

# Putnam VT Small Cap Value Fund

## The fund's portfolio

3/31/23 (Unaudited)

### COMMON STOCKS (98.0%)(a)

	Shares	Value
<b>Aerospace and defense (1.3%)</b>		
V2X, Inc. <i>(NON)</i>	35,758	\$1,420,308
		<b>1,420,308</b>
<b>Automobile components (0.8%)</b>		
Motorcar Parts of America, Inc. <i>(NON)</i>	121,395	903,179
		<b>903,179</b>
<b>Banks (15.6%)</b>		
Ameris Bancorp	29,360	1,073,989
Axos Financial, Inc. <i>(NON)</i>	18,200	671,944
Bancorp, Inc. (The) <i>(NON)</i>	53,640	1,493,874
Bank of NT Butterfield & Son, Ltd. (The) (Bermuda)	33,300	899,100
Bridgewater Bancshares, Inc. <i>(NON)</i>	63,280	685,955
Coastal Financial Corp./WA <i>(NON)</i>	25,963	934,928
ConnectOne Bancorp, Inc.	47,509	839,959
CrossFirst Bankshares, Inc. <i>(NON)</i>	41,862	438,714
Equity Bancshares, Inc. Class A	38,700	943,119
First Foundation, Inc.	79,303	590,807
Five Star Bancorp	42,818	913,736
Lakeland Bancorp, Inc.	61,460	961,234
Metropolitan Bank Holding Corp. <i>(NON)</i>	16,061	544,307
OFG Bancorp (Puerto Rico)	57,600	1,436,544
Origin Bancorp, Inc.	18,400	591,560
Peapack-Gladstone Financial Corp.	33,000	977,460
QCR Holdings, Inc.	24,078	1,057,265
Southern First Bancshares, Inc. <i>(NON)</i>	14,844	455,711
UMB Financial Corp.	12,200	704,184
Valley National Bancorp	66,100	610,764
		<b>16,825,154</b>
<b>Biotechnology (4.0%)</b>		
Chinook Therapeutics, Inc. <i>(NON)</i>	54,400	1,259,360
ImmunoGen, Inc. <i>(NON)</i>	285,800	1,097,472
Veracyte, Inc. <i>(NON)</i>	44,200	985,660
Xencor, Inc. <i>(NON)</i>	35,800	998,462

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**4,340,954****Capital markets (0.8%)**

NewtekOne, Inc. <sup>(S)</sup>	69,100	884,480
		<hr/> <b>884,480</b>

**Chemicals (1.2%)**

Olin Corp.	23,280	1,292,040
		<hr/> <b>1,292,040</b>

**Commercial services and supplies (3.9%)**

ACCO Brands Corp.	187,000	994,840
Deluxe Corp.	66,600	1,065,600
SP Plus Corp. <sup>(NON)</sup>	38,900	1,333,881
VSE Corp.	18,800	844,120
		<hr/> <b>4,238,441</b>

**Communications equipment (3.5%)**

Aviat Networks, Inc. <sup>(NON)</sup>	60,970	2,101,028
Ribbon Communications, Inc. <sup>(NON)</sup>	489,100	1,672,722
		<hr/> <b>3,773,750</b>

**Construction and engineering (3.6%)**

APi Group Corp. <sup>(NON)</sup>	80,900	1,818,632
Granite Construction, Inc.	31,047	1,275,411
WillScot Mobile Mini Holdings Corp. <sup>(NON)</sup>	17,892	838,777
		<hr/> <b>3,932,820</b>

**Consumer staples distribution and retail (0.5%)**

United Natural Foods, Inc. <sup>(NON)</sup>	20,100	529,635
		<hr/> <b>529,635</b>

**Containers and packaging (1.4%)**

Graphic Packaging Holding Co.	60,700	1,547,243
		<hr/> <b>1,547,243</b>

**Diversified consumer services (1.3%)**

Universal Technical Institute, Inc. <sup>(NON)</sup>	183,627	1,355,167
		<hr/> <b>1,355,167</b>

**Diversified REITs (1.1%)**

Alpine Income Property Trust, Inc. <sup>(R)</sup>	70,252	1,182,341
		<hr/> <b>1,182,341</b>

**Electronic equipment, instruments, and components (4.0%)**

Celestica, Inc. (Canada) <sup>(NON)</sup>	124,100	1,600,890
Jabil, Inc.	12,327	1,086,748
Vontier Corp.	59,600	1,629,464
		<hr/>
		<b>4,317,102</b>

