

Putnam VT Small Cap Value Fund

The fund's portfolio

9/30/23 (Unaudited)

COMMON STOCKS (99.1%)(a)

	Shares	Value
Aerospace and defense (0.9%)		
V2X, Inc. <i>(NON)</i>	18,458	\$953,540
		953,540
Automobile components (1.1%)		
Motorcar Parts of America, Inc. <i>(NON)</i>	148,995	1,205,370
		1,205,370
Banks (14.9%)		
Amalgamated Financial Corp.	25,300	435,666
Axos Financial, Inc. <i>(NON)</i>	29,300	1,109,298
Bancorp, Inc. (The) <i>(NON)</i>	55,240	1,905,783
Bank of NT Butterfield & Son, Ltd. (The) (Bermuda)	32,800	888,224
Business First Bancshares, Inc.	30,900	579,684
Capital City Bank Group, Inc.	14,600	435,518
Coastal Financial Corp./WA <i>(NON)</i>	25,363	1,088,326
ConnectOne Bancorp, Inc.	50,409	898,792
First Foundation, Inc.	299,003	1,817,938
Five Star Bancorp	40,335	809,120
Metropolitan Bank Holding Corp. <i>(NON)</i>	25,137	911,970
Northrim BanCorp, Inc.	12,400	491,288
OFG Bancorp (Puerto Rico)	61,500	1,836,390
Origin Bancorp, Inc.	15,000	433,050
Peapack-Gladstone Financial Corp.	16,100	412,965
QCR Holdings, Inc.	16,978	823,773
Southern First Bancshares, Inc. <i>(NON)</i>	14,644	394,509
UMB Financial Corp.	12,200	757,010
		16,029,304
Beverages (1.0%)		
MGP Ingredients, Inc.	10,800	1,139,184
		1,139,184
Biotechnology (2.9%)		
MiMedx Group, Inc. <i>(NON)</i>	176,300	1,285,227
Veracyte, Inc. <i>(NON)</i>	46,400	1,036,112

Xencor, Inc. ^(NON)	39,100	787,865
		3,109,204
Building products (3.7%)		
Janus International Group, Inc. ^(NON)	117,800	1,260,460
Tecnoglass, Inc. (Colombia)	33,400	1,100,864
UFP Industries, Inc.	15,600	1,597,440
		3,958,764
Chemicals (1.3%)		
Olin Corp.	28,580	1,428,428
		1,428,428
Commercial services and supplies (6.1%)		
ACCO Brands Corp.	172,900	992,446
Deluxe Corp.	53,600	1,012,504
HNI Corp.	57,500	1,991,225
SP Plus Corp. ^(NON)	43,000	1,552,300
VSE Corp.	21,100	1,064,284
		6,612,759
Communications equipment (4.0%)		
Aviat Networks, Inc. ^(NON)	52,572	1,640,246
NETGEAR, Inc. ^(NON)	86,800	1,092,812
Ribbon Communications, Inc. ^(NON)	605,500	1,622,740
		4,355,798
Construction and engineering (2.6%)		
APi Group Corp. ^(NON)	39,200	1,016,456
Granite Construction, Inc. ^(S)	31,047	1,180,407
WillScot Mobile Mini Holdings Corp. ^(NON)	14,392	598,563
		2,795,426
Containers and packaging (0.9%)		
Graphic Packaging Holding Co.	45,400	1,011,512
		1,011,512
Diversified consumer services (3.0%)		
H&R Block, Inc.	41,500	1,786,990
Universal Technical Institute, Inc. ^(NON)	166,327	1,393,820
		3,180,810
Diversified REITs (1.4%)		
Alpine Income Property Trust, Inc. ^(R)	90,152	1,474,887

1,474,887

Electric utilities (2.1%)

ALLETE, Inc.	20,000	1,056,000
NRG Energy, Inc.	32,600	1,255,752

2,311,752

Electronic equipment, instruments, and components (2.4%)

Celestica, Inc. (Canada) ^(NON)	94,205	2,309,907
Jabil, Inc.	2,027	257,206

2,567,113

Energy equipment and services (5.4%)

Diamond Offshore Drilling, Inc. ^(NON)	107,000	1,570,760
Helix Energy Solutions Group, Inc. ^(NON)	101,600	1,134,872
Newpark Resources, Inc. ^(NON)	267,237	1,846,608
Oceaneering International, Inc. ^(NON)	47,917	1,232,425

5,784,665

Entertainment (0.8%)

Lions Gate Entertainment Corp. Class A ^(NON)	103,484	877,544
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877,544

Financial services (2.1%)

NewtekOne, Inc. ^(S)	67,300	992,675
Walker & Dunlop, Inc.	17,280	1,282,867

2,275,542

Gas utilities (1.0%)

ONE Gas, Inc.	16,600	1,133,448
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1,133,448

Ground transportation (1.0%)

Marten Transport, Ltd.	56,100	1,105,731
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1,105,731

Health care equipment and supplies (1.7%)

Lantheus Holdings, Inc. ^(NON)	9,940	690,631
QuidelOrtho Corp. ^(NON)	15,800	1,154,032

1,844,663

Health care providers and services (4.2%)

Aveanna Healthcare Holdings, Inc. ^(NON)	349,500	415,905
Brookdale Senior Living, Inc. ^(NON)	362,246	1,499,698
Option Care Health, Inc. ^(NON)	11,200	362,320

