Putnam VT Core Equity Fund†

The fund's portfolio

9/30/23 (Unaudited)

† Prior to April 30, 2023, the fund was known as Putnam Multi-Cap Core Fund.

COMMON STOCKS (97.3%)(a)

	Shares	Value
Aerospace and defense (0.9%)		
Northrop Grumman Corp.	1,770	\$779,136
RTX Corp.	7,236	520,775
		1,299,911
Air freight and logistics (0.2%)		
GXO Logistics, Inc. (NON)	4,933	289,320
		289,320
Automobile components (0.3%)		
Magna International, Inc. (Canada)	7,646	409,902
		409,902
Automobiles (1.3%)		
General Motors Co.	9,342	308,006
Tesla, Inc. (NON)	5,642	1,411,741
		1,719,747
Banks (3.0%)		
Bank of America Corp.	95,983	2,628,015
JPMorgan Chase & Co.	9,962	1,444,689
		4,072,704
Beverages (2.1%)		
Coca-Cola Co. (The)	34,658	1,940,155
Duckhorn Portfolio, Inc. (The) ^(NON)	5,986	61,416
Molson Coors Beverage Co. Class B	14,168	900,943

		2,902,514
Biotechnology (2.6%)		
AbbVie, Inc.	7,723	1,151,190
Amgen, Inc.	5,071	1,362,882
Regeneron Pharmaceuticals, Inc. (NON)	1,326	1,091,245
		3,605,317
Broadline retail (3.3%)		
Amazon.com, Inc.(NON)	35,345	4,493,056
		4,493,056
		4,493,056
Capital markets (3.9%)	4.050	4 500 074
Ameriprise Financial, Inc.	4,652	1,533,671
Goldman Sachs Group, Inc. (The) Morgan Stanley	4,507 8,128	1,458,330 663,814
Raymond James Financial, Inc. ^(S)	15,084	1,514,886
TPG, Inc. ^(S)	7,105	214,003
11 0, 1110.	7,103	
		5,384,704
Chemicals (0.8%)		
DuPont de Nemours, Inc.	4,203	313,502
Eastman Chemical Co.	10,032	769,655
		1,083,157
Commercial services and supplies (0.4%)		
Cintas Corp.	1,048	504,098
		504.000
		504,098
Communications equipment (1.3%)		
Cisco Systems, Inc.	33,816	1,817,948
		1,817,948
Consumer staples distribution and retail (2.5%)		
Kroger Co. (The)	12,133	542,952
Target Corp.	8,124	898,271
Walmart, Inc.	12,109	1,936,592
		3,377,815
Containers and packaging (0.2%)		5,511,515
Containers and packaging (0.3%)	7,205	446.062
Berry Global Group, Inc.	7,205	446,062
		446,062
Distributors (0.4%)		
LKQ Corp.	11,726	580,554

		580,554
Diversified REITs (0.4%)		
Armada Hoffler Properties, Inc. (R)	53,369	546,499
		546,499
Diversified telecommunication services (0.5%)		
Liberty Global PLC Class A (United Kingdom)(NON)	40,381	691,323
		691,323
Electric utilities (2.7%)		
Constellation Energy Corp.	11,028	1,202,934
NRG Energy, Inc.	26,111	1,005,796
PG&E Corp.(NON)	90,339	1,457,168
		3,665,898
Electrical equipment (—%)		
FREYR Battery SA (Norway) (NON)(S)	6,870	33,594
		33,594
Entertainment (1.0%)		
Universal Music Group NV (Netherlands)	22,549	586,381
Walt Disney Co. (The) ^(NON)	8,071	654,155
Warner Bros Discovery, Inc. (NON)	15,520	168,547
		1,409,083
Financial services (5.7%)		
Apollo Global Management, Inc.	19,505	1,750,769
Berkshire Hathaway, Inc. Class B ^(NON)	8,911	3,121,523
Mastercard, Inc. Class A	7,567	2,995,851
		7,868,143
Ground transportation (1.3%)		
Hertz Global Holdings, Inc. (NON)(S)	13,113	160,634
Union Pacific Corp.	8,300	1,690,129
		1,850,763
Health care equipment and supplies (0.5%)		
Medtronic PLC	7,094	555,886
Nyxoah SA (Belgium) ^(NON)	9,312	64,253
		620,139
Health care providers and services (5.4%)		
CVS Health Corp.	10,031	700,364
Elevance Health, Inc.	2,075	903,497

