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Putnam Variable Trust

Putnam VT George Putnam Balanced Fund

Annual report

12 | 31 | 22

Message from the Trustees

February 9, 2023

Dear Shareholder:

As an investor, you might be happy to see 2022 in the rearview mirror. High inflation and aggressive interest-rate increases from the U.S. Federal Reserve contributed to market volatility and negative returns for stocks and bonds. Fortunately, toward the end of the year, we saw both inflation levels and Fed actions begin to moderate somewhat.

Although we still face high inflation and uncertainty on how much the economy will slow because of higher interest rates, we believe financial market performance might be better in 2023 as compared with 2022. Historically, stocks and bonds have recovered from bear markets like the one we are experiencing. Be assured that our investment teams are actively researching securities with attractive potential and working to keep portfolio risks in check.

Thank you for investing with Putnam.

Respectfully yours,



Robert L. Reynolds
President and Chief Executive Officer
Putnam Investments



Kenneth R. Leibler
Chair, Board of Trustees

Performance summary (as of 12/31/22)

Investment objective

Balanced investment comprising a well-diversified portfolio of stocks and bonds that produce both capital growth and current income

Net asset value December 31, 2022

Class IA: \$11.61

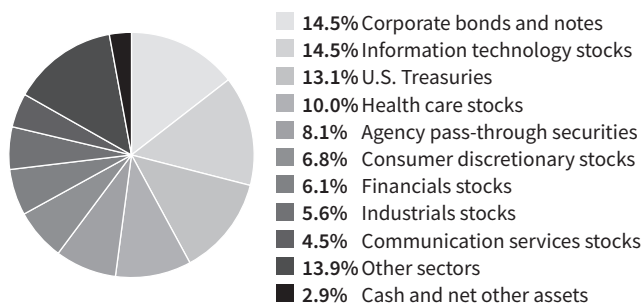
Class IB: \$11.54

Annualized total return at net asset value (as of 12/31/22)

	Class IA shares (4/30/98)	Class IB shares (4/30/98)	George Putnam Blended Index (primary benchmark)	S&P 500 Index (secondary benchmark)	Bloomberg U.S. Aggregate Bond Index
1 year	-15.82%	-15.99%	-15.56%	-18.11%	-13.01%
5 years	6.09	5.82	6.21	9.42	0.02
10 years	8.14	7.86	8.25	12.56	1.06
Life of fund	4.99	4.75	6.41	7.13	3.94

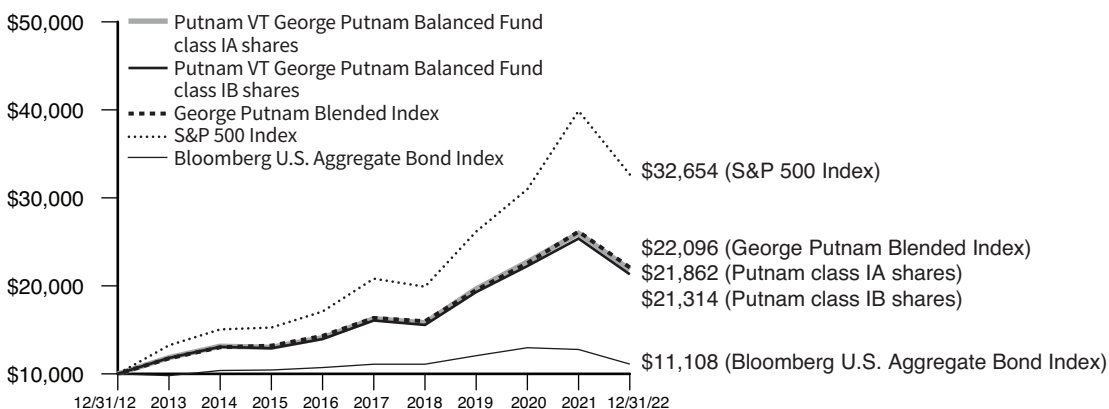
For a portion of the periods, the fund had expense limitations, without which returns would have been lower.

Portfolio composition



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, derivatives, short-term securities, 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 derivative securities, 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.