**Energy equipment and services (3.9%)**

Diamond Offshore Drilling, Inc. <sup>(NON)</sup>	129,300	1,556,772
Newpark Resources, Inc. <sup>(NON)</sup>	264,737	1,019,237
Oceaneering International, Inc. <sup>(NON)</sup>	64,817	1,142,724
ProFrac Holding Corp. Class A <sup>(NON)</sup>	36,336	460,377
		<hr/>
		<b>4,179,110</b>

**Entertainment (1.2%)**

Lions Gate Entertainment Corp. Class A <sup>(NON)</sup>	112,684	1,247,412
		<hr/>
		<b>1,247,412</b>

**Financial services (1.2%)**

Walker & Dunlop, Inc.	16,780	1,278,133
		<hr/>
		<b>1,278,133</b>

**Food products (0.5%)**

Hostess Brands, Inc. <sup>(NON)</sup>	21,400	532,432
		<hr/>
		<b>532,432</b>

**Ground transportation (1.0%)**

Marten Transport, Ltd.	51,800	1,085,210
		<hr/>
		<b>1,085,210</b>

**Health care equipment and supplies (1.9%)**

Lantheus Holdings, Inc. <sup>(NON)</sup>	10,540	870,182
QuidelOrtho Corp. <sup>(NON)</sup>	13,800	1,229,442
		<hr/>
		<b>2,099,624</b>

**Health care providers and services (3.9%)**

Acadia Healthcare Co., Inc. <sup>(NON)</sup>	3,805	274,911
Aveanna Healthcare Holdings, Inc. <sup>(NON)</sup>	340,800	354,432
Brookdale Senior Living, Inc. <sup>(NON)(S)</sup>	399,446	1,178,366
Option Care Health, Inc. <sup>(NON)</sup>	34,000	1,080,180
RadNet, Inc. <sup>(NON)</sup>	52,420	1,312,073
		<hr/>
		<b>4,199,962</b>

**Hotel and resort REITs (2.1%)**

Apple Hospitality REIT, Inc. <sup>(R)</sup>	86,300	1,339,376
RLJ Lodging Trust <sup>(R)</sup>	91,940	974,564
		<hr/>
		<b>2,313,940</b>
<b>Hotels, restaurants, and leisure (4.5%)</b>		
Chuy's Holdings, Inc. <sup>(NON)</sup>	37,400	1,340,790
Dave & Buster's Entertainment, Inc. <sup>(NON)</sup>	32,900	1,210,391
Everi Holdings, Inc. <sup>(NON)</sup>	68,400	1,173,060
Penn Entertainment, Inc. <sup>(NON)</sup>	36,500	1,082,590
		<hr/>
		<b>4,806,831</b>
<b>Household durables (1.2%)</b>		
Cavco Industries, Inc. <sup>(NON)</sup>	3,100	984,994
M/I Homes, Inc. <sup>(NON)</sup>	5,200	328,068
		<hr/>
		<b>1,313,062</b>
<b>Insurance (2.4%)</b>		
Heritage Insurance Holdings, Inc.	81,004	249,492
Horace Mann Educators Corp.	31,800	1,064,664
Kemper Corp.	23,100	1,262,646
		<hr/>
		<b>2,576,802</b>
<b>IT Services (0.4%)</b>		
Edigo, Inc. <sup>(NON)</sup>	573,200	453,459
		<hr/>
		<b>453,459</b>
<b>Leisure products (1.1%)</b>		
Clarus Corp.	121,800	1,151,010
		<hr/>
		<b>1,151,010</b>
<b>Machinery (4.7%)</b>		
Chart Industries, Inc. <sup>(NON)</sup>	9,943	1,246,852
Crane Co. <sup>(NON)</sup>	10,400	775,840
Crane Holdings Co.	5,640	640,140
Federal Signal Corp.	19,700	1,067,937
Hillenbrand, Inc.	27,200	1,292,816
		<hr/>
		<b>5,023,585</b>
<b>Metals and mining (3.3%)</b>		
Alamos Gold, Inc. Class A (Canada)	89,180	1,090,671
Haynes International, Inc.	24,656	1,235,019
United States Steel Corp.	46,600	1,216,260
		<hr/>
		<b>3,541,950</b>
<b>Mortgage real estate investment trusts (REITs) (3.9%)</b>		

