

Putnam Variable Trust

Putnam VT Government Money Market Fund

Annual report

12 | 31 | 23

Message from the Trustees

February 9, 2024

Dear Shareholder:

With the new year comes new beginnings. We are pleased to report that on January 1, 2024, Franklin Resources, Inc., a leading global asset management firm operating as Franklin Templeton, acquired Putnam Investments.

With complementary capabilities and an established infrastructure serving over 150 countries, Franklin Templeton enhances Putnam's investment, risk management, operations, and technology platforms. Together, our firms are committed to delivering strong fund performance and more choices for our investors.

As we enter this new chapter, you can rest assured that your fund continues to be actively managed by the same experienced professionals. Your investment team is exploring new and attractive opportunities for your fund, while monitoring changing market conditions. The following pages provide an update on your fund.

Thank you for investing with Putnam.

Respectfully yours,



Robert L. Reynolds
President, The Putnam Funds



Kenneth R. Leibler
Chair, Board of Trustees

Performance summary (as of 12/31/23)

Investment objective

As high a rate of current income as Putnam Investment Management, LLC, believes is consistent with preservation of capital and maintenance of liquidity

Net asset value December 31, 2023

Class IA: \$1.00

Class IB: \$1.00

Annualized total return at net asset value (as of 12/31/23)

	Class IA shares (2/1/88)	Class IB shares (4/30/98)	Lipper VP (Underlying Funds) – U.S. Government Money Market Funds category median
1 year	4.70%	4.44%	4.66%
5 years	1.60	1.45	1.59
10 years	0.99	0.87	0.97
Life of fund	2.85	2.76	2.87
Current rate (as of 12/31/23)			
Current 7-day yield	4.93%	4.68%	

For a portion of the periods, the fund had expense limitations or waivers, without which returns would have been lower.

Lipper peer group median is provided by Lipper, an LSEG company.

The 7-day yield is the most common gauge for measuring money market mutual fund performance. Yield reflects current performance more closely than total return.

Data represent past performance. Past performance does not guarantee future results. More recent returns may be less or more than those shown. Investment return and principal value will fluctuate, and you may have a gain or a loss when you sell your shares. Performance information does not reflect any deduction for taxes a shareholder may owe on fund distributions or on the redemption of fund shares. All total return figures are at net asset value and exclude contract charges and expenses, which are added to the variable annuity contracts to determine total return at unit value. Had these charges and expenses been reflected, performance would have been lower. Performance of class IB shares before their inception is derived from the historical performance of class IA shares, adjusted to reflect the higher operating expenses applicable to such shares. For more recent performance, contact your variable annuity provider who can provide you with performance that reflects the charges and expenses at your contract level.

Portfolio composition

Repurchase agreements	86.0%
U.S. government agency debt	9.4%
U.S. Treasury debt	5.3%
Cash and net other assets	-0.7%

Allocations are shown as a percentage of the fund's net assets. Cash and net other assets, if any, represent the market value weights of cash and other unclassified assets in the portfolio. Summary information may differ from the portfolio schedule included in the financial statements due to the inclusion of any interest accruals, the exclusion of as-of trades, if any, the use of different classifications of securities for presentation purposes, and rounding. Holdings and allocations may vary over time. Due to rounding, percentages may not equal 100%.

The cash and net other assets category may show a negative market value percentage as a result of the timing of trade-date versus settlement-date transactions.

Report from your fund's managers

How was the money market environment for the 12-month reporting period ended December 31, 2023?

Government money market funds [MMFs] delivered positive performance amid considerable market volatility during the period. Rising interest rates, U.S. debt ceiling concerns, and cooling but still high inflation weighed on investor sentiment for much of the period. The financial markets also experienced severe volatility in March 2023 due to turmoil in the banking sector. The failure of a few regional U.S. banks combined with a forced merger of a bank in Switzerland raised concerns about the health of the global banking system. Quick actions by global central banks, including shoring up bank deposits, minimized systemic risk.

With inflation still well above the the U.S. Federal Reserve's 2% target, the Fed hiked its benchmark-interest rate four times in 2023, from a target range of 4.25%–4.50% to 5.25%–5.50%. The Fed's interest-rate increases, the last of which came in July 2023, were beneficial for money market investors. At times, yields on some shorter-term Treasuries rose above those of longer-term bonds. [Shorter-term interest rates tend to be more responsive to changes in the Fed's benchmark rate than longer-term rates.] MMF assets greatly increased as a result, as the higher yields attracted cash from investors' lower-yielding bank deposits.

How did Putnam VT Government Money Market Fund perform for the reporting period?

For the 12-month reporting period, the fund's class IA shares returned 4.70%, edging out the 4.66% median return of its Lipper peer group, U.S. Government Money Market Funds.

What was the fund's strategy in this environment?

As the pace of interest-rate hikes began to slow, the fund selectively added term exposure in the 6- to 12-month maturity range with investments in U.S. government-sponsored enterprises where we saw opportunities to lock in higher yields. Holdings in the Federal Home Loan Bank System exemplify the fund's strategy in this market.

The fund's strategy increased the weighted average maturity [WAM] of the fund's portfolio from 15 days on December 31, 2022, to 17 days at period-end. [WAM represents the average life of all the money market securities held in the portfolio.]

On December 31, 2023, the fund held most of its assets in repurchase agreements [86.0%]. U.S. government agency securities [9.4%] and short-term U.S. Treasury notes [5.3%] composed the remaining balance of the portfolio's assets.

What are your thoughts about Fed policy in 2024?

In December 2023, with economic data weakening, global central banks raised the prospect of interest-rate cuts earlier than expected. This spurred a global bond rally, led by Fed and U.S. interest rates.

The expectation that policymakers would hike or hold interest rates steady for longer to bring inflation back to targets has faded. Investors are focused on the timing of the Fed's first interest-rate cut. The markets have priced in a number of interest-rate cuts in 2024, beginning as early as March. Meanwhile, the Fed has signaled three 25 basis-point reductions in 2024.

Near term, expectations for interest-rate cuts may be challenged by stronger data prints. However, we believe interest rates will trend down and will be balanced by a reduction in the central bank's quantitative easing [QE]. Central banks use QE to increase domestic money supply and reduce interest rates to spur economic activity.

The foregoing information reflects our views, which are subject to change. They are not meant as investment advice. Please note that the holdings discussed in this report may not have been held by the fund for the entire period. Portfolio composition is subject to review in accordance with the fund's investment strategy and may vary in the future.

Statements in the Q&A concerning the fund's performance or portfolio composition relative to those of the fund's Lipper peer group may reference information produced by Lipper Inc. or through a third party.

