

# Putnam VT Emerging Markets Equity Fund

## The fund's portfolio

3/31/23 (Unaudited)

### COMMON STOCKS (94.1%)<sup>(a)</sup>

	Shares	Value
<b>Automobiles (1.9%)</b>		
BYD Co., Ltd. Class H (China)	14,500	\$426,052
		<b>426,052</b>
<b>Banks (11.6%)</b>		
Abu Dhabi Islamic Bank PJSC (United Arab Emirates)	81,888	222,601
Bank Central Asia Tbk PT (Indonesia)	408,300	238,570
Bank Mandiri Persero Tbk PT (Indonesia)	512,300	352,210
Grupo Financiero Banorte SAB de CV Class O (Mexico)	69,470	584,905
ICICI Bank, Ltd. (India)	97,255	1,042,984
KB Financial Group, Inc. (South Korea)	5,362	196,946
		<b>2,638,216</b>
<b>Broadline retail (5.5%)</b>		
Alibaba Group Holding, Ltd. (China) <sup>(NON)</sup>	42,016	534,347
JD.com, Inc. Class A (China)	6,002	131,544
MercadoLibre, Inc. (Brazil) <sup>(NON)</sup>	248	326,879
Pinduoduo, Inc. ADR (China) <sup>(NON)</sup>	3,558	270,052
		<b>1,262,822</b>
<b>Capital markets (0.4%)</b>		
B3 SA - Brasil Bolsa Balcao (Brazil)	46,300	94,547
		<b>94,547</b>
<b>Chemicals (0.7%)</b>		
Hansol Chemical Co., Ltd. (South Korea)	861	159,585
		<b>159,585</b>
<b>Communications equipment (0.9%)</b>		
Accton Technology Corp. (Taiwan)	20,000	211,666
		<b>211,666</b>
<b>Consumer staples distribution and retail (5.3%)</b>		

Dino Polska SA (Poland) <sup>(NON)</sup>	2,450	222,016
Shoprite Holdings, Ltd. (South Africa)	18,591	232,081
Sumber Alfaria Trijaya Tbk PT (Indonesia)	1,001,200	192,606
WalMart de Mexico (Walmex) SAB de CV (Mexico)	142,336	568,712
		<hr/>
		<b>1,215,415</b>
<b>Electrical equipment (1.1%)</b>		
KEI Industries, Ltd. (India)	12,506	258,984
		<hr/>
		<b>258,984</b>
<b>Electronic equipment, instruments, and components (3.9%)</b>		
E Ink Holdings, Inc. (Taiwan)	19,000	116,372
Samsung SDI Co., Ltd. (South Korea)	781	445,124
Sinbon Electronics Co., Ltd. (Taiwan)	30,000	338,023
		<hr/>
		<b>899,519</b>
<b>Food products (1.2%)</b>		
China Mengniu Dairy Co., Ltd. (China)	67,000	274,762
		<hr/>
		<b>274,762</b>
<b>Gas utilities (1.0%)</b>		
China Resources Gas Group, Ltd. (China)	58,800	217,420
		<hr/>
		<b>217,420</b>
<b>Health care equipment and supplies (1.0%)</b>		
Shenzhen Mindray Bio-Medical Electronics Co., Ltd. Class A (China)	5,100	232,437
		<hr/>
		<b>232,437</b>
<b>Health care providers and services (2.4%)</b>		
Apollo Hospitals Enterprise, Ltd. (India)	5,004	263,053
Max Healthcare Institute, Ltd. (India) <sup>(NON)</sup>	51,070	274,685
		<hr/>
		<b>537,738</b>
<b>Hotels, restaurants, and leisure (5.4%)</b>		
H World Group, Ltd. ADR (China)	8,046	394,093
Indian Hotels Co., Ltd. (India)	88,162	348,235
Meituan Class B (China) <sup>(NON)</sup>	26,740	485,695
		<hr/>
		<b>1,228,023</b>
<b>Insurance (3.2%)</b>		
AIA Group, Ltd. (Hong Kong)	36,400	382,469
Ping An Insurance Group Co. of China, Ltd. Class H (China)	54,000	349,993
		<hr/>

