

Putnam VT Emerging Markets Equity Fund

The fund's portfolio

9/30/23 (Unaudited)

COMMON STOCKS (96.4%)(a)

	Shares	Value
Automobiles (3.1%)		
BYD Co., Ltd. Class H (China)	12,500	\$384,767
Kia Corp. (South Korea)	4,677	280,715
		665,482
Banks (13.3%)		
Abu Dhabi Islamic Bank PJSC (United Arab Emirates)	107,479	329,403
Banco do Brasil SA (Brazil)	18,300	171,767
Bank Central Asia Tbk PT (Indonesia)	445,100	253,938
Bank Mandiri Persero Tbk PT (Indonesia)	900,000	350,862
Grupo Financiero Banorte SAB de CV Class O (Mexico)	69,470	582,268
ICICI Bank, Ltd. (India)	100,173	1,145,611
		2,833,849
Broadline retail (4.4%)		
Alibaba Group Holding, Ltd. (China) ^(NON)	43,516	471,774
MercadoLibre, Inc. (Brazil) ^(NON)	264	334,720
PDD Holdings, Inc. ADR (China) ^(NON)	1,209	118,567
		925,061
Capital markets (0.9%)		
B3 SA - Brasil Bolsa Balcao (Brazil)	78,800	192,667
		192,667
Chemicals (0.6%)		
Hansol Chemical Co., Ltd. (South Korea)	1,106	137,450
		137,450
Communications equipment (1.3%)		
Accton Technology Corp. (Taiwan)	18,000	274,936
		274,936
Construction materials (1.1%)		
UltraTech Cement, Ltd. (India)	2,446	242,721
		242,721

Consumer staples distribution and retail (4.6%)

Dino Polska SA (Poland) ^(NON)	2,173	175,612
Shoprite Holdings, Ltd. (South Africa)	17,397	220,340
Sumber Alfaria Trijaya Tbk PT (Indonesia)	1,001,200	191,795
WalMart de Mexico (Walmex) SAB de CV (Mexico)	101,964	384,863

972,610**Electrical equipment (1.8%)**

KEI Industries, Ltd. (India)	12,237	389,106
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389,106**Electronic equipment, instruments, and components (3.6%)**

Elite Material Co., Ltd. (Taiwan)	10,000	133,614
Samsung SDI Co., Ltd. (South Korea)	845	320,428
Sinbon Electronics Co., Ltd. (Taiwan)	32,000	321,123

775,165**Gas utilities (1.0%)**

China Resources Gas Group, Ltd. (China)	73,800	214,625
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214,625**Health care equipment and supplies (0.4%)**

Shenzhen Mindray Bio-Medical Electronics Co., Ltd. Class A (China)	2,100	77,769
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77,769**Health care providers and services (2.5%)**

Apollo Hospitals Enterprise, Ltd. (India)	3,040	188,192
Max Healthcare Institute, Ltd. (India) ^(NON)	49,123	335,607

523,799**Hotels, restaurants, and leisure (6.7%)**

Alsea SAB de CV (Mexico) ^(NON)	35,181	128,390
H World Group, Ltd. ADR (China) ^(NON)	8,368	329,950
Indian Hotels Co., Ltd. (India)	82,228	406,080
MakeMyTrip, Ltd. (India) ^(NON)	3,684	149,276
Meituan Class B (China) ^(NON)	28,540	414,325

1,428,021**Insurance (2.7%)**

AIA Group, Ltd. (Hong Kong)	34,600	279,882
Ping An Insurance Group Co. of China, Ltd. Class H (China)	53,500	303,035

582,917

Interactive media and services (5.6%)

Tencent Holdings, Ltd. (China)	30,700	1,189,780
		<hr/>
		1,189,780

IT Services (2.4%)

Tata Consultancy Services, Ltd. (India)	11,894	504,533
		<hr/>
		504,533

Machinery (0.3%)

Shenzhen Inovance Technology Co., Ltd. Class A (China)	6,350	58,178
		<hr/>
		58,178

Metals and mining (1.7%)

Anglo American PLC (United Kingdom)	6,158	170,327
APL Apollo Tubes, Ltd. (India)	10,121	197,672
		<hr/>
		367,999

Oil, gas, and consumable fuels (5.7%)

PetroChina Co., Ltd. Class H (China)	626,000	469,934
PRIO SA (Brazil) ^(NON)	26,800	250,803
Reliance Industries, Ltd. (India)	17,276	484,937
		<hr/>
		1,205,674

Passenger airlines (1.3%)

Copa Holdings SA Class A (Panama)	3,042	271,103
		<hr/>
		271,103

Pharmaceuticals (3.9%)

AstraZeneca PLC (United Kingdom)	2,443	328,771
Eli Lilly and Co.	610	327,649
Sun Pharmaceutical Industries, Ltd. (India)	12,842	178,438
		<hr/>
		834,858

Professional services (0.8%)

Centre Testing International Group Co., Ltd. Class A (China)	64,000	163,520
		<hr/>
		163,520

Real estate management and development (1.1%)

Phoenix Mills, Ltd. (The) (India)	10,227	223,653
		<hr/>
		223,653

Semiconductors and semiconductor equipment (11.9%)