Your fund's managers



Portfolio Manager **Joanne M. Driscoll, CFA**, is Head of Short-Term Liquid Markets. She joined Putnam in 1995 and has been in the investment industry since 1992.



Portfolio Manager **Jonathan M. Topper** has been in the investment industry since he joined Putnam in 1990.

Your fund's managers also manage other accounts advised by Putnam Management or an affiliate, including retail mutual fund counterparts to the funds in Putnam Variable Trust.

Understanding your fund's expenses

As an investor in a variable annuity product that invests in a registered investment company, you pay ongoing expenses, such as management fees, distribution fees (12b-1 fees), and other expenses. Using the following information, you can estimate how these expenses affect your investment and compare them with the expenses of other funds. You may also pay one-time transaction expenses, which are not shown in this section and would result in higher total expenses. Charges and expenses at the insurance company separate account level are not reflected. For more information, see your fund's prospectus or talk to your financial representative.

Review your fund's expenses

The two left-hand columns of the Expenses per \$1,000 table show the expenses you would have paid on a \$1,000 investment in your fund from 7/1/23 to 12/31/23. They also show how much a \$1,000 investment would be worth at the close of the period, assuming *actual returns and expenses*. To estimate the ongoing expenses you paid over the period, divide your account value by \$1,000, then multiply the result by the number in the first line for the class of shares you own.

Compare your fund's expenses with those of other funds

The two right-hand columns of the Expenses per \$1,000 table show your fund's expenses based on a \$1,000 investment, assuming a *hypothetical 5% annualized return*. You can use this information to compare the ongoing expenses (but not transaction expenses or total costs) of investing in the fund with those of other funds. All shareholder reports of mutual funds and funds serving as variable annuity vehicles will provide this information to help you make this comparison. Please note that you cannot use this information to estimate your actual ending account balance and expenses paid during the period.

Expense ratios

	Class IA	Class IB
Total annual operating expenses for the fiscal year ended 12/31/22*	0.46%	0.71%
Annualized expense ratio for the six-month period ended 12/31/23†	0.47%	0.72%

Fiscal year expense information in this table is taken from the most recent prospectus, is subject to change, and may differ from that shown for the annualized expense ratio and in the financial highlights of this report.

Expenses are shown as a percentage of average net assets.

*Restated to reflect current fees.

†Expense ratios for each class are for the fund's most recent fiscal half year. As a result of this, ratios may differ from expense ratios based on one-year data in the financial highlights.

Expenses per \$1,000

	Expenses and value for a \$1,000 investment, assuming actual returns for the 6 months ended 12/31/23		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 12/31/23	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$2.40	\$3.67	\$2.40	\$3.67
Ending value (after expenses)	\$1,024.80	\$1,023.50	\$1,022.84	\$1,021.58

*Expenses for each share class are calculated using the fund's annualized expense ratio for each class, which represents the ongoing expenses as a percentage of average net assets for the six months ended 12/31/23. The expense ratio may differ for each share class.

†Expenses based on actual returns are calculated by multiplying the expense ratio by the average account value for the period; then multiplying the result by the number of days in the period (184); and then dividing that result by the number of days in the year (365). Expenses based on a hypothetical 5% return are calculated by multiplying the expense ratio by the average account value for the six-month period; then multiplying the result by the number of days in the six-month period (184); and then dividing that result by the number of days in the year (365).

Report of Independent Registered Public Accounting Firm

To the Board of Trustees of Putnam Variable Trust and Shareholders of
Putnam VT Government Money Market Fund:

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT Government Money Market Fund (one of the funds constituting Putnam Variable Trust, referred to hereafter as the "Fund") as of December 31, 2023, the related statement of operations for the year ended December 31, 2023, the statement of changes in net assets for each of the two years in the period ended December 31, 2023, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2023 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Fund as of December 31, 2023, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period ended December 31, 2023 and the financial highlights for each of the five years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Fund's management. Our responsibility is to express an opinion on the Fund's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Fund in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of December 31, 2023 by correspondence with the custodian and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

PricewaterhouseCoopers LLP
Boston, Massachusetts
February 9, 2024

We have served as the auditor of one or more investment companies in the Putnam Funds family of funds since at least 1957. We have not been able to determine the specific year we began serving as auditor.

The fund's portfolio 12/31/23

	Principal amount	Value
REPURCHASE AGREEMENTS (85.3%)*		
Interest in \$100,000,000 joint tri-party repurchase agreement dated 12/29/2023 with BNP Paribas Securities Corp. due 1/2/2024 — maturity value of \$22,513,375 for an effective yield of 5.350% (collateralized by Agency Mortgage-Backed Securities and U.S. Treasuries (including strips) with coupon rates ranging from 1.750% to 7.500% and due dates ranging from 11/15/2025 to 11/20/2053, valued at \$102,060,633)	\$22,500,000	\$22,500,000
Interest in \$352,590,000 joint tri-party repurchase agreement dated 12/29/2023 with BofA Securities, Inc. due 1/2/2024 — maturity value of \$22,665,440 for an effective yield of 5.340% (collateralized by Agency Mortgage-Backed Securities with coupon rates ranging from 1.500% to 7.500% and due dates ranging from 1/1/2026 to 8/20/2063, valued at \$359,641,800)	22,652,000	22,652,000
Interest in \$22,500,000 tri-party repurchase agreement dated 12/29/2023 with Goldman, Sachs & Co. LLC due 1/2/2024 — maturity value of \$22,513,350 for an effective yield of 5.340% (collateralized by U.S. Treasuries (including strips) with coupon rates ranging from 4.500% to 6.000% and due dates ranging from 2/15/2026 to 5/15/2037, valued at \$22,950,073)	22,500,000	22,500,000
Total repurchase agreements (cost \$67,652,000)		\$67,652,000

U.S. GOVERNMENT AGENCY OBLIGATIONS (9.3%)*	Yield (%)	Maturity date	Principal amount	Value
Federal Farm Credit Banks discount notes	5.393	1/4/24	\$550,000	\$549,758
Federal Home Loan Banks discount notes	5.580	8/19/24	500,000	500,000
Federal Home Loan Banks discount notes	5.504	4/12/24	750,000	738,621
Federal Home Loan Banks unsec. bonds	5.490	7/15/24	500,000	500,000
Federal Home Loan Banks discount notes	5.475	2/9/24	640,000	636,311
Federal Home Loan Banks discount notes	5.470	6/17/24	700,000	682,817