HCA Healthcare, Inc.	2,385	586,662
McKesson Corp.	4,711	2,048,578
Tenet Healthcare Corp.(NON)	7,289	480,272
UnitedHealth Group, Inc.	5,468	2,756,911
		7,476,284
Hotels, restaurants, and leisure (1.4%)		
Booking Holdings, Inc. (NON)	171	527,355
Chuy's Holdings, Inc. (NON)	11,287	401,591
First Watch Restaurant Group, Inc. (NON)	12,165	210,333
McDonald's Corp.	2,923	770,035
	_,	
		1,909,314
Household durables (1.0%)		
PulteGroup, Inc.	18,115	1,341,416
		4 044 440
		1,341,416
Household products (1.0%)		
Procter & Gamble Co. (The)	9,425	1,374,731
		4 274 724
		1,374,731
Industrial conglomerates (0.9%)		
Honeywell International, Inc.	6,939	1,281,911
		1,281,911
		1,201,311
Insurance (1.3%)		
Arch Capital Group, Ltd.(NON)	13,373	1,065,962
Assured Guaranty, Ltd.	12,298	744,275
		1,810,237
		1,010,207
Interactive media and services (6.6%)		
Alphabet, Inc. Class C ^(NON)	45,444	5,991,791
Meta Platforms, Inc. Class A ^(NON)	10,444	3,135,393
		9,127,184
		3,121,131
IT Services (1.0%)		
Gartner, Inc.(NON)	2,874	987,535
GoDaddy, Inc. Class A ^(NON)	4,769	355,195
		1,342,730
		1,072,100
Life sciences tools and services (0.1%)		
Bio-Rad Laboratories, Inc. Class A ^(NON)	388	139,079
		139,079
		100,019

Machinery (2.0%)		
Deere & Co.	1,765	666,076
Otis Worldwide Corp.	25,156	2,020,278
		2,686,354
Media (0.9%)		
Charter Communications, Inc. Class A ^(NON)	938	412,551
Comcast Corp. Class A	19,808	878,287
		1,290,838
Metals and mining (1.5%)		
Freeport-McMoRan, Inc. (Indonesia)	25,640	956,116
Nucor Corp.	7,148	1,117,590
		2,073,706
Mortgage real estate investment trusts (REITs) (0.3%)		
Starwood Property Trust, Inc. (R)(S)	17,845	345,301
		345,301
M. 14:4:14: (0.40/)		040,001
Multi-utilities (0.4%) CMS Energy Corp.	11,373	604,020
	11,070	
		604,020
Office REITs (0.3%)		
Equity Commonwealth ^(R)	15,089	277,185
Highwoods Properties, Inc. (R)	8,845	182,295
		459,480
Oil, gas, and consumable fuels (2.9%)		
Antero Resources Corp. (NON)	6,135	155,706
ConocoPhillips	14,909	1,786,098
Exxon Mobil Corp.	17,159	2,017,555
		3,959,359
Passenger airlines (0.6%)		
Southwest Airlines Co.	31,034	840,090
		840,090
Personal care products (0.5%)		
Kenvue, Inc.	31,153	625,552
		625,552
Pharmaceuticals (4.4%)	4 007	2 502 727
Eli Lilly and Co.	4,827	2,592,727

Johnson & Johnson	9,781	1,523,391
Merck & Co., Inc.	11,861	1,221,090
Pfizer, Inc.	20,082	666,120
	0,00	
		6,003,328
Real estate management and development (1.1%)		
CBRE Group, Inc. Class A ^(NON)	20,068	1,482,222
		1,482,222
Semiconductors and semiconductor equipment (5.1%)		
Intel Corp.	11,333	402,888
Lam Research Corp.	2,941	1,843,331
NVIDIA Corp.	7,726	3,360,733
Qualcomm, Inc.	6,837	759,317
Texas Instruments, Inc.	4,396	699,008
		7,065,277
Software (11.1%)		
Adobe, Inc. (NON)	2 242	1 104 196
	2,342	1,194,186
Fair Isaac Corp. (NON)	376	326,567
Microsoft Corp.	32,396	10,229,037
NCR Corp. (NON)	10,129	273,179
Oracle Corp.	22,902	2,425,780
Salesforce, Inc.(NON)	4,080	827,342
		15,276,091
Specialized REITs (1.1%)		
Gaming and Leisure Properties, Inc. (R)	34,668	1,579,127
,	,,,,,,	
		1,579,127
Specialty retail (1.9%)		
Best Buy Co., Inc.	11,145	774,243
Leslie's, Inc. (NON)(S)	14,747	83,468
Lowe's Cos., Inc.	8,407	1,747,311
		2,605,022
Technology hardware, storage, and peripherals (7.4%)		
Apple, Inc.	59,525	10,191,275
, ippo, mo.	33,323	
		10,191,275
Textiles, apparel, and luxury goods (0.2%)		
Nike, Inc. Class B	2,674	255,688
		255,688
T-1 (0.0%)		•

Tobacco (0.6%)

Altria Group, Inc.	21,005	883,260
		883,260
Trading companies and distributors (0.9%)		
United Rentals, Inc.	2,864	1,273,252
		1,273,252
Total common stocks (cost \$74.103.315)		\$133.974.379

INVESTMENT COMPANIES (1.5%)(a)