Advanced Micro Devices, Inc. ^(NON)	2,071	212,940
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SK Hynix, Inc. (South Korea)	4,282	363,702
Taiwan Semiconductor Manufacturing Co., Ltd. (Taiwan)	120,000	1,947,371
		2,524,013
Software (1.4%)		
Synopsys, Inc. <i>(NON)</i>	351	161,098
Totvs SA (Brazil)	25,145	135,066
		296,164
Technology hardware, storage, and peripherals (5.4%)		
AURAS Technology Co., Ltd. (Taiwan)	13,000	128,799
Samsung Electronics Co., Ltd. (South Korea)	20,187	1,022,774
		1,151,573
Textiles, apparel, and luxury goods (5.0%)		
Arezzo Industria e Comercio SA (Brazil)	9,200	118,895
LVMH Moet Hennessy Louis Vuitton SA (France)	461	347,791
PRADA SpA (Italy)	49,400	288,988
Shenzhou International Group Holdings, Ltd. (China)	33,300	317,917
		1,073,591
Transportation infrastructure (1.9%)		
Grupo Aeroportuario del Centro Norte SAB de CV (Mexico)	10,240	111,316
International Container Terminal Services, Inc. (Philippines)	80,180	292,966
		404,282
Total common stocks (cost \$18,021,705)		\$20,505,099

INVESTMENT COMPANIES (1.5%)^(a)

	Shares	Value
iShares Core MSCI Emerging Markets ETF	6,555	\$311,952
Total investment companies (cost \$307,321)		\$311,952

SHORT-TERM INVESTMENTS (2.7%)(a)

	Shares	Value
Putnam Short Term Investment Fund Class P 5.57% (AFF)	574,590	\$574,590
Total short-term investments (cost \$574,590)		\$574,590

TOTAL INVESTMENTS

Total investments (cost \$18,903,616)	\$21,391,641
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OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 9/30/23 (Unaudited)

Swap counterparty/ notional amount	Value	Upfront premium received (paid)	Termi- nation date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized depreciation
Bank of America N.A.						
\$323,604	\$322,685	\$—	6/23/25	(US SOFR plus 1.00%) — Monthly	Alinma Bank — Monthly	\$(585)
		—			Unrealized appreciation	—
		—			Unrealized (depreciation)	(585)
	Total	\$—			Total	\$(585)

Key to holding's abbreviations

ADR American Depository Receipts: Represents ownership of foreign securities on deposit with a custodian bank.

ETF Exchange Traded Fund
PJSC Public Joint Stock Company

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 \$21,260,173.

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

(AFF) Affiliated company. For investments in 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 Short Term Investment Fund*	\$819,827	\$5,479,646	\$5,724,883	\$27,509	\$574,590
Total Short-term investments	\$819,827	\$5,479,646	\$5,724,883	\$27,509	\$574,590

* 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.

DIVERSIFICATION BY COUNTRY

Distribution of investments by country of risk at the close of the reporting period, excluding collateral received, if any (as a percentage of Portfolio Value):

China	21.1%
India	20.8
Taiwan	13.1
South Korea	9.9
United States	7.5
Mexico	5.6
Brazil	5.6
Indonesia	3.7
United Kingdom	2.3
France	1.6
United Arab Emirates	1.6
Philippines	1.4
Italy	1.4
Hong Kong	1.3
Panama	1.3
South Africa	1.0
Poland	0.8
Total	100.0%

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 and total return swap contracts 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 and total return swaps in the portfolio. 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.

Total return swap contracts: The fund entered into OTC and/or centrally cleared total return swap contracts, which are arrangements to exchange a market-linked return for a periodic payment, both based on a notional principal amount, to manage exposure to specific securities and to gain exposure to specific markets or countries.

To the extent that the total return of the security, index or other financial measure underlying the transaction exceeds or falls short of the offsetting interest rate obligation, the fund will receive a payment from or make a payment to the counterparty. OTC and/or centrally cleared total return swap contracts are marked to market daily based upon quotations from an independent pricing service or market maker. Any change is recorded as an unrealized gain or

loss on OTC total return swaps. Daily fluctuations in the value of centrally cleared total return swaps are settled through a central clearing agent and are recorded as unrealized gain or loss. Payments received or made are recorded as realized gains or losses. Certain OTC and/or centrally cleared total return swap contracts may include extended effective dates. Payments related to these swap contracts are accrued based on the terms of the contract. The fund could be exposed to credit or market risk due to unfavorable changes in the fluctuation of interest rates or in the price of the underlying security or index, the possibility that there is no liquid market for these agreements or that the counterparty may default on its obligation to perform. The fund's maximum risk of loss from counterparty risk or central clearing risk is the fair value of the contract. This risk may be mitigated for OTC total return swap contracts by having a master netting arrangement between the fund and the counterparty and for centrally cleared total return swap contracts through the daily exchange of variation margin. There is minimal counterparty risk with respect to centrally cleared total return swap contracts due to the clearinghouse guarantee fund and other resources that are available in the event of a clearing member default.

For the fund's average notional amount on total return swap 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 had a net liability position of \$585 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	\$—	\$1,189,780	\$—
Consumer discretionary	1,179,798	2,912,357	—
Consumer staples	384,863	587,747	—
Energy	250,803	954,871	—
Financials	946,702	2,662,731	—
Health care	327,649	1,108,777	—
Industrials	382,419	903,770	—
Information technology	509,104	5,017,280	—
Materials	—	748,170	—
Real estate	—	223,653	—
Utilities	—	214,625	—
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Total common stocks	3,981,338	16,523,761	—
Investment companies	311,952	—	—
Short-term investments	—	574,590	—
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Totals by level	\$4,293,290	\$17,098,351	\$—

	Valuation inputs		
Other financial instruments:	Level 1	Level 2	Level 3
Total return swap contracts	\$—	\$(585)	\$—
	<hr/>	<hr/>	<hr/>
Totals by level	\$—	\$(585)	\$—

* 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:

OTC total return swap contracts (notional)	\$370,000
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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