U.S. GOVERNMENT AGENCY OBLIGATIONS (9.3%)* cont.	Yield (%)	Maturity date	Principal amount	Value
Federal Home Loan Banks discount notes	5.467	3/22/24	\$750,000	\$741,023
Federal Home Loan Banks discount notes	5.461	3/13/24	330,000	326,489
Federal Home Loan Banks discount notes	5.455	3/20/24	750,000	741,261
Federal Home Loan Banks discount notes	5.427	2/1/24	750,000	746,603
Federal Home Loan Banks discount notes	5.212	6/10/24	750,000	732,927
Federal Home Loan Mortgage Corporation unsec. notes	5.420	6/17/24	500,000	500,000
Total U.S. government agency obligations (cost \$7,395,810)				\$7,395,810

U.S. TREASURY OBLIGATIONS (5.3%)*	Yield (%)	Maturity date	Principal amount	Value
U.S. Treasury Bills	5.273	6/6/24	\$750,000	\$733,421
U.S. Treasury Bills	5.312	6/13/24	750,000	732,594
U.S. Treasury FRN	5.531	1/31/25	650,000	650,486
U.S. Treasury FRN	5.500	4/30/25	700,000	700,323
U.S. Treasury FRN	5.471	10/31/24	700,000	699,569
U.S. Treasury FRN	5.456	7/31/25	650,000	649,584
Total U.S. treasury obligations (cost \$4,165,977)				\$4,165,977

Total investments (cost \$79,213,787) \$79,213,787

Key to holding's abbreviations

FRN Floating Rate Notes: The rate shown is the current interest rate or yield at the close of the reporting period. Rates may be subject to a cap or floor. For certain securities, the rate may represent a fixed rate currently in place at the close of the reporting period.

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 December 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 Franklin Resources, Inc., and references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures*.

* Percentages indicated are based on net assets of \$79,313,927.

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

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:

Investments in securities:	Valuation inputs		
	Level 1	Level 2	Level 3
Repurchase agreements	\$—	67,652,000	\$—
U.S. government agency obligations	—	7,395,810	—
U.S. treasury obligations	—	4,165,977	—
Totals by level	\$—	\$79,213,787	\$—

The accompanying notes are an integral part of these financial statements.

Statement of assets and liabilities

12/31/23

Assets

Investment in securities, at value (Note 1):	
Unaffiliated issuers (identified cost \$11,561,787)	\$11,561,787
Repurchase agreements (identified cost \$67,652,000)	67,652,000
Cash	10,438
Interest and other receivables	119,729
Receivable for shares of the fund sold	343,964
Total assets	79,687,918

Liabilities

Payable for shares of the fund repurchased	210,866
Payable for compensation of Manager (Note 2)	18,384
Payable for custodian fees (Note 2)	3,432
Payable for investor servicing fees (Note 2)	9,089
Payable for Trustee compensation and expenses (Note 2)	72,909
Payable for administrative services (Note 2)	1,099
Payable for distribution fees (Note 2)	7,877
Payable for auditing and tax fees	39,331
Other accrued expenses	11,004
Total liabilities	373,991
Net assets	\$79,313,927

Represented by

Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$79,312,257
Total distributable earnings (Note 1)	1,670
Total — Representing net assets applicable to capital shares outstanding	\$79,313,927

Computation of net asset value Class IA

Net assets	\$41,774,676
Number of shares outstanding	41,773,233
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$1.00

Computation of net asset value Class IB

Net assets	\$37,539,251
Number of shares outstanding	37,539,011
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$1.00

The accompanying notes are an integral part of these financial statements.

Statement of operations

Year ended 12/31/23

Investment income

Interest	\$3,635,026
Total investment income	3,635,026

Expenses

Compensation of Manager (Note 2)	201,023
Investor servicing fees (Note 2)	50,251
Custodian fees (Note 2)	10,158
Trustee compensation and expenses (Note 2)	3,182
Distribution fees (Note 2)	80,002
Administrative services (Note 2)	2,366
Auditing and tax fees	39,721
Other	27,764
Total expenses	414,467
Expense reduction (Note 2)	(451)
Net expenses	414,016
Net investment income	3,221,010
Net increase in net assets resulting from operations	\$3,221,010

Statement of changes in net assets

	Year ended 12/31/23	Year ended 12/31/22
Increase (decrease) in net assets		
Operations:		
Net investment income	\$3,221,010	\$893,145
Net realized gain on investments	—	1,026
Net increase in net assets resulting from operations	3,221,010	894,171
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(1,829,142)	(536,260)
Class IB	(1,394,181)	(353,766)
Increase (decrease) from capital share transactions (Note 4)	6,470,116	(2,550,058)
Total increase (decrease) in net assets	6,467,803	(2,545,913)
Net assets:		
Beginning of year	72,846,124	75,392,037
End of year	\$79,313,927	\$72,846,124

The accompanying notes are an integral part of these financial statements.

Financial highlights

(For a common share outstanding throughout the period)

Period ended	INVESTMENT OPERATIONS:				LESS DISTRIBUTIONS:				RATIOS AND SUPPLEMENTAL DATA:			
	Net asset value, beginning of period	Net investment income (loss)	Net realized gain (loss) on investments	Total from investment operations	From net investment income	Total distributions	Net asset value, end of period	Total return at net asset value (%) ^{a,b}	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) ^{a,c}	Ratio of net investment income (loss) to average net assets (%)	
Class IA												
12/31/23	\$1.00	.0459	—	.0459	(.0460)	(.0460)	\$1.00	4.70	\$41,775	.47	4.60	
12/31/22	1.00	.0129	— ^d	.0129	(.0128)	(.0128)	1.00	1.29	41,354	.35 ^e	1.28 ^e	
12/31/21	1.00	.0001	— ^d	.0001	(.0001)	(.0001)	1.00	.01	40,968	.07 ^e	.01 ^e	
12/31/20	1.00	.0024	— ^d	.0024	(.0024)	(.0024)	1.00	.24	48,536	.26 ^e	.22 ^e	
12/31/19	1.00	.0179	— ^d	.0179	(.0179)	(.0179)	1.00	1.81	44,065	.45	1.79	
Class IB												
12/31/23	\$1.00	.0434	—	.0434	(.0435)	(.0435)	\$1.00	4.44	\$37,539	.72	4.35	
12/31/22	1.00	.0112	— ^d	.0112	(.0112)	(.0112)	1.00	1.12	31,492	.51 ^e	1.08 ^e	
12/31/21	1.00	.0001	— ^d	.0001	(.0001)	(.0001)	1.00	.01	34,424	.07 ^e	.01 ^e	
12/31/20	1.00	.0019	— ^d	.0019	(.0019)	(.0019)	1.00	.19	38,903	.32 ^e	.20 ^e	
12/31/19	1.00	.0154	— ^d	.0154	(.0154)	(.0154)	1.00	1.55	42,137	.70	1.55	

^a The charges and expenses at the insurance company separate account level are not reflected.

^b Total return assumes dividend reinvestment.