732,462

**Interactive media and services (6.2%)**

Tencent Holdings, Ltd. (China)	29,200	1,426,810
		<hr/>
		<b>1,426,810</b>

**IT Services (3.2%)**

Persistent Systems, Ltd. (India)	2,584	145,453
Tata Consultancy Services, Ltd. (India)	14,736	577,147
		<hr/>
		<b>722,600</b>

**Life sciences tools and services (0.9%)**

Hangzhou Tigermed Consulting Co., Ltd. Class H (China)	22,700	213,856
		<hr/>
		<b>213,856</b>

**Machinery (0.8%)**

Shenzhen Inovance Technology Co., Ltd. Class A (China)	17,450	178,822
		<hr/>
		<b>178,822</b>

**Metals and mining (1.1%)**

Anglo American PLC (United Kingdom)	4,886	161,406
Vale Indonesia Tbk PT (Indonesia) <sup>(NON)</sup>	204,400	90,838
		<hr/>
		<b>252,244</b>

**Oil, gas, and consumable fuels (3.7%)**

PetroChina Co., Ltd. Class H (China)	584,000	346,435
Reliance Industries, Ltd. (India)	17,671	502,324
		<hr/>
		<b>848,759</b>

**Passenger airlines (1.1%)**

Copa Holdings SA Class A (Panama) <sup>(NON)</sup>	2,842	262,459
		<hr/>
		<b>262,459</b>

**Pharmaceuticals (3.1%)**

AstraZeneca PLC (United Kingdom)	1,769	245,537
Eli Lilly and Co.	775	266,151
Sun Pharmaceutical Industries, Ltd. (India)	15,736	188,519
		<hr/>
		<b>700,207</b>

**Professional services (0.9%)**

Centre Testing International Group Co., Ltd. Class A (China)	68,400	204,320
		<hr/>
		<b>204,320</b>

**Real estate management and development (0.6%)**

Phoenix Mills, Ltd. (The) (India)	8,830	139,877
		<hr/>
		<b>139,877</b>

**Semiconductors and semiconductor equipment (13.0%)**

Advanced Micro Devices, Inc. <i>(NON)</i>	4,499	440,947
Faraday Technology Corp. (Taiwan)	34,000	221,818
LEENO Industrial, Inc. (South Korea)	319	35,428
Taiwan Semiconductor Manufacturing Co., Ltd. (Taiwan)	128,000	2,267,633
		<hr/>
		<b>2,965,826</b>

**Software (1.1%)**

Totvs SA (Brazil)	46,345	257,490
		<hr/>
		<b>257,490</b>

**Specialty retail (0.4%)**

Lojas Renner SA (Brazil)	27,000	88,270
		<hr/>
		<b>88,270</b>

**Technology hardware, storage, and peripherals (4.8%)**

Samsung Electronics Co., Ltd. (South Korea)	21,888	1,085,389
		<hr/>
		<b>1,085,389</b>

**Textiles, apparel, and luxury goods (6.3%)**

Li Ning Co., Ltd. (China)	45,500	358,639
LVMH Moet Hennessy Louis Vuitton SA (France)	557	510,467
PRADA SpA (Italy)	29,400	209,391
Shenzhou International Group Holdings, Ltd. (China)	33,600	350,890
		<hr/>
		<b>1,429,387</b>

**Transportation infrastructure (1.4%)**

International Container Terminal Services, Inc. (Philippines)	81,320	319,480
		<hr/>
		<b>319,480</b>

**Total common stocks (cost \$18,089,651)**

---

**\$21,485,444**

**INVESTMENT COMPANIES (2.9%)<sup>(a)</sup>**

	Shares	Value
iShares Core MSCI Emerging Markets ETF <sup>(S)</sup>	13,462	\$656,811
<b>Total investment companies (cost \$650,700)</b>		<b>\$656,811</b>

