

Putnam VT Multi-Cap Core Fund

The fund's portfolio

9/30/21 (Unaudited)

COMMON STOCKS (96.8%)(a)

	Shares	Value
Aerospace and defense (2.2%)		
Northrop Grumman Corp.	8,100	\$2,917,215
Raytheon Technologies Corp.	37,600	3,232,096
		6,149,311
Airlines (1.0%)		
Southwest Airlines Co. (NON)	55,200	2,838,936
		2,838,936
Auto components (1.0%)		
Magna International, Inc. (Canada)	37,125	2,793,285
		2,793,285
Banks (5.5%)		
Bank of America Corp.	238,242	10,113,373
Citigroup, Inc.	55,600	3,902,008
KeyCorp	73,307	1,584,897
		15,600,278
Beverages (1.3%)		
Coca-Cola Co. (The)	46,200	2,424,114
Molson Coors Beverage Co. Class B(S)	28,435	1,318,815
		3,742,929
Biotechnology (2.8%)		
AbbVie, Inc.	36,525	3,939,952
Amgen, Inc.	17,995	3,826,637
Vor BioPharma, Inc. (NON)(S)	21,389	335,380
		8,101,969
Capital markets (4.2%)		
Apollo Global Management, Inc.	19,314	1,189,549
Goldman Sachs Group, Inc. (The)	10,090	3,814,323
KKR & Co., Inc.	44,500	2,709,160
Morgan Stanley	26,638	2,592,144
Raymond James Financial, Inc.	17,550	1,619,514
		11,924,690

Chemicals (0.7%)		
Eastman Chemical Co.	18,500	1,863,690
		1,863,690
Communications equipment (1.6%)		
Cisco Systems, Inc./California	81,741	4,449,163
		4,449,163
Construction materials (0.3%)		
Summit Materials, Inc. Class A ^(NON)	22,574	721,691
		721,691
Distributors (0.3%)		
LKQ Corp. ^(NON)	15,400	774,928
		774,928
Diversified financial services (3.5%)		
Berkshire Hathaway, Inc. Class B ^(NON)	20,400	5,567,976
FirstMark Horizon Acquisition Corp. Class A ^(NON)	41,382	405,544
Pershing Square Tontine Holdings, Ltd. Class A ^(NON)	110,700	2,180,790
Senior Connect Acquisition Corp. I Class A ^(NON)	90,234	881,586
Switchback Energy (acquired 5/12/21, cost \$386,350) (Private) ^{(NON)(F)(RES)(P1)}	38,635	346,324
Switchback II Corp. Class A ^{(NON)(S)}	44,579	444,007
		9,826,227
Diversified telecommunication services (1.2%)		
AT&T, Inc.	48,372	1,306,528
Liberty Global PLC Class A (United Kingdom) ^(NON)	72,374	2,156,745
		3,463,273
Electric utilities (2.2%)		
Exelon Corp.	49,200	2,378,328
NRG Energy, Inc.	56,800	2,319,144
PG&E Corp. ^(NON)	163,878	1,573,229
		6,270,701
Entertainment (1.0%)		
Universal Music Group NV (Netherlands) ^(NON)	5,364	143,622
Walt Disney Co. (The) ^(NON)	16,800	2,842,056
		2,985,678
Equity real estate investment trusts (REITs) (2.1%)		
Armada Hoffer Properties, Inc.	96,384	1,288,654
Boston Properties, Inc.	9,700	1,050,995
Gaming and Leisure Properties, Inc.	69,611	3,224,382

Vornado Realty Trust	9,300	390,693
		5,954,724
Food and staples retail (1.8%)		
Walmart, Inc.	36,100	5,031,618
		5,031,618
Health-care equipment and supplies (0.8%)		
Medtronic PLC	14,800	1,855,180
Nyxoah SA (Belgium) ^(NON)	16,370	462,125
		2,317,305
Health-care providers and services (5.0%)		
Cigna Corp.	7,700	1,541,232
CVS Health Corp.	23,200	1,968,752
HCA Healthcare, Inc.	7,039	1,708,506
McKesson Corp.	11,100	2,213,118
Tenet Healthcare Corp. ^(NON)	33,100	2,199,164
UnitedHealth Group, Inc.	11,900	4,649,806
		14,280,578
Hotels, restaurants, and leisure (0.3%)		
Chuy's Holdings, Inc. ^(NON)	17,562	553,730
Kura Sushi USA, Inc. Class A ^(NON)	9,444	412,514
		966,244
Household durables (1.2%)		
HC Brillant Services GmbH (acquired 8/2/13, cost \$4) (Private) (Germany) ^{(NON)(F)(RES)}	6	—
PulteGroup, Inc.	72,600	3,333,792
		3,333,792
Industrial conglomerates (1.4%)		
Honeywell International, Inc.	18,700	3,969,636
		3,969,636
Insurance (1.3%)		
Arch Capital Group, Ltd. ^(NON)	46,000	1,756,280
Assured Guaranty, Ltd.	44,591	2,087,305
		3,843,585
Interactive media and services (6.4%)		
Alphabet, Inc. Class C ^(NON)	4,284	11,418,188
Facebook, Inc. Class A ^(NON)	19,800	6,719,922
		18,138,110
Internet and direct marketing retail (3.7%)		