^c Includes amounts paid through expense offset arrangements, if any (Note 2). Also excludes acquired fund fees and expenses, if any.

^d Amount represents less than \$0.0001 per share.

^e Reflects a voluntary waiver of certain fund expenses in effect during the period relating to the enhancement of certain annualized net yields of the fund. As a result of such waivers, the expenses of each class reflect a reduction of the following amounts as a percentage of average net assets (Note 2):

	12/31/22	12/31/21	12/31/20
Class IA	0.13%	0.37%	0.18%
Class IB	0.21	0.62	0.38

The accompanying notes are an integral part of these financial statements.

Notes to financial statements 12/31/23

Unless otherwise noted, the “reporting period” represents the period from January 1, 2023 through December 31, 2023. The following table defines commonly used references within the Notes to financial statements:

References to	Represent
Franklin Templeton	Franklin Resources, Inc.
JPMorgan	JPMorgan Chase Bank, N.A.
PIL	Putnam Investments Limited, an affiliate of Putnam Management
Putnam Management	Putnam Investment Management, LLC, the fund’s manager, an indirect wholly-owned subsidiary of Franklin Templeton
SEC	Securities and Exchange Commission
State Street	State Street Bank and Trust Company

Putnam VT Government Money Market Fund (the fund) is a diversified series of Putnam Variable Trust (the Trust), a Massachusetts business trust registered under the Investment Company Act of 1940, as amended, as an open-end management investment company. The goal of the fund is to seek as high a rate of current income as Putnam Management believes is consistent with preservation of capital and maintenance of liquidity. The fund invests at least 99.5 percent of the fund’s total assets in cash, U.S. government securities and repurchase agreements that are fully collateralized by U.S. government securities or cash. The fund invests mainly in debt securities that are obligations of the U.S. government, its agencies and instrumentalities and accordingly are backed by the full faith and credit of the United States (e.g., U.S. Treasury bills) or by the credit of a federal agency or government-sponsored entity (e.g., securities issued by Fannie Mae and Freddie Mac). The U.S. government securities in which the fund invests may also include variable and floating rate instruments and when-issued and delayed delivery securities (i.e., payment or delivery of the securities occurs at a future date for a predetermined price). Under normal circumstances, the fund invests at least 80% of the fund’s net assets in U.S. government securities and repurchase agreements that are fully collateralized by U.S. government securities. This policy may be changed only after 60 days’ notice to shareholders. The securities purchased by the fund are subject to quality, maturity, diversification and other requirements pursuant to rules promulgated by the SEC. Putnam Management may consider, among other factors, credit and interest rate risks and characteristics of the issuer or counterparty, as well as general market conditions, when deciding whether to buy or sell investments.

The fund offers class IA and class IB shares of beneficial interest. Class IA shares are offered at net asset value and are not subject to a distribution fee. Class IB shares are offered at net asset value and pay an ongoing distribution fee, which is identified in Note 2.

In the normal course of business, the fund enters into contracts that may include agreements to indemnify another party under given circumstances. The fund’s maximum exposure under these arrangements is unknown as this would involve future claims that may be, but have not yet been, made against the fund. However, the fund’s management team expects the risk of material loss to be remote.

The fund has entered into contractual arrangements with an investment adviser, administrator, distributor, shareholder servicing agent and custodian, who each provide services to the fund. Unless expressly stated otherwise, shareholders are not parties to, or intended beneficiaries of these contractual arrangements, and these contractual arrangements are not intended to create any shareholder right to enforce them against the service providers or to seek any remedy under them against the service providers, either directly or on behalf of the fund.

Under the Trust’s Amended and Restated Agreement and Declaration of Trust, any claims asserted by a shareholder against or on behalf of the Trust (or its series), including claims against Trustees and Officers, must be brought in state and federal courts located within the Commonwealth of Massachusetts.

Note 1 — Significant accounting policies

The fund follows the accounting and reporting guidance in Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic 946, *Financial Services – Investment Companies* (ASC 946) and applies the specialized accounting and reporting guidance in U.S. Generally Accepted Accounting Principles (U.S. GAAP), including, but not limited to, ASC 946. The following is a summary of significant accounting policies consistently followed by the fund in the preparation of its financial statements. The preparation of financial statements is in conformity

with accounting principles generally accepted in the United States of America and requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities in the financial statements and the reported amounts of increases and decreases in net assets from operations. Actual results could differ from those estimates. Subsequent events after the Statement of assets and liabilities date through the date that the financial statements were issued have been evaluated in the preparation of the financial statements.

Investment income, realized gains and losses and expenses of the fund are borne pro-rata based on the relative net assets of each class to the total net assets of the fund, except that each class bears expenses unique to that class (including the distribution fees applicable to such classes). Each class votes as a class only with respect to its own distribution plan or other matters on which a class vote is required by law or determined by the Trustees. Shares of each class would receive their pro-rata share of the net assets of the fund, if the fund were liquidated. In addition, the Trustees declare separate dividends on each class of shares.

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.

The valuation of the fund’s portfolio instruments is determined by means of the amortized cost method (which approximates fair value) as set forth in Rule 2a–7 under the Investment Company Act of 1940. The amortized cost of an instrument is determined by valuing it at its original cost and thereafter amortizing any discount or premium from its face value at a constant rate until maturity and is generally categorized as a Level 2 security.

Joint trading account Pursuant to an exemptive order from the SEC, the fund may transfer uninvested cash balances into a joint trading account along with the cash of other registered investment companies and certain other accounts managed by Putnam Management. These balances may be invested in issues of short-term investments having maturities of up to 90 days.

Repurchase agreements The fund, or any joint trading account, through its custodian, receives delivery of the underlying securities, the fair value of which at the time of purchase is required to be in an amount at least equal to the resale price, including accrued interest. Collateral for certain tri-party repurchase agreements, which totaled \$69,018,755 at the end of the reporting period, is held at the counterparty’s custodian in a segregated account for the benefit of the fund and the counterparty. Putnam Management is responsible for determining that the value of these underlying securities is at all times at least equal to the resale price, including accrued interest. In the event of default or bankruptcy by the other party to the agreement, retention of the collateral may be subject to legal proceedings.

Security transactions and related investment income Security transactions are recorded on the trade date (the date the order to buy or sell is executed). Interest income, including amortization and accretion of premiums and discounts, is recorded on the accrual basis. Gains or losses on securities sold are determined on the identified cost basis.

Interfund lending The fund, along with other Putnam funds, may participate in an interfund lending program pursuant to an exemptive order issued by the SEC. This program allows the fund to lend to other Putnam funds that permit such transactions. Interfund lending transactions are subject to each fund’s investment policies and borrowing and lending limits. Interest earned or paid on the interfund lending transaction will be based on the average of certain current market rates. During the reporting period, the fund did not utilize the program.