Cumulative total returns of a \$10,000 investment in class IA and class IB shares at net asset value — since 12/31/12



The George Putnam Blended Index is an unmanaged index administered by Putnam Management, 60% of which is the S&P 500® Index and 40% of which is the Bloomberg U.S. Aggregate Bond Index. The S&P 500® Index is an unmanaged index of common stock performance. The Bloomberg U.S. Aggregate Bond Index is an unmanaged index of U.S. investment-grade fixed income securities.

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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. 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.

Report from your fund's managers

Please describe investing conditions for the 12-month reporting period ended December 31, 2022.

Financial markets were challenged by high inflation, rising interest rates, supply chain disruptions, and the Russia-Ukraine War. China's zero-Covid-19 policy also caused periodic lockdowns, which stoked global growth concerns.

To help curb multidecade-high inflation, the U.S. Federal Reserve and other central banks worldwide began to raise interest rates. The federal funds rate rose from 0.00%–0.25% at the start of the period to 4.25%–4.50% at period-end. This pushed yields on short-term bonds above long-term bonds, which caused the yield curve to flatten or invert at times.

Near the close of the period, inflation showed signs of easing, and positive corporate earnings results helped lift stocks. Credit spreads began to tighten as investor sentiment improved. [Credit spreads are the yield advantage credit-sensitive bonds offer over comparable-maturity U.S. Treasuries. Bond prices rise as yield spreads tighten and decline as spreads widen.] The yield on the 10-year U.S. Treasury climbed from 1.52% at the start of the period to 3.88% at period-end.

For the 12-month period, the S&P 500 Index logged its biggest loss since 2008. Investment-grade [IG] corporate bonds also declined, as measured by the Bloomberg U.S. Aggregate Bond Index, which returned –13.01% for the period.

How did Putnam VT George Putnam Balanced Fund perform for the reporting period?

The fund's class IA shares returned –15.82%, slightly underperforming its custom primary benchmark, the George Putnam Blended Index, which returned –15.56%. This custom index comprises 60% of the S&P 500 Index and 40% of the Bloomberg U.S. Aggregate Bond Index. The fund outperformed its all-stock secondary benchmark, the S&P 500 Index, which returned –18.11% for the period, but modestly underperformed its fixed income benchmark, the Bloomberg U.S. Aggregate Bond Index.

Within the fund's stock portfolio, what were some top contributors and detractors relative to the custom benchmark for the reporting period?

Cenovus Energy, a Canadian oil-sands operator, was our top-performing stock holding. The Russia-Ukraine War caused a spike in energy prices, which boosted Cenovus's profit margins. Telecommunications operator T-Mobile U.S. was another top contributor. During the period, T-Mobile performed well as investors shifted toward more defensive, value-oriented stocks.

An overweight position relative to the custom benchmark in Amazon.com was among our top detractors for stocks. The global e-retailer saw a decline in cloud computing services and online product sales during the period. Higher costs from supply chain disruptions and inflation further squeezed company profits. An out-of-benchmark position in Unity Software, a U.S. video game software developer, also dampened results. Unity's operating losses widened during the period, which cautioned investors. We sold the stock before period-end.

How were derivatives used during the period?

We used forward currency contracts to help hedge foreign exchange risk.

How did the portfolio's bond allocations perform during the reporting period?

Our bond allocations slightly outperformed the Bloomberg U.S. Aggregate Bond Index. Our tactical mortgage basis strategy [which seeks to capitalize on the difference between longer-term U.S. Treasury yields and the interest rates on 30-year home mortgages] was positioned to take advantage of fluctuations in mortgage rates throughout the year. Exposure to U.S. IG corporate credit offset positive performance, largely from our positioning in the financials sector.

What is your outlook for bond markets?

While we continue to find pockets of idiosyncratic opportunity, we have a cautious view on U.S. IG corporate bonds over the intermediate term. Multiple data sources have shown that inflation is on the decline. Yet, we believe monetary policy will need to remain restrictive until the Fed nears its target of 2% inflation.

Current financial conditions continue to weigh on consumer confidence, and corporate pricing power is eroding in certain sectors, in our view. We believe corporate credit fundamentals are deteriorating, albeit from a very strong base. IG valuations have worsened in recent months. We continue to believe valuations will be supported by persistent demand from liability-based and foreign institutional investors over the longer term.

What is your outlook for the economy and the portfolio?

Calendar 2022 was a very challenging year for financial markets and all asset classes. Investors may not find relief until inflation eases, economic growth slows further, and central banks become less hawkish, in our view.