AGNC Investment Corp. <sup>(R)</sup>	69,500	700,560
Ladder Capital Corp. <sup>(R)</sup>	114,512	1,082,138
MFA Financial, Inc. <sup>(R)</sup>	98,800	980,096
Rithm Capital Corp. <sup>(R)</sup>	187,680	1,501,440
		<hr/>
		<b>4,264,234</b>
<b>Multi-utilities (2.5%)</b>		
Algonquin Power & Utilities Corp. (Canada) <sup>(S)</sup>	149,900	1,259,160
Unitil Corp.	24,380	1,390,635
		<hr/>
		<b>2,649,795</b>
<b>Oil, gas, and consumable fuels (3.2%)</b>		
CNX Resources Corp. <sup>(NON)(S)</sup>	60,520	969,530
International Seaways, Inc.	28,600	1,192,048
Magnolia Oil & Gas Corp. Class A <sup>(S)</sup>	49,185	1,076,168
Scorpio Tankers, Inc.	4,800	270,288
		<hr/>
		<b>3,508,034</b>
<b>Passenger airlines (1.3%)</b>		
Sun Country Airlines Holdings, Inc. <sup>(NON)</sup>	65,905	1,351,053
		<hr/>
		<b>1,351,053</b>
<b>Professional services (2.1%)</b>		
IBEX, Ltd. <sup>(NON)</sup>	57,190	1,395,436
ICF International, Inc.	8,340	914,898
		<hr/>
		<b>2,310,334</b>
<b>Retail REITs (1.1%)</b>		
Spirit Realty Capital, Inc. <sup>(R)</sup>	28,959	1,153,727
		<hr/>
		<b>1,153,727</b>
<b>Software (0.8%)</b>		
Verra Mobility Corp. <sup>(NON)</sup>	50,438	853,411
		<hr/>
		<b>853,411</b>
<b>Specialized REITs (0.9%)</b>		
EPR Properties <sup>(R)(S)</sup>	26,860	1,023,366
		<hr/>
		<b>1,023,366</b>
<b>Specialty retail (0.2%)</b>		
a.k.a. Brands Holding Corp. <sup>(NON)</sup>	351,976	191,721
		<hr/>
		<b>191,721</b>
<b>Textiles, apparel, and luxury goods (1.9%)</b>		

Levi Strauss & Co. Class A <sup>(S)</sup>	61,800	1,126,614
Unifi, Inc. <sup>(NON)</sup>	114,164	932,720
		<b>2,059,334</b>
<b>Tobacco (1.0%)</b>		
Turning Point Brands, Inc.	51,100	1,073,100
		<b>1,073,100</b>
<b>Trading companies and distributors (2.8%)</b>		
Custom Truck One Source, Inc. <sup>(NON)(S)</sup>	196,800	1,336,272
Karat Packaging, Inc.	29,580	394,301
MRC Global, Inc. <sup>(NON)</sup>	128,320	1,247,270
		<b>2,977,843</b>
<b>Total common stocks (cost \$118,322,792)</b>		<b>\$105,761,088</b>

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**SHORT-TERM INVESTMENTS (8.0%)<sup>(a)</sup>**

	Shares	Value
Putnam Cash Collateral Pool, LLC 5.03% <sup>(AFF)</sup>	6,722,602	\$6,722,602
Putnam Short Term Investment Fund Class P 4.88% <sup>(AFF)</sup>	1,948,532	1,948,532
<b>Total short-term investments (cost \$8,671,134)</b>		<b>\$8,671,134</b>
<b>TOTAL INVESTMENTS</b>		
<b>Total investments (cost \$126,993,926)</b>		<b>\$114,432,222</b>

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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 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 \$107,961,755.

(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
<b>Short-term investments</b>					
Putnam Cash Collateral Pool, LLC*#	\$12,315,103	\$22,731,478	\$28,323,979	\$144,877	\$6,722,602
Putnam Short Term Investment Fund**	2,747,560	6,972,958	7,771,986	12,229	1,948,532
<b>Total Short-term investments</b>	<b>\$15,062,663</b>	<b>\$29,704,436</b>	<b>\$36,095,965</b>	<b>\$157,106</b>	<b>\$8,671,134</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 \$6,722,602 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 \$6,558,067. Certain of these securities were sold prior to the close of the reporting period.

\*\* 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. 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.

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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:

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#### Valuation inputs

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<b>Investments in securities:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
<b>Common stocks*:</b>			
Communication services	\$1,247,412	\$—	\$—
Consumer discretionary	11,780,304	—	—
Consumer staples	2,135,167	—	—
Energy	7,687,144	—	—
Financials	25,828,803	—	—
Health care	10,640,540	—	—
Industrials	22,339,594	—	—
Information technology	9,397,722	—	—
Materials	6,381,233	—	—
Real estate	5,673,374	—	—
Utilities	2,649,795	—	—
	<hr/>	<hr/>	<hr/>
<b>Total common stocks</b>	<b>105,761,088</b>	<b>—</b>	<b>—</b>
Short-term investments	—	8,671,134	—
	<hr/>	<hr/>	<hr/>
<b>Totals by level</b>	<b>\$105,761,088</b>	<b>\$8,671,134</b>	<b>\$—</b>

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