Lines of credit The fund participates, along with other Putnam funds, in a \$320 million syndicated unsecured committed line of credit, provided by State Street (\$160 million) and JPMorgan (\$160 million), and a \$235.5 million unsecured uncommitted line of credit, provided by State Street. Borrowings may be made for temporary or emergency purposes, including the funding of shareholder redemption requests and trade settlements. Interest is charged to the fund based on the fund’s borrowing at a rate equal to 1.25% plus the higher of (1) the Federal Funds rate and (2) the Overnight Bank Funding Rate for the committed line of credit and 1.30% plus the higher of (1) the Federal Funds rate and (2) the Overnight Bank Funding Rate for the uncommitted line of credit. A closing fee equal to 0.04% of the committed line of credit and 0.04% of the uncommitted line

of credit has been paid by the participating funds and a \$75,000 fee has been paid by the participating funds to State Street as agent of the syndicated committed line of credit. In addition, a commitment fee of 0.21% per annum on any unutilized portion of the committed line of credit is allocated to the participating funds based on their relative net assets and paid quarterly. During the reporting period, the fund had no borrowings against these arrangements.

Federal taxes It is the policy of the fund to distribute all of its taxable income within the prescribed time period and otherwise comply with the provisions of the Internal Revenue Code of 1986, as amended (the Code), applicable to regulated investment companies.

The fund is subject to the provisions of Accounting Standards Codification 740 *Income Taxes* (ASC 740). ASC 740 sets forth a minimum threshold for financial statement recognition of the benefit of a tax position taken or expected to be taken in a tax return. The fund did not have a liability to record for any unrecognized tax benefits in the accompanying financial statements. No provision has been made for federal taxes on income, capital gains or unrealized appreciation on securities held nor for excise tax on income and capital gains. Each of the fund's federal tax returns for the prior three fiscal years remains subject to examination by the Internal Revenue Service.

Distributions to shareholders Income dividends are recorded daily by the fund and are paid monthly. Distributions from capital gains, if any, are paid at least annually. The amount and character of income and gains to be distributed are determined in accordance with income tax regulations, which may differ from generally accepted accounting principles. For the reporting period, there were no material temporary or permanent differences. Reclassifications are made to the fund's capital accounts to reflect income and gains available for distribution (or available capital loss carryovers) under income tax regulations. At the close of the reporting period, the fund reclassified \$864 to increase undistributed net investment income and \$864 to decrease accumulated net realized gain.

The tax basis components of distributable earnings and the federal tax cost as of the close of the reporting period were as follows:

Undistributed ordinary income \$1,294

The aggregate identified cost on a financial reporting and tax basis is the same.

Expenses of the Trust Expenses directly charged or attributable to any fund will be paid from the assets of that fund. Generally, expenses of the Trust will be allocated among and charged to the assets of each fund on a basis that the Trustees deem fair and equitable, which may be based on the relative assets of each fund or the nature of the services performed and relative applicability to each fund.

Beneficial interest At the close of the reporting period, insurance companies or their separate accounts were record owners of all but a de minimis number of the shares of the fund. Approximately 34.5% of the fund is owned by accounts of one insurance company.

Note 2 — Management fee, administrative services and other transactions

The fund pays Putnam Management a management fee (based on the fund's average net assets and computed and paid monthly) at annual rates that may vary based on the average of the aggregate net assets of all open-end mutual funds sponsored by Putnam Management (excluding net assets of funds that are invested in, or that are invested in by, other Putnam funds to the extent necessary to avoid "double counting" of those assets). Such annual rates may vary as follows:

- 0.440% of the first \$5 billion,
- 0.390% of the next \$5 billion,
- 0.340% of the next \$10 billion,
- 0.290% of the next \$10 billion,
- 0.240% of the next \$50 billion,
- 0.220% of the next \$50 billion,
- 0.210% of the next \$100 billion and
- 0.205% of any excess thereafter.

For the reporting period, the management fee represented an effective rate (excluding the impact from any expense waivers in effect) of 0.280% of the fund's average net assets.

Putnam Management has contractually agreed, through April 30, 2025, to waive fees and/or reimburse the fund's expenses to the extent necessary to limit the cumulative expenses of the fund, exclusive of brokerage, interest, taxes, investment-related expenses, extraordinary expenses, acquired fund fees and expenses and payments under the fund's investor servicing contract, investment management contract and distribution plan, on a fiscal year-to-date basis to an annual rate of 0.20% of the fund's average net assets over such fiscal year-to-date period.

During the reporting period, the fund's expenses were not reduced as a result of this limit.

Putnam Management may from time to time voluntarily undertake to waive fees and/or reimburse certain fund expenses in order to enhance the annualized net yield for the fund. Any such waiver or reimbursement would be voluntary and may be modified or discontinued by Putnam Management at any time without notice. For the reporting period, Putnam Management did not waive any specific distribution fees from the fund.

PIL is authorized by the Trustees to manage a separate portion of the assets of the fund as determined by Putnam Management from time to time. PIL did not manage any portion of the assets of the fund during the reporting period. If Putnam Management were to engage the services of PIL, Putnam Management would pay a quarterly sub-management fee to PIL for its services at an annual rate of 0.20% of the average net assets of the portion of the fund managed by PIL.

On January 1, 2024, a subsidiary of Franklin Templeton acquired Putnam U.S. Holdings I, LLC ("Putnam Holdings"), the parent company of Putnam Management and PIL, in a stock and cash transaction (the "Transaction"). As a result of the Transaction, Putnam Management (the investment manager to the fund and a wholly-owned subsidiary of Putnam Holdings) and PIL (sub-adviser to the fund and an indirect, wholly-owned subsidiary of Putnam Holdings) became indirect, wholly-owned subsidiaries of Franklin Templeton. The Transaction also resulted in the automatic termination of the investment management contract between the fund and Putnam Management and the sub-management contract for the fund between Putnam Management and PIL that were in place for the fund before the Transaction. However, Putnam Management and PIL continue to provide uninterrupted services with respect to the fund pursuant to new investment management and sub-management contracts that were approved by fund shareholders at a shareholder meeting held in connection with the Transaction and that took effect on January 1, 2024. The terms of the new investment management and sub-management contracts are substantially similar to those of the previous investment management and sub-management contracts, and the fee rates payable under the new investment management and sub-management contracts are the same as the fee rates under the previous investment management and sub-management contracts.

The fund reimburses Putnam Management an allocated amount for the compensation and related expenses of certain officers of the fund and their staff who provide administrative services to the fund. The aggregate amount of all such reimbursements is determined annually by the Trustees.