As we enter 2023, we believe that there are reasons for optimism. Certain sectors and industries that were devastated two years ago now appear to be thriving. We expect many assets will recoup their losses once the Fed slows interest-rate hikes further. For the portfolio, we continue to use deep fundamental research to identify companies that we believe can weather macro-driven risks and will rebound if conditions shift in 2023.

The views expressed in this report are exclusively those of Putnam Management and 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. Current and future portfolio holdings are subject to risk.

Consider these risks before investing: The value of investments in the fund's portfolio may fall or fail to rise over extended periods of time for a variety of reasons, including general economic, political, or financial market conditions; investor sentiment and market perceptions; government actions; geopolitical events or changes; and factors related to a specific issuer, asset class, geography, industry, or sector.

These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings.

Growth stocks may be more susceptible to earnings disappointments, and value stocks may fail to rebound. Bond investments are subject to interest-rate risk (the risk of bond prices falling if interest rates rise) and credit risk (the risk of an issuer defaulting on interest or principal payments). Interest-rate risk is generally greater for longer-term bonds, and credit risk is generally greater for below-investment-grade bonds. Risks associated with derivatives include increased investment exposure (which may be considered leverage) and, in the case of over-the-counter instruments, the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations.

Our investment techniques, analyses, and judgments may not produce the outcome we intend. The investments we select for the fund may not perform as well as other securities that we do not select for the fund. We, or the fund's other service providers, may experience disruptions or operating errors that could have a negative effect on the fund. You can lose money by investing in the fund.

Your fund's managers



Portfolio Manager **Andrew C. Benson** has been in the investment industry since he joined Putnam in 2008.



Portfolio Manager **Kathryn B. Lakin** is Director of Equity Research. She joined Putnam in 2012 and has been in the investment industry since 2008.

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 7/1/22 to 12/31/22. 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 12/31/21	0.64%	0.89%
Annualized expense ratio for the six-month period ended 12/31/22*	0.67%	0.92%

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.

*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 12/31/22		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 12/31/22	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$3.39	\$4.65	\$3.41	\$4.69
Ending value (after expenses)	\$1,007.80	\$1,007.00	\$1,021.83	\$1,020.57

*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 12/31/22. 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 George Putnam Balanced Fund:

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT George Putnam Balanced Fund (one of the funds constituting Putnam Variable Trust, referred to hereafter as the "Fund") as of December 31, 2022, the related statement of operations for the year ended December 31, 2022, the statement of changes in net assets for each of the two years in the period ended December 31, 2022, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2022 (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, 2022, 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, 2022 and the financial highlights for each of the five years in the period ended December 31, 2022 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, 2022 by correspondence with the custodian, transfer agent 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, 2023

We have served as the auditor of one or more investment companies in the Putnam Investments 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 12/31/22

