NON)</i>	6,050	348,843
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		1,126,676

Insurance (3.1%)

Kinsale Capital Group, Inc.	2,405	614,285
RLI Corp.	1,485	152,034
		<hr/>
		766,319

IT Services (3.7%)

CSG Systems International, Inc.	2,335	123,475
Perficient, Inc. <i>(NON)</i>	4,588	298,312
WNS Holdings, Ltd. ADR (India) <i>(NON)</i>	6,020	492,677
		<hr/>
		914,464

Life sciences tools and services (1.7%)

Medpace Holdings, Inc. <i>(NON)(S)</i>	2,695	423,573
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		423,573

Machinery (3.9%)

Chart Industries, Inc. <i>(NON)</i>	1,155	212,924
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Federal Signal Corp.	7,220	269,450
RBC Bearings, Inc. <i>(NON)(S)</i>	2,381	494,796
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		977,170
Media (1.8%)		
TechTarget, Inc. <i>(NON)(S)</i>	7,609	450,453
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		450,453
Metals and mining (0.4%)		
MP Materials Corp. <i>(NON)</i>	3,900	106,470
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		106,470
Oil, gas, and consumable fuels (4.7%)		
Chord Energy Corp.	1,410	192,846
Civitas Resources, Inc.	3,795	217,795
Magnolia Oil & Gas Corp. Class A	13,620	269,812
Matador Resources Co.	4,825	236,039
SM Energy Co.	6,570	247,098
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		1,163,590
Personal products (0.6%)		
BellRing Brands, Inc. <i>(NON)</i>	7,265	149,732
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		149,732
Pharmaceuticals (2.2%)		
Axsome Therapeutics, Inc. <i>(NON)</i>	3,430	153,047
Corcept Therapeutics, Inc. <i>(NON)(S)</i>	4,450	114,098
Harmony Biosciences Holdings, Inc. <i>(NON)</i>	3,500	155,015
Pacira BioSciences, Inc. <i>(NON)</i>	2,305	122,603
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		544,763
Professional services (2.9%)		
ICF International, Inc.	3,450	376,119
KBR, Inc.	8,080	349,218
		<hr/>
		725,337
Real estate management and development (1.8%)		
Colliers International Group, Inc. (Canada)	4,890	448,131
		<hr/>
		448,131
Road and rail (3.3%)		
Saia, Inc. <i>(NON)</i>	1,090	207,100
TFI International, Inc. (Canada)	6,650	601,815
		<hr/>
		808,915

Semiconductors and semiconductor equipment (4.0%)

Nova, Ltd. (Israel) ^{(NON)(S)}	5,595	477,254
Onto Innovation, Inc. ^(NON)	4,040	258,762
Synaptics, Inc. ^(NON)	975	96,535
Ultra Clean Holdings, Inc. ^(NON)	5,907	152,105
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		984,656

Software (10.4%)

Descartes Systems Group, Inc. (The) (Canada) ^(NON)	5,650	358,945
Manhattan Associates, Inc. ^(NON)	4,130	549,414
Paylocity Holding Corp. ^(NON)	1,205	291,104
Progress Software Corp.	4,001	170,243
Rapid7, Inc. ^(NON)	1,755	75,290
SPS Commerce, Inc. ^(NON)	3,425	425,488
Tenable Holdings, Inc. ^(NON)	3,950	137,460
Verra Mobility Corp. ^{(NON)(S)}	35,943	552,444
Vertex, Inc. Class A ^(NON)	925	12,645
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		2,573,033

Specialty retail (4.4%)

Boot Barn Holdings, Inc. ^(NON)	7,018	410,272
Five Below, Inc. ^{(NON)(S)}	3,160	435,037
Murphy USA, Inc.	855	235,048
		<hr/>
		1,080,357

Thriffs and mortgage finance (0.4%)

Walker & Dunlop, Inc.	1,153	96,541
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		96,541

Trading companies and distributors (1.5%)

Applied Industrial Technologies, Inc.	3,665	376,683
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		376,683

Total common stocks (cost \$21,228,390)**\$24,155,859**

SHORT-TERM INVESTMENTS (20.6%)^(a)

Shares Value

Putnam Cash Collateral Pool, LLC 3.06% ^(AFF)	4,284,094	\$4,284,094
Putnam Short Term Investment Fund Class P 3.11% ^(AFF)	814,098	814,098
Total short-term investments (cost \$5,098,192)		\$5,098,192
TOTAL INVESTMENTS		
Total investments (cost \$26,326,582)		\$29,254,051

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, 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 \$24,774,280.

(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*#	\$2,143,385	\$17,428,586	\$15,287,877	\$19,523	\$4,284,094
Putnam Short Term Investment Fund**	280,216	4,374,946	3,841,064	3,640	814,098
Total Short-term investments	\$2,423,601	\$21,803,532	\$19,128,941	\$23,163	\$5,098,192

* 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 \$4,284,094 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 \$4,170,161.

** 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 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. 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	\$450,453	\$—	\$—
Consumer discretionary	2,363,472	—	—
Consumer staples	1,111,671	—	—
Energy	1,602,478	—	—
Financials	1,545,797	—	—
Health care	6,256,505	—	—
Industrials	4,801,608	—	—
Information technology	4,883,016	—	—
Materials	376,752	—	—
Real estate	764,107	—	—
	<hr/>	<hr/>	<hr/>
Total common stocks	24,155,859	—	—
Short-term investments	—	5,098,192	—
	<hr/>	<hr/>	<hr/>
Totals by level	\$24,155,859	\$5,098,192	\$—

* 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