Custodial functions for the fund's assets are provided by State Street. Custody fees are based on the fund's asset level, the number of its security holdings and transaction volumes.

Putnam Investor Services, Inc., an affiliate of Putnam Management, provides investor servicing agent functions to the fund. Putnam Investor Services, Inc. was paid a monthly fee for investor servicing at an annual rate of 0.07% of the fund's average daily net assets. During the reporting period, the expenses for each class of shares related to investor servicing fees were as follows:

Class IA	\$27,877
Class IB	22,374
Total	\$50,251

The fund has entered into expense offset arrangements with Putnam Investor Services, Inc. and State Street whereby Putnam Investor Services, Inc.'s and State Street's fees are reduced by credits allowed on cash balances. For the reporting period, the fund's expenses were reduced by \$451 under the expense offset arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$67, as a quarterly retainer, has been allocated to the fund, and an additional fee for each Trustees meeting attended. Trustees also are reimbursed for expenses they incur relating to their services as Trustees.

The fund has adopted a Trustee Fee Deferral Plan (the Deferral Plan) which allows the Trustees to defer the receipt of all or a portion of Trustees fees payable from July 1, 1995 through December 31, 2023. The deferred fees remain invested in certain Putnam funds until distribution in accordance with the Deferral Plan.

The fund has adopted an unfunded noncontributory defined benefit pension plan (the Pension Plan) covering all Trustees of the fund who have served as a Trustee for at least five years and were first elected prior to 2004. Benefits under the Pension Plan are equal to 50% of the Trustee's average annual attendance and retainer fees for the three years ended December 31, 2005. The retirement benefit is payable during a Trustee's lifetime, beginning the year following retirement, for

the number of years of service through December 31, 2006. Pension expense for the fund is included in Trustee compensation and expenses in the Statement of operations. Accrued pension liability is included in Payable for Trustee compensation and expenses in the Statement of assets and liabilities. The Trustees have terminated the Pension Plan with respect to any Trustee first elected after 2003.

The fund has adopted a distribution plan (the Plan) with respect to its class IB shares pursuant to Rule 12b-1 under the Investment Company Act of 1940. The purpose of the Plan is to compensate Putnam Retail Management Limited Partnership, an indirect wholly-owned subsidiary of Franklin Templeton, for services provided and expenses incurred in distributing shares of the fund. The Plan provides for payment by the fund to Putnam Retail Management Limited Partnership at an annual rate of up to 0.35% of the average net assets attributable to the fund's class IB shares. The Trustees have approved payment by the fund at an annual rate of 0.25% of the average net assets attributable to the fund's class IB

shares. The expenses related to distribution fees during the reporting period are included in Distribution fees in the Statement of operations.

Note 3 — Purchases and sales of securities

During the reporting period, the cost of purchases and the proceeds from sales (including maturities) of investment securities (all short-term obligations) aggregated \$15,854,851,869 and \$15,848,383,000, respectively. The fund may purchase or sell investments from or to other Putnam funds in the ordinary course of business, which can reduce the fund's transaction costs, at prices determined in accordance with SEC requirements and policies approved by the Trustees. During the reporting period, purchases or sales from or to other Putnam funds, if any, did not represent more than 5% of the fund's total cost of purchases and/or total proceeds from sales.

Note 4 — Capital shares

At the close of the reporting period, there were an unlimited number of shares of beneficial interest authorized. Subscriptions and redemptions are presented at the omnibus level. Transactions in capital shares were as follows:

	Class IA shares				Class IB shares			
	Year ended 12/31/23		Year ended 12/31/22		Year ended 12/31/23		Year ended 12/31/22	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	18,302,582	\$18,302,582	33,679,958	\$33,679,958	14,281,480	\$14,281,480	6,689,682	\$6,689,682
Shares issued in connection with reinvestment of distributions	1,829,142	1,829,142	536,260	536,260	1,394,181	1,394,181	353,766	353,766
	20,131,724	20,131,724	34,216,218	34,216,218	15,675,661	15,675,661	7,043,448	7,043,448
Shares repurchased	(19,710,438)	(19,710,438)	(33,832,505)	(33,832,505)	(9,626,831)	(9,626,831)	(9,977,219)	(9,977,219)
Net increase (decrease)	421,286	\$421,286	383,713	\$383,713	6,048,830	\$6,048,830	(2,933,771)	\$(2,933,771)

Note 5 — Market, credit and other risks

In the normal course of business, the fund trades financial instruments and enters into financial transactions where risk of potential loss exists due to changes in the market (market risk) or failure of the contracting party to the transaction to perform (credit risk). The fund may be exposed to additional credit risk that an institution or other entity with which the fund has unsettled or open transactions will default.

Note 6 — Offsetting of financial and derivative assets and liabilities

The following table summarizes any derivatives, repurchase agreements and reverse repurchase agreements, at the end of the reporting period, that are subject to an enforceable master netting agreement or similar agreement. For securities lending transactions or borrowing transactions associated with securities sold short, if any, see Note 1. For financial reporting purposes, the fund does not offset financial assets and financial liabilities that are subject to the master netting agreements in the Statement of assets and liabilities.

	BofA Securities, Inc.	BNP Paribas Securities Corp.	Goldman, Sachs & Co. LLC	Total
Assets:				
Repurchase agreements**	\$22,652,000	\$22,500,000	\$22,500,000	\$67,652,000
Total Assets	\$22,652,000	\$22,500,000	\$22,500,000	\$67,652,000
Total Financial and Derivative Net Assets	\$22,652,000	\$22,500,000	\$22,500,000	\$67,652,000
Total collateral received (pledged)†##	\$22,652,000	\$22,500,000	\$22,500,000	
Net amount	\$—	\$—	\$—	
<i>Controlled collateral received (including TBA commitments)**</i>	\$—	\$—	\$—	\$—
<i>Uncontrolled collateral received</i>	\$23,105,040	\$22,963,643	\$22,950,072	\$69,018,755
<i>Collateral (pledged) (including TBA commitments)**</i>	\$—	\$—	\$—	\$—

** Included with Investments in securities on the Statement of assets and liabilities.

† Additional collateral may be required from certain brokers based on individual agreements.

Any over-collateralization of total financial and derivative net assets is not shown. Collateral may include amounts related to unsettled agreements.

Shareholder meeting results (Unaudited)

October 20, 2023 special meeting

At the meeting, a new Management Contract for your fund with Putnam Investment Management, LLC was approved, as follows:









Votes for	Votes against	Abstentions/Votes withheld
64,803,414	160,559	2,513,028

At the meeting, a new Sub-Management Contract for your fund between Putnam Investment Management, LLC and Putnam Investments Limited was approved, as follows:

Votes for	Votes against	Abstentions/Votes withheld
64,466,507	311,828	2,698,666

All tabulations are rounded to the nearest whole number.