COMMON STOCKS (60.5%)*	Shares	Value
Basic materials (2.1%)		
Agnico-Eagle Mines, Ltd. (Canada)	8,093	\$420,549
Alamos Gold, Inc. Class A (Canada)	32,045	323,975
Avery Dennison Corp.	1,786	323,266
Corteva, Inc.	9,393	552,121
CRH PLC ADR (Ireland) [§]	7,850	312,352
DuPont de Nemours, Inc. [§]	12,399	850,943
Eastman Chemical Co.	4,275	348,156
Linde PLC	482	157,219
PPG Industries, Inc.	3,174	399,099
Sherwin-Williams Co. (The)	2,669	633,434
		4,321,114
Capital goods (3.8%)		
Berry Global Group, Inc.	4,154	251,026
Boeing Co. (The) †	888	169,155
Deere & Co.	1,015	435,191
Emerson Electric Co.	7,135	685,388
Honeywell International, Inc.	4,966	1,064,214
Ingersoll Rand, Inc.	9,647	504,056
Johnson Controls International PLC	16,201	1,036,864
Northrop Grumman Corp.	2,092	1,141,416
Otis Worldwide Corp.	13,964	1,093,521
Raytheon Technologies Corp.	12,095	1,220,627
		7,601,458
Communication services (1.2%)		
Charter Communications, Inc. Class A †	1,297	439,813
T-Mobile US, Inc. †	13,953	1,953,420
		2,393,233
Computers (3.1%)		
Apple, Inc.	39,255	5,100,402
CDW Corp./DE	6,463	1,154,163
		6,254,565
Conglomerates (0.1%)		
General Electric Co.	2,498	209,307
		209,307
Consumer cyclicals (9.6%)		
4Front Ventures Corp. †	523,966	122,346
Adyen NV (Netherlands) †	193	266,179
Amazon.com, Inc. †	40,012	3,361,008
Aramark	7,513	310,587
Bath & Body Works, Inc.	2,784	117,318
BJ's Wholesale Club Holdings, Inc. †	1,791	118,493
Booking Holdings, Inc. †	503	1,013,686
CarMax, Inc. † [§]	3,442	209,583
General Motors Co.	5,543	186,467
Hilton Worldwide Holdings, Inc.	4,648	587,321
Home Depot, Inc. (The)	8,519	2,690,811
Levi Strauss & Co. Class A [§]	8,554	132,758
Lululemon Athletica, Inc. (Canada) †	492	157,627
Mastercard, Inc. Class A	8,231	2,862,166
Nike, Inc. Class B	3,577	418,545
O'Reilly Automotive, Inc. †	750	633,023
PayPal Holdings, Inc. †	4,016	286,020
Penn Entertainment, Inc. † [§]	8,210	243,837
PulteGroup, Inc.	23,222	1,057,298
Target Corp.	4,736	705,853
Tesla, Inc. †	7,524	926,806
TJX Cos., Inc. (The)	3,376	268,730
United Rentals, Inc. †	1,551	551,256
Walmart, Inc.	9,886	1,401,736

COMMON STOCKS (60.5%)* <i>cont.</i>	Shares	Value
Consumer cyclicals <i>cont.</i>		
Walt Disney Co. (The) †	5,651	\$490,959
Warby Parker, Inc. Class A † [§]	3,931	53,029
		19,173,442
Consumer staples (4.3%)		
Altria Group, Inc.	5,703	260,684
Chipotle Mexican Grill, Inc. †	365	506,434
Coca-Cola Co. (The)	23,376	1,486,947
Constellation Brands, Inc. Class A	603	139,745
Costco Wholesale Corp.	1,604	732,226
McCormick & Co., Inc. (non-voting shares)	3,708	307,356
Netflix, Inc. †	1,845	544,054
PepsiCo, Inc.	11,212	2,025,560
Procter & Gamble Co. (The)	16,203	2,455,727
Sea, Ltd. ADR (Singapore) † [§]	3,298	171,595
		8,630,328
Electronics (2.6%)		
Advanced Micro Devices, Inc. †	24,672	1,598,005
NVIDIA Corp.	13,820	2,019,655
Qualcomm, Inc.	10,520	1,156,569
Vontier Corp.	19,386	374,731
		5,148,960
Energy (3.7%)		
Cenovus Energy, Inc. (Canada)	89,726	1,740,843
ConocoPhillips	7,524	887,832
Diamond Offshore Drilling, Inc. †	70,616	734,406
Enphase Energy, Inc. †	385	102,010
Exxon Mobil Corp.	28,951	3,193,295
Shell PLC (London Exchange) (United Kingdom)	27,903	784,637
		7,443,023
Financials (7.2%)		
AIA Group, Ltd. (Hong Kong)	58,600	651,658
Apollo Global Management, Inc.	18,789	1,198,550
Assured Guaranty, Ltd.	23,592	1,468,838
AXA SA (France)	23,504	655,540
Bank of America Corp.	34,510	1,142,971
Charles Schwab Corp. (The)	14,745	1,227,669
Citigroup, Inc.	37,600	1,700,648
Gaming and Leisure Properties, Inc. ^R	18,660	971,999
Goldman Sachs Group, Inc. (The)	5,662	1,944,218
KKR & Co., Inc.	17,717	822,423
Prudential PLC (United Kingdom)	66,279	903,443
Quilter PLC (United Kingdom)	237,178	266,435
Silergate Capital Corp. Class A † [§]	5,731	99,719
Visa, Inc. Class A	5,668	1,177,584
Vornado Realty Trust ^{R §}	8,731	181,692
		14,413,387
Health care (10.0%)		
Abbott Laboratories	5,726	628,658
AbbVie, Inc.	4,841	782,354
Alkermes PLC †	15,943	416,591
Ascendis Pharma A/S ADR (Denmark) † [§]	3,847	469,834
Avantor, Inc. †	14,130	298,002
Becton Dickinson and Co.	1,919	488,002
Bio-Rad Laboratories, Inc. Class A †	868	364,985
Biogen, Inc. †	1,450	401,534
Boston Scientific Corp. †	16,442	760,771
Cigna Corp.	6,504	2,155,035
Danaher Corp.	3,463	919,149
Dexcom, Inc. †	3,286	372,107
Elevance Health, Inc.	442	226,733
Eli Lilly and Co.	3,514	1,285,562