Quipt Home Medical Corp. <i>(NON)</i>	207,200	1,054,648
RadNet, Inc. <i>(NON)</i>	40,720	1,147,897
		4,480,468
Hotel and resort REITs (2.0%)		
Apple Hospitality REIT, Inc. <i>(R)(S)</i>	82,900	1,271,686
RLJ Lodging Trust <i>(R)</i>	93,240	912,820
		2,184,506
Hotels, restaurants, and leisure (2.1%)		
Chuy's Holdings, Inc. <i>(NON)</i>	29,600	1,053,168
Dave & Buster's Entertainment, Inc. <i>(NON)(S)</i>	31,300	1,160,291
		2,213,459
Household durables (2.0%)		
Cavco Industries, Inc. <i>(NON)</i>	4,300	1,142,338
M/I Homes, Inc. <i>(NON)</i>	7,400	621,896
Taylor Morrison Home Corp. <i>(NON)</i>	10,100	430,361
		2,194,595
Insurance (3.2%)		
Heritage Insurance Holdings, Inc. <i>(NON)</i>	86,304	560,113
Horace Mann Educators Corp.	29,600	869,648
Kemper Corp.	23,400	983,502
Skyward Specialty Insurance Group, Inc. <i>(NON)</i>	39,105	1,069,913
		3,483,176
IT Services (0.8%)		
Edigo, Inc. <i>(NON)</i>	971,800	828,071
		828,071
Leisure products (1.0%)		
Clarus Corp.	146,100	1,104,516
		1,104,516
Machinery (2.3%)		
Chart Industries, Inc. <i>(NON)(S)</i>	8,543	1,444,792
Hillman Solutions Corp. <i>(NON)</i>	126,100	1,040,325
		2,485,117
Media (1.1%)		
Gray Television, Inc.	177,800	1,230,376
		1,230,376

Metals and mining (1.7%)

Alamos Gold, Inc. Class A (Canada)	49,680	560,887
Haynes International, Inc.	26,256	1,221,429
		1,782,316

Mortgage real estate investment trusts (REITs) (3.9%)

AGNC Investment Corp. ^{(R)(S)}	115,900	1,094,096
Ladder Capital Corp. ^(R)	90,312	926,601
MFA Financial, Inc. ^(R)	91,300	877,393
Rithm Capital Corp. ^(R)	136,580	1,268,828
		4,166,918

Multi-utilities (1.6%)

Algonquin Power & Utilities Corp. (Canada) ^(S)	144,100	853,072
Unitil Corp.	20,180	861,888
		1,714,960

Oil, gas, and consumable fuels (6.0%)

CNX Resources Corp. ^{(NON)(S)}	70,920	1,601,374
Equitrans Midstream Corp.	111,200	1,041,944
Magnolia Oil & Gas Corp. Class A	59,485	1,362,801
Permian Resources Corp.	86,513	1,207,721
SM Energy Co.	31,300	1,241,045
		6,454,885

Professional services (0.8%)

IBEX, Ltd. ^(NON)	54,590	843,416
		843,416

Retail REITs (1.1%)

Spirit Realty Capital, Inc. ^(R)	35,959	1,205,705
		1,205,705

Specialty retail (1.1%)

Shoe Carnival, Inc. ^(S)	50,200	1,206,306
		1,206,306

Textiles, apparel, and luxury goods (0.8%)

Unifi, Inc. ^(NON)	119,564	848,904
		848,904

Tobacco (1.2%)

Turning Point Brands, Inc.	56,200	1,297,658

1,297,658

Trading companies and distributors (1.9%)

Custom Truck One Source, Inc. <i>(NON)</i>	171,600	1,063,920
MRC Global, Inc. <i>(NON)</i>	91,420	937,055

2,000,975

Total common stocks (cost \$114,001,674) \$106,881,771

SHORT-TERM INVESTMENTS (10.0%)^(a)

	Shares	Value
Putnam Cash Collateral Pool, LLC 5.62% <i>(AFF)</i>	10,086,475	\$10,086,475
Putnam Short Term Investment Fund Class P 5.57% <i>(AFF)</i>	728,862	728,862
Total short-term investments (cost \$10,815,337)		\$10,815,337

TOTAL INVESTMENTS

Total investments (cost \$124,817,011) \$117,697,108

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 \$107,823,345.

(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
Short-term investments					
Putnam Cash Collateral Pool, LLC*#	\$12,315,103	\$74,919,481	\$77,148,109	\$357,797	\$10,086,475
Putnam Short Term Investment Fund**	2,747,560	23,666,024	25,684,722	40,157	728,862
Total Short-term investments	\$15,062,663	\$98,585,505	\$102,832,831	\$397,954	\$10,815,337

* 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 \$10,086,475 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 \$9,795,859.

** 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 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, 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.

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	\$2,107,920	\$—	\$—
Consumer discretionary	11,953,960	—	—
Consumer staples	2,436,842	—	—
Energy	12,239,550	—	—
Financials	25,954,940	—	—
Health care	9,434,335	—	—
Industrials	20,755,728	—	—

Information technology	7,750,982	—	—
Materials	4,222,256	—	—
Real estate	4,865,098	—	—
Utilities	5,160,160	—	—
Total common stocks	106,881,771	—	—
Short-term investments	—	10,815,337	—
Totals by level	\$106,881,771	\$10,815,337	\$—

* 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