About the Trustees

Name Year of birth Position held	Principal occupations during past five years	Other directorships	
Independent Trustees			
LiaquatAhamed Born 1952 Trustee since 2012	Author; won Pulitzer Prize for <i>Lords of Finance: The Bankers Who Broke the World</i> .	Chair of the Sun Valley Writers Conference, a literary not-for-profit organization, and a Trustee of the Journal of Philosophy.	
Barbara M. Baumann Born 1955 Trustee since 2010 Vice Chair since 2022	President of Cross Creek Energy Corporation, a strategic consultant to domestic energy firms and direct investor in energy projects.	Director of Devon Energy Corporation, a publicly traded independent natural gas and oil exploration and production company; Director of National Fuel Gas Company, a publicly traded energy company that engages in the production, gathering, transportation, distribution, and marketing of natural gas; Senior Advisor to the energy private equity firm First Reserve; member of the Finance Committee of the Children's Hospital of Colorado; member of the Investment Committee of the Board of The Denver Foundation; and previously a Director of publicly traded companies Buckeye Partners LP, UNS Energy Corporation, CVR Energy Company, and SM Energy Corporation.	
Katinka Domotorffy Born 1975 Trustee since 2012	Voting member of the Investment Committees of the Anne Ray Foundation and Margaret A. Cargill Foundation, part of the Margaret A. Cargill Philanthropies.	Director of the Great Lakes Science Center and of College Now Greater Cleveland.	
Catharine Bond Hill Born 1954 Trustee since 2017	Managing Director of Ithaca S+R, a not-for-profit service that helps the academic community navigate economic and technological change. From 2006 to 2016, Dr. Hill served as the 10th president of Vassar College.	Director of Yale-NUS College and Trustee of Yale University.	
Kenneth R. Leibler Born 1949 Trustee since 2006 Vice Chair from 2016 to 2018, Chair since 2018	Vice Chair Emeritus of the Board of Trustees of Beth Israel Deaconess Hospital in Boston. Member of the Investment Committee of the Boston Arts Academy Foundation.	Director of Eversource Corporation, which operates New England's largest energy delivery system; previously the Chairman of the Boston Options Exchange, an electronic marketplace for the trading of listed derivatives securities; previously the Chairman and Chief Executive Officer of the Boston Stock Exchange; and previously the President and Chief Operating Officer of the American Stock Exchange.	
Jennifer Williams Murphy* Born 1964 Trustee since 2022	Chief Executive Officer and Founder of Runa Digital Assets, LLC, an institutional investment advisory firm specializing in active management of digital assets. Until 2021, Chief Operating Officer of Western Asset Management, LLC, a global investment adviser, and Chief Executive Officer and President of Western Asset Mortgage Capital Corporation, a mortgage finance real estate investment trust.	Previously, a Director of Western Asset Mortgage Capital Corporation.	
Marie Pillai Born 1954 Trustee since 2022	Senior Advisor, Hunter Street Partners, LP, an asset-oriented private investment firm; Specialty Leader and Member of the Curriculum Committee of the Center for Board Certified Fiduciaries, a public benefit corporation providing coursework for developing fiduciaries. Until 2019, Vice President, Chief Investment Officer, and Treasurer of General Mills, Inc., a global food company.	Member of the Investment Committee of the Bush Foundation, a nonprofit organization supporting community problem-solving in Minnesota, North Dakota, and South Dakota; Member of the Finance Council and Corporate Board of the Archdiocese of Saint Paul and Minneapolis; Director of Choice Bank, a private, community bank based in North Dakota; and previously a Board Member of Catholic Charities of St. Paul and Minneapolis; former Director of the Catholic Community Foundation of Minnesota; and former Investment Advisory Board Member of the University of Minnesota.	
George Putnam III Born 1951 Trustee since 1984	Chairman of New Generation Research, Inc., a publisher of financial advisory and other research services, and President of New Generation Advisors, LLC, a registered investment adviser to private funds.	Director of The Boston Family Office, LLC, a registered investment adviser; a Director of the Gloucester Marine Genomics Institute; a Trustee of the Lowell Observatory Foundation; and previously a Trustee of the Marine Biological Laboratory.	

Name Year of birth Position held	Principal occupations during past five years	Other directorships	
Manoj P. Singh Born 1952 Trustee since 2017	Until 2015, Chief Operating Officer and Global Managing Director at Deloitte Touche Tohmatsu, Ltd., a global professional services organization, serving on the Deloitte U.S. Board of Directors and the boards of Deloitte member firms in China, Mexico, and Southeast Asia.	Director of ReNew Energy Global PLC, a publicly traded renewable energy company; Director of Abt Associates, a global research firm working in the fields of health, social and environmental policy, and international development; Trustee of Carnegie Mellon University; Director of Pratham USA, an organization dedicated to children's education in India; member of the advisory board of Altimetrik, a business transformation and technology solutions firm; and Director of DXC Technology, a global IT services and consulting company.	
Mona K. Sutphen Born 1967 Trustee since 2020	Partner, Investment Strategies, at The Vistria Group, a private investment firm focused on middle-market companies in the health care, education, and financial services industries. From 2014 to 2018, Partner at Macro Advisory Partners, a global consulting firm.	Director of Spotify Technology S.A., a publicly traded audio content streaming service; Director of Unitek Learning, a private nursing and medical services education provider in the United States; Board Member, International Rescue Committee; Co-Chair of the Board of Human Rights First; Trustee of Mount Holyoke College; member of the Advisory Board for the Center on Global Energy Policy at Columbia University's School of International and Public Affairs; previously Director of Pattern Energy and Pioneer Natural Resources, publicly traded energy companies; and previously Managing Director of UBS AG.	

Interested Trustees

Robert L. Reynolds† Born 1952 Trustee since 2008	Chair of Great-West Lifeco U.S. LLC. Prior to 2019, also President and Chief Executive Officer of Great-West Financial, a financial services company that provides retirement savings plans, life insurance, and annuity and executive benefits products, and of Great-West Lifeco U.S. LLC, a holding company that owns Putnam Investments and Great-West Financial, and a member of Great-West Financial's Board of Directors. Until 2023, President and Chief Executive Officer of Putnam Investments, President and Chief Executive Officer of Putnam Management, and member of Putnam Investments' Board of Directors.	Director of the Concord Museum; Director of Dana-Farber Cancer Institute; Director of the U.S. Ski & Snowboard Foundation; Chair of the Boston Advisory Board of the American Ireland Fund; Council Co-Chair of the American Enterprise Institute; Member of U.S. Chamber of Commerce, Center for Capital Markets Competitiveness; Chair of Massachusetts High Technology Council; Member of the Chief Executives Club of Boston; Member of the Massachusetts General Hospital President's Council; Chairman of the Board of Directors of the Ron Burton Training Village; Director and former Chair of the Massachusetts Competitive Partnership; former Chair of the West Virginia University Foundation; and former Executive Committee Member of the Greater Boston Chamber of Commerce.	
Jane E. Trust‡ Born 1962 Trustee since 2024	Since 2020, Senior Vice President, Fund Board Management, of Franklin Templeton. Since 2015, Officer and/or Trustee/Director of 127 funds associated with Legg Mason Partners Fund Advisor, LLC ("LMPFA") or its affiliates, and President and Chief Executive Officer of LMPFA. From 2018 to 2020, Senior Managing Director of Legg Mason & Co., LLC (Legg Mason & Co.). From 2016 to 2018, Managing Director of Legg Mason & Co. In 2015, Senior Vice President of LMPFA.	None.	