COMMON STOCKS (60.5%)* cont.	Shares	Value
Health care cont.		
Humana, Inc.	818	\$418,971
Illumina, Inc. †	338	68,344
Innoviva, Inc. †	38,125	505,156
Intuitive Surgical, Inc. †	1,991	528,312
Johnson & Johnson	8,353	1,475,557
McKesson Corp.	2,956	1,108,855
Medtronic PLC	1,335	103,756
Merck & Co., Inc.	12,659	1,404,516
Pfizer, Inc.	14,480	741,955
Regeneron Pharmaceuticals, Inc. †	246	177,487
Thermo Fisher Scientific, Inc.	2,116	1,165,260
UnitedHealth Group, Inc.	4,991	2,646,128
Zoetis, Inc.	575	84,266
		19,997,880
Semiconductor (0.5%)		
Applied Materials, Inc.	10,989	1,070,109
		1,070,109
Software (5.5%)		
Intuit, Inc.	3,021	1,175,834
Microsoft Corp.	29,758	7,136,564
Oracle Corp.	32,765	2,678,211
		10,990,609
Technology services (3.2%)		
Alphabet, Inc. Class A †	51,093	4,507,935
Meta Platforms, Inc. Class A †	7,525	905,559
salesforce.com, Inc. †	7,372	977,453
		6,390,947
Transportation (1.5%)		
CSX Corp.	11,841	366,834
FedEx Corp.	2,482	429,882
Southwest Airlines Co. †	11,804	397,441
Union Pacific Corp.	9,299	1,925,544
		3,119,701
Utilities and power (2.1%)		
Ameren Corp.	4,864	432,507
Constellation Energy Corp.	1,640	141,384
Exelon Corp.	21,703	938,221
NextEra Energy, Inc.	9,787	818,193
NRG Energy, Inc.	49,647	1,579,768
PG&E Corp. †	16,481	267,981
		4,178,054
Total common stocks (cost \$99,757,911)		\$121,336,117

U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (9.5%)*	Principal amount	Value
U.S. Government Guaranteed Mortgage Obligations (2.3%)		
Government National Mortgage Association Pass-Through Certificates		
4.50%, 3/20/49	\$422,881	\$413,636
3.50%, with due dates from 11/20/47 to 4/20/51	1,231,625	1,134,981
3.00%, with due dates from 7/20/46 to 11/20/46	2,435,071	2,207,247
2.00%, 1/20/51	876,594	716,383
		4,472,247
U.S. Government Agency Mortgage Obligations (7.2%)		
Federal Home Loan Mortgage Corporation Pass-Through Certificates		
4.50%, 8/1/52	995,012	962,024
2.50%, with due dates from 7/1/50 to 2/1/51	194,285	167,270
Federal National Mortgage Association Pass-Through Certificates		
5.50%, with due dates from 7/1/33 to 11/1/38	64,730	66,556
5.00%, with due dates from 8/1/33 to 10/1/52	1,024,013	1,018,215

U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (9.5%)* cont.	Principal amount	Value
U.S. Government Agency Mortgage Obligations cont.		
Federal National Mortgage Association Pass-Through Certificates		
4.50%, 2/1/49	\$598,818	\$592,364
4.00%, with due dates from 4/1/49 to 5/1/49	716,705	684,004
3.50%, with due dates from 11/1/49 to 12/1/49	751,238	693,187
3.00%, with due dates from 6/1/46 to 8/1/51	1,988,189	1,779,455
2.50%, with due dates from 7/1/50 to 7/1/51	5,299,499	4,518,156
2.50%, 2/1/36	201,580	185,621
2.00%, 10/1/50	2,270,333	1,867,662
Uniform Mortgage-Backed Securities		
5.00%, TBA, 1/1/53	1,000,000	986,094
4.50%, TBA, 1/1/53	1,000,000	963,906
		14,484,514