	Shares	Value
iShares Expanded Tech-Software Sector ETF	5,926	\$2,022,307
Total investment companies (cost \$1,642,304)		\$2,022,307

PURCHASED OPTIONS OUTSTANDING $(0.1\%)^{(a)}$

Counterparty	Expiration date/ strike price	Notional amount	Contract amount	Value
Goldman Sachs International				
	Nov-			
Apple, Inc. (Put)	23/\$185.00	\$838,415	\$4,897	\$71,508
Eli Lilly and Co.(Put)	Nov-23/540.00	336,243	626	14,425
UBS AG				
Berkshire Hathaway, Inc. Class B (Put)	Nov-23/345.00	436,824	1,247	7,596
Constellation Energy Corp. (Put)	Nov-23/105.00	360,618	3,306	8,279
Total purchased options outstanding (cost				
\$48,623)				\$101,808

SHORT-TERM INVESTMENTS $(3.1\%)^{(a)}$

	ar	Principal mount/shares	Value
Putnam Cash Collateral Pool, LLC 5.62% ^(AFF)	Shares	2,157,135	\$2,157,135
Putnam Short Term Investment Fund Class P 5.57% (AFF)	Shares	1,657,123	1,657,123
U.S. Treasury Bills 5.324%, 11/16/23		\$100,000	99,338
U.S. Treasury Bills 5.005%, 11/2/23		287,000	285,693
Total short-term investments (cost \$4,199,377)			\$4,199,289
TOTAL INVESTMENTS			
Total investments (cost \$79,993,619)		;	\$140,297,783

WRITTEN OPTIONS OUTSTANDING at 9/30/23 (premiums \$27,755) (Unaudited)

Counterparty	Expiration date/ strike price	Notional amount	Contract amount	Value
Goldman Sachs International				
Apple, Inc. (Call)	Nov- 23/\$210.00	\$838,415	\$4,897	\$469
Eli Lilly and Co.(Call)	Nov-23/620.00	336,243	626	1,534
UBS AG				
Berkshire Hathaway, Inc. Class B (Call)	Nov-23/395.00	436,824	1,247	244
Constellation Energy Corp. (Call)	Nov-23/122.50	360,618	3,306	2,620
Total				\$4,867

Key to holding's abbreviations

ETF Exchange Traded Fund

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 whollyowned 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 \$137,675,423.
- (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	Sale proceeds	Investment income	outstanding and fair value as of 9/30/23
Short-term investments					_
Putnam Cash Collateral Pool, LLC*#	\$1,068,687	\$37,737,356	\$36,648,908	\$72,221	\$2,157,135
Putnam Short Term Investment Fund**	4,951,318	10,286,340	13,580,535	182,201	1,657,123
Total Short-term investments	\$6,020,005	\$48,023,696	\$50,229,443	\$254,422	\$3,814,258

Shares

- * 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 \$2,157,135 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 \$2,104,252.
- ** 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. Unless otherwise noted, the rates quoted in Short-term investments security descriptions represent the weighted average yield to maturity.
 - 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.

Market quotations are not considered to be readily available for certain debt obligations (including short-term investments with remaining maturities of 60 days or less) and other investments; such investments are valued on the basis of valuations furnished by an independent pricing service approved by the Trustees or dealers selected by Putnam Management. Such services or dealers determine valuations for normal institutional-size trading units of such securities using methods based on market transactions for comparable securities and various relationships, generally recognized by institutional traders, between securities (which consider such factors as security prices, yields, maturities and ratings). These securities will generally be categorized as Level 2.

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. At the close of the reporting period, fair value pricing was used for certain foreign securities in the portfolio. Securities quoted in foreign currencies, if any, are translated into U.S. dollars at the current exchange rate.

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.

Options contracts: The fund used options contracts to hedge against changes in values of securities it owns, owned or expects to own.

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 repledged, 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 did not have a net liability position on open derivative contracts subject to the Master 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 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	\$11,932,047	\$586,381	\$—
Consumer discretionary	13,314,699	_	_
Consumer staples	9,163,872	_	_
Energy	3,959,359	_	
Financials	19,481,089	_	
Health care	17,844,147	_	_
Industrials	10,059,293	_	_
Information technology	35,693,321	_	
Materials	3,602,925	_	_
Real estate	4,067,328	_	_
Utilities	4,269,918	_	_
Total common stocks	133,387,998	 586,381	_
Investment companies	2,022,307	_	
Purchased options outstanding	, , , <u> </u>	101,808	
Short-term investments	_	4,199,289	_
Totals by level	\$135,410,305	\$4,887,478	\$—

Valuation inputs

Other financial instruments:	Level 1	Level 2	Level 3
Written options outstanding	\$—	\$(4,867)	\$—
Totals by level	\$—	\$(4,867)	\$ —

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

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:

Purchased equity option contracts (contract amount)	\$3,000
Written equity option contracts (contract amount)	\$3,000

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