Amazon.com, Inc. <i>(NON)</i>	3,236	10,630,389
		10,630,389
IT Services (2.5%)		
Mastercard, Inc. Class A	12,800	4,450,304
PayPal Holdings, Inc. <i>(NON)</i>	10,200	2,654,142
		7,104,446
Machinery (1.4%)		
Deere & Co.	2,900	971,703
Otis Worldwide Corp.	35,500	2,920,940
		3,892,643
Media (1.3%)		
Comcast Corp. Class A	66,640	3,727,175
		3,727,175
Metals and mining (1.2%)		
Freeport-McMoRan, Inc. (Indonesia)	57,800	1,880,234
Nucor Corp.	16,263	1,601,743
		3,481,977
Mortgage real estate investment trusts (REITs) (0.3%)		
Starwood Property Trust, Inc.	31,400	766,474
		766,474
Multiline retail (1.8%)		
Target Corp.	22,000	5,032,940
		5,032,940
Oil, gas, and consumable fuels (2.0%)		
Comstock Resources, Inc. <i>(NON)</i>	76,737	794,228
ConocoPhillips	27,157	1,840,430
Enterprise Products Partners LP	99,500	2,153,180
Phillips 66	14,300	1,001,429
		5,789,267
Personal products (—%)		
Better Choice Co., Inc. <i>(NON)</i>	22,188	82,317
		82,317
Pharmaceuticals (2.7%)		
Eli Lilly and Co.	12,000	2,772,600
Johnson & Johnson	29,930	4,833,695
		7,606,295

Real estate management and development (1.0%)

CBRE Group, Inc. Class A ^(NON)	29,700	2,891,592
		<hr/>
		2,891,592

Road and rail (1.3%)

Union Pacific Corp.	18,745	3,674,207
		<hr/>
		3,674,207

Semiconductors and semiconductor equipment (3.9%)

Intel Corp.	51,720	2,755,642
Lam Research Corp.	7,900	4,496,285
Micron Technology, Inc. ^(NON)	23,800	1,689,324
Texas Instruments, Inc.	10,700	2,056,647
		<hr/>
		10,997,898

Software (12.8%)

Citrix Systems, Inc.	5,598	601,057
Dynatrace, Inc. ^(NON)	30,282	2,149,114
EngageSmart, Inc. ^{(NON)(S)}	9,200	313,352
Microsoft Corp.	87,550	24,682,096
NCR Corp. ^(NON)	34,000	1,317,840
Oracle Corp.	58,418	5,089,960
RingCentral, Inc. Class A ^(NON)	1,600	348,000
Salesforce.com, Inc. ^(NON)	6,100	1,654,442
Upland Software, Inc. ^(NON)	9,200	307,648
		<hr/>
		36,463,509

Specialty retail (2.8%)

Best Buy Co., Inc.	21,700	2,293,907
Lowe's Cos., Inc.	28,600	5,801,796
		<hr/>
		8,095,703

Technology hardware, storage, and peripherals (7.1%)

Apple, Inc.	142,332	20,139,978
		<hr/>
		20,139,978

Tobacco (0.7%)

Altria Group, Inc.	44,100	2,007,432
		<hr/>
		2,007,432

Trading companies and distributors (1.2%)

Karat Packaging, Inc. ^(NON)	38,875	817,541
United Rentals, Inc. ^(NON)	7,200	2,526,696
		<hr/>
		3,344,237

Total common stocks (cost \$152,777,226)**\$275,070,820**

INVESTMENT COMPANIES (3.0%)^(a)