Total U.S. government and agency mortgage obligations (cost \$21,079,518) \$18,956,761

U.S. TREASURY OBLIGATIONS (13.0%)*	Principal amount	Value
U.S. Treasury Bonds		
3.00%, 2/15/49	\$320,000	\$263,525
3.00%, 2/15/47	2,010,000	1,650,681
2.75%, 8/15/42 #	4,350,000	3,503,770
1.875%, 2/15/51	1,350,000	857,988
1.25%, 5/15/50	1,490,000	801,864
U.S. Treasury Notes		
2.75%, 8/15/32	580,000	528,163
2.75%, 2/15/28	800,000	752,219
2.25%, 11/15/27	3,580,000	3,298,635
1.75%, 12/31/24	320,000	303,750
1.625%, 5/15/31	2,410,000	2,026,754
1.625%, 9/30/26	2,210,000	2,021,977
1.625%, 2/15/26	3,530,000	3,265,602
1.50%, 2/15/30	760,000	647,663
1.375%, 11/15/31	1,660,000	1,351,084
1.125%, 2/28/25	4,710,000	4,396,675
0.625%, 10/15/24	420,000	392,224
Total U.S. treasury obligations (cost \$30,363,886)		\$26,062,574

CORPORATE BONDS AND NOTES (14.4%)*	Principal amount	Value
Basic materials (1.0%)		
Cabot Corp. sr. unsec. bonds 5.00%, 6/30/32	\$125,000	\$115,575
Celanese US Holdings, LLC company guaranty sr. unsec. notes 6.165%, 7/15/27 (Germany)	175,000	172,607
Celanese US Holdings, LLC company guaranty sr. unsec. notes 3.50%, 5/8/24 (Germany)	45,000	43,471
Celanese US Holdings, LLC company guaranty sr. unsec. notes 1.40%, 8/5/26 (Germany)	95,000	79,466
CF Industries, Inc. company guaranty sr. unsec. bonds 4.95%, 6/1/43	174,000	148,861
CF Industries, Inc. 144A company guaranty sr. notes 4.50%, 12/1/26	13,000	12,583
Georgia-Pacific, LLC 144A sr. unsec. sub. notes 2.10%, 4/30/27	200,000	179,176
Glencore Finance Canada, Ltd. 144A company guaranty sr. unsec. unsub. notes 6.00%, 11/15/41 (Canada)	5,000	4,707
Glencore Funding, LLC 144A company guaranty sr. unsec. notes 4.125%, 3/12/24	40,000	39,359
Glencore Funding, LLC 144A company guaranty sr. unsec. notes 2.50%, 9/1/30	258,000	209,416