**SHORT-TERM INVESTMENTS (6.0%)<sup>(a)</sup>**

	Shares	Value
Putnam Cash Collateral Pool, LLC 5.03% <sup>(AFF)</sup>	603,768	\$603,768
Putnam Short Term Investment Fund Class P 4.88% <sup>(AFF)</sup>	771,063	771,063
<b>Total short-term investments (cost \$1,374,831)</b>		<b>\$1,374,831</b>

**TOTAL INVESTMENTS**

<b>Total investments (cost \$20,115,182)</b>		<b>\$23,517,086</b>
--	--	---------------------

**OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited)**

Swap counterparty/ notional amount	Value	Upfront premium received (paid)	Termination date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
<b>Bank of America N.A.</b>						
\$127,993	\$129,617	\$—	6/20/23	(US SOFR plus 1.00%) — Monthly	Alinma Bank — Monthly (F)	\$1,420
113,730	115,173	—	6/23/23	(US SOFR plus 1.00%) — Monthly	Alinma Bank — Monthly (F)	1,265
81,308	82,339	—	6/20/23	(US SOFR plus 1.00%) — Monthly	Alinma Bank — Monthly (F)	904

55,719	56,426	—	6/23/23	(US SOFR plus 1.00%) — Monthly	Alinma Bank — Monthly (F)	620
<b>Upfront premium received</b>		—			<b>Unrealized appreciation</b>	<b>4,209</b>
<b>Upfront premium (paid)</b>		—			<b>Unrealized (depreciation)</b>	<b>—</b>
<b>Total</b>		<b>\$—</b>			<b>Total</b>	<b>\$4,209</b>

(F) Is valued at fair value following procedures approved by the Trustees.

### Key to holding's abbreviations

ADR American Depositary 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 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 \$22,830,481.

(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*#	\$—	\$1,736,347	\$1,132,579	\$2,891	\$603,768
Putnam Short Term Investment Fund**	819,827	2,592,443	2,641,207	9,652	771,063
<b>Total Short-term investments</b>	<b>\$819,827</b>	<b>\$4,328,790</b>	<b>\$3,773,786</b>	<b>\$12,543</b>	<b>\$1,374,831</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 \$603,768 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 \$590,359.

\*\* 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.

(S) This security is on loan, in part or in entirety, at the close of the reporting 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	28.0%
India	16.3
Taiwan	13.8
United States	9.3
South Korea	8.4
Mexico	5.0
Indonesia	3.8
Brazil	3.3
France	2.2
United Kingdom	1.8
Hong Kong	1.7
Philippines	1.4
Panama	1.1
South Africa	1.0
United Arab Emirates	1.0
Poland	1.0
Italy	0.9
<b>Total</b>	<b>100.0%</b>

**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 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 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 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 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:

	<b>Valuation inputs</b>		
<b>Investments in securities:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
<b>Common stocks*:</b>			
Communication services	\$—	\$1,426,810	\$—
Consumer discretionary	1,079,294	3,355,260	—

Consumer staples	568,712	921,465	—
Energy	—	848,759	—
Financials	679,452	2,785,773	—
Health care	266,151	1,418,087	—
Industrials	262,459	961,606	—
Information technology	698,437	5,444,053	—
Materials	—	411,829	—
Real estate	—	139,877	—
Utilities	—	217,420	—
	<hr/>	<hr/>	<hr/>
<b>Total common stocks</b>	<b>3,554,505</b>	<b>17,930,939</b>	<b>—</b>
Investment companies	656,811	—	—
Short-term investments	—	1,374,831	—
	<hr/>	<hr/>	<hr/>
<b>Totals by level</b>	<b>\$4,211,316</b>	<b>\$19,305,770</b>	<b>\$—</b>

**Valuation inputs**

<b>Other financial instruments:</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Total return swap contracts	\$—	\$4,209	\$—
	<hr/>	<hr/>	<hr/>
<b>Totals by level</b>	<b>\$—</b>	<b>\$4,209</b>	<b>\$—</b>

\* 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) \$430,000

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