*Ms. Murphy is the founder, controlling member, and Chief Executive Officer of Runa Digital Assets, LLC ("RDA"), the investment manager of Runa Digital Partners, LP ("RDP"), a private investment fund. Ms. Murphy also holds a controlling interest in RDP's general partner and is a limited partner in RDP. A subsidiary of Franklin Templeton and certain individuals employed by Franklin Templeton or its affiliates have made passive investments as limited partners in RDP (one of whom serves on the advisory board for RDA, which has no governance or oversight authority over RDA), representing in the aggregate approximately 33% of RDP as of October 31, 2023. In addition, if certain conditions are met, Franklin Templeton will be entitled to receive a portion of any incentive compensation allocable to RDP's general partner. For so long as Franklin Templeton maintains its investment in RDP, Ms. Murphy also has agreed upon request to advise and consult with Franklin Templeton and its affiliates on the market for digital assets. Ms. Murphy provides similar service to other limited partners in RDP that request her advice. Ms. Murphy also is entitled to receive deferred cash compensation in connection with her prior employment by an affiliate of Franklin Templeton, which employment ended at the end of 2021. With regard to Ms. Murphy, the relationships described above may give rise to a potential conflict of interest with respect to the Funds.

†Mr. Reynolds is an "interested person" (as defined in the Investment Company Act of 1940) of the fund and Putnam Management. He is President of your fund and each of the other Putnam funds and holds direct beneficial interest in shares of Franklin Templeton, of which Putnam Management is an indirect wholly-owned subsidiary.

‡Ms. Trust is an "interested person" (as defined in the Investment Company Act of 1940) of the fund and Putnam Management by virtue of her positions with certain affiliates of Putnam Management.

The address of each Trustee is 100 Federal Street, Boston, MA 02110.

As of December 31, 2023, there were 105 funds in the Putnam family of funds, including 89 mutual funds, 4 closed-end funds, and 12 exchange-traded funds. Each Trustee serves as Trustee of the 105 funds in the Putnam family of funds. Ms. Trust also serves as Trustee of 127 other funds that are advised by one or more affiliates of Putnam Management.

Each Trustee serves for an indefinite term, until his or her resignation, retirement at age 75, removal, or death.

Officers

In addition to Robert L. Reynolds, the other officers of the fund are shown below:

Kevin R. Blatchford *(Born 1967)*
Vice President and Assistant Treasurer
Since 2023
Director, Financial Reporting, Putnam Holdings

James F. Clark *(Born 1974)*
Vice President and Chief Compliance Officer
Since 2016
Chief Compliance Officer, Putnam Management
and Putnam Holdings

Michael J. Higgins *(Born 1976)*
Vice President, Treasurer, and Clerk
Since 2010

Jonathan S. Horwitz *(Born 1955)*
Executive Vice President, Principal Executive
Officer, and Compliance Liaison
Since 2004

Kelley Hunt *(Born 1984)*
AML Compliance Officer
Since 2023
Manager, U.S. Financial Crime Compliance,
Franklin Templeton

Denere P. Poulack *(Born 1968)*
Assistant Vice President, Assistant Clerk,
and Assistant Treasurer
Since 2004

Janet C. Smith *(Born 1965)*
Vice President, Principal Financial
Officer, Principal Accounting Officer,
and Assistant Treasurer
Since 2007
Head of Fund Administration Services, Putnam
Holdings and Putnam Management

Stephen J. Tate *(Born 1974)*
Vice President and Chief Legal Officer
Since 2021
General Counsel, Putnam Holdings, Putnam
Management, and Putnam Retail Management

The principal occupations of the officers for the past five years have been with the employers as shown above, although in some cases they have held different positions with such employers. The address of each officer, other than Ms. Hunt, is 100 Federal Street, Boston, MA 02110. Ms. Hunt's address is 100 Fountain Parkway, St. Petersburg, FL 33716.

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Other important information

Proxy voting

The Putnam funds' proxy voting guidelines and procedures, as well as information regarding how your fund voted proxies relating to portfolio securities during the 12-month period ended June 30, 2023, are available in the Individual Investors section of putnam.com and on the Securities and Exchange Commission's (SEC) website at www.sec.gov. If you have questions about finding forms on the SEC's website, you may call the SEC at 1-800-SEC-0330. You may also obtain the Putnam funds' proxy voting guidelines and procedures at no charge by calling 1-800-225-1581.

Fund portfolio holdings

The fund files monthly portfolio information with the SEC on Form N-MFP. The fund's Form N-MFP reports are available on the SEC's website at www.sec.gov. For information on the fund's portfolio, you may also visit the Putnam Investments website, putnam.com/individual/annuities, where the fund's portfolio holdings and related portfolio information may be viewed monthly beginning no later than five business days after the end of each month.

Fund information

Investment Manager

Putnam Investment Management, LLC
100 Federal Street
Boston, MA 02110

Investment Sub-Advisor

Putnam Investments Limited
16 St James's Street
London, England SW1A 1ER

Marketing Services

Putnam Retail Management
Limited Partnership
100 Federal Street
Boston, MA 02110

Investor Servicing Agent

Putnam Investments
Mailing address:
P.O. Box 219697
Kansas City, MO 64121-9697
1-800-225-1581

Custodian

State Street Bank and Trust Company

Legal Counsel

Ropes & Gray LLP

Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP

Trustees

Kenneth R. Leibler, *Chair*
Barbara M. Baumann, *Vice Chair*
Liaquat Ahamed
Katinka Domotorffy
Catharine Bond Hill
Jennifer Williams Murphy
Marie Pillai
George Putnam III
Robert L. Reynolds
Manoj P. Singh
Mona K. Sutphen
Jane E. Trust

The fund's Statement of Additional Information contains additional information about the fund's Trustees and is available without charge upon request by calling 1-800-225-1581.