	Shares	Value
Consumer Staples Select Sector SPDR Fund	58,200	\$4,006,488
Health Care Select Sector SPDR Fund	34,400	4,379,120
Total investment companies (cost \$8,562,846)		\$8,385,608

CONVERTIBLE BONDS AND NOTES (0.4%)^(a)

	Principal amount	Value
Penn National Gaming, Inc. cv. sr. unsec. notes 2.75%, 5/15/26	\$362,000	\$1,155,142
Total convertible bonds and notes (cost \$362,000)		\$1,155,142

UNITS (0.3%)^(a)

	Units	Value
COVA Acquisition Corp. <i>(NON)</i>	71,761	\$713,304
Total units (cost \$717,610)		\$713,304

SHORT-TERM INVESTMENTS (0.4%)(a)

	Shares	Value
Putnam Cash Collateral Pool, LLC 0.09%(AFF)	1,173,325	\$1,173,325
Total short-term investments (cost \$1,173,325)		\$1,173,325
TOTAL INVESTMENTS		
Total investments (cost \$163,593,007)		\$286,498,199

WRITTEN OPTIONS OUTSTANDING at 9/30/21 (premiums \$71,874) (Unaudited)

Counterparty	Expiration date/ strike price	Notional amount	Contract amount	Value
UBS AG				
Facebook, Inc. Class A (Call)	Nov-21/\$385.00	\$1,343,984	\$3,960	\$11,508
Total				\$11,508

Key to holding's abbreviations

SPDR S&P Depository Receipts

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, 2021 through September 30, 2021 (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 "the SEC" represent the Securities and Exchange Commission, 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 \$284,142,319.

(NON) This security is non-income-producing.

(RES) This security is restricted with regard to public resale. The total fair value of this security and any other

restricted securities (excluding 144A securities), if any, held at the close of the reporting period was \$346,324, or 0.1% of net assets.

(AFF) Affiliated company. For investments in Putnam Cash Collateral Pool, LLC, 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 12/31/20	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 9/30/21
Short-term investments					
Putnam Cash Collateral Pool, LLC*#	\$4,793,650	\$43,859,812	\$47,480,137	\$1,749	\$1,173,325
Putnam Short Term Investment Fund**	10,647,478	29,768,860	40,416,338	3,599	—
Total Short-term investments	\$15,441,128	\$73,628,672	\$87,896,475	\$5,348	\$1,173,325

* 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 \$1,173,325 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 \$1,145,210.

** 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.

(F) This security is valued by Putnam Management at fair value following procedures approved by the Trustees. Securities are classified as Level 3 for ASC 820 based on the securities' valuation inputs.

(S) This security is on loan, in part or in entirety, at the close of the reporting period.

(P1) The investment is an irrevocable commitment made in a private investment transaction to purchase shares of a special purpose acquisition corporation upon consummation of a merger or other identified acquisition transaction in the aggregate amount of \$386,350, the deferred settlement.

At the close of the reporting period, the fund maintained liquid assets totaling \$1,524,600 to cover certain derivative contracts.

Debt obligations are considered secured unless otherwise indicated.

The dates shown on debt obligations are the original maturity dates.

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.

Options contracts: The fund used options contracts to manage downside risks.

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 replugged, 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 had a net liability position of \$11,508 on open derivative contracts subject to the Master Agreements. There was no collateral posted by the fund at period end for these agreements.

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	\$28,314,236	\$—	\$—
Consumer discretionary	31,627,281	—	—
Consumer staples	10,864,296	—	—
Energy	5,789,267	—	—
Financials	41,614,930	—	346,324
Health care	32,306,147	—	—
Industrials	23,868,970	—	—
Information technology	79,154,994	—	—
Materials	6,067,358	—	—
Real estate	8,846,316	—	—
Utilities	6,270,701	—	—
Total common stocks	274,724,496	—	346,324
Convertible bonds and notes	—	1,155,142	—
Investment companies	8,385,608	—	—
Units	713,304	—	—
Short-term investments	—	1,173,325	—
Totals by level	\$283,823,408	\$2,328,467	\$346,324

	Valuation inputs		
Other financial instruments:	Level 1	Level 2	Level 3
Written options outstanding	\$—	\$(11,508)	\$—

Totals by level**\$—****\$(11,508)****\$—**

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

At the start and close of the reporting period, Level 3 investments in securities represented less than 1% of the fund's net assets and were not considered a significant portion of the fund's portfolio.

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:

Written equity option contracts (contract amount)	\$1,000
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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