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Basic materials cont.		
Huntsman International, LLC sr. unsec. notes 4.50%, 5/1/29	\$210,000	\$188,597
International Flavors & Fragrances, Inc. sr. unsec. notes 4.45%, 9/26/28	80,000	75,293
International Flavors & Fragrances, Inc. 144A company guaranty sr. unsec. bonds 3.468%, 12/1/50	27,000	18,276
International Flavors & Fragrances, Inc. 144A sr. unsec. notes 2.30%, 11/1/30	48,000	38,082
Nutrien, Ltd. sr. unsec. notes 4.00%, 12/15/26 (Canada)	152,000	146,142
Sherwin-Williams Co. (The) sr. unsec. unsub. bonds 3.45%, 6/1/27	87,000	81,601
Westlake Corp. sr. unsec. bonds 3.125%, 8/15/51	233,000	143,453
Westlake Corp. sr. unsec. bonds 2.875%, 8/15/41	117,000	77,270
WestRock MWV, LLC company guaranty sr. unsec. unsub. notes 8.20%, 1/15/30	140,000	157,863
WestRock MWV, LLC company guaranty sr. unsec. unsub. notes 7.95%, 2/15/31	10,000	11,236
Weyerhaeuser Co. sr. unsec. unsub. notes 7.375%, 3/15/32 ^R	24,000	26,529
		1,969,563
Capital goods (0.6%)		
Berry Global, Inc. 144A company guaranty sr. notes 1.65%, 1/15/27	135,000	115,462
Berry Global, Inc. 144A company guaranty sr. notes 1.57%, 1/15/26	160,000	142,531
Boeing Co. (The) sr. unsec. notes 4.875%, 5/1/25	90,000	89,311
Boeing Co. (The) sr. unsec. notes 1.433%, 2/4/24	90,000	86,248
L3Harris Technologies, Inc. sr. unsec. notes 3.85%, 12/15/26	242,000	230,790
Northrop Grumman Corp. sr. unsec. unsub. notes 3.25%, 1/15/28	210,000	193,672
Oshkosh Corp. sr. unsec. sub. notes 4.60%, 5/15/28	99,000	94,086
Oshkosh Corp. sr. unsec. unsub. notes 3.10%, 3/1/30	21,000	17,710
Otis Worldwide Corp. sr. unsec. notes 2.293%, 4/5/27	86,000	76,972
Waste Connections, Inc. sr. unsec. bonds 4.20%, 1/15/33	40,000	37,150
Waste Connections, Inc. sr. unsec. notes 4.25%, 12/1/28	166,000	158,606
		1,242,538
Communication services (1.3%)		
American Tower Corp. sr. unsec. notes 3.125%, 1/15/27 ^R	230,000	210,733
American Tower Corp. sr. unsec. notes 2.90%, 1/15/30 ^R	130,000	110,093
American Tower Corp. sr. unsec. sub. notes 2.75%, 1/15/27 ^R	66,000	59,830
AT&T, Inc. company guaranty sr. unsec. unsub. notes 2.30%, 6/1/27	205,000	182,325
AT&T, Inc. sr. unsec. unsub. bonds 2.55%, 12/1/33	172,000	132,184
AT&T, Inc. sr. unsec. unsub. bonds 2.25%, 2/1/32	147,000	115,222
AT&T, Inc. sr. unsec. unsub. notes 4.75%, 5/15/46	12,000	10,145
Charter Communications Operating, LLC/Charter Communications Operating Capital Corp. company guaranty sr. notes 2.25%, 1/15/29	55,000	44,268

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Communication services cont.		
Charter Communications Operating, LLC/Charter Communications Operating Capital Corp. company guaranty sr. sub. bonds 6.484%, 10/23/45	\$111,000	\$100,097
Charter Communications Operating, LLC/Charter Communications Operating Capital Corp. sr. bonds 3.70%, 4/1/51	5,000	3,040
Comcast Corp. company guaranty sr. unsec. notes 3.45%, 2/1/50	201,000	145,774
Comcast Corp. company guaranty sr. unsec. unsub. bonds 3.999%, 11/1/49	127,000	100,215
Comcast Corp. company guaranty sr. unsec. unsub. bonds 2.35%, 1/15/27	113,000	102,671
Cox Communications, Inc. 144A sr. unsec. bonds 3.50%, 8/15/27	73,000	67,763
Cox Communications, Inc. 144A sr. unsec. notes 3.35%, 9/15/26	76,000	71,057
Crown Castle, Inc. sr. unsec. bonds 3.80%, 2/15/28 ^R	134,000	124,535
Crown Castle, Inc. sr. unsec. bonds 3.65%, 9/1/27 ^R	66,000	61,303
Crown Castle, Inc. sr. unsec. notes 4.75%, 5/15/47 ^R	30,000	25,444
Crown Castle, Inc. sr. unsec. sub. bonds 2.25%, 1/15/31	130,000	104,290
Equinix, Inc. sr. unsec. sub. notes 3.20%, 11/18/29 ^R	194,000	168,862
Rogers Communications, Inc. company guaranty sr. unsec. bonds 8.75%, 5/1/32 (Canada)	10,000	11,643
T-Mobile USA, Inc. company guaranty sr. notes 3.875%, 4/15/30	6,000	5,435
T-Mobile USA, Inc. company guaranty sr. notes 3.75%, 4/15/27	229,000	215,693
Verizon Communications, Inc. sr. unsec. bonds 3.70%, 3/22/61	123,000	85,791
Verizon Communications, Inc. sr. unsec. notes 3.15%, 3/22/30	140,000	123,458
Verizon Communications, Inc. sr. unsec. notes 2.55%, 3/21/31	62,000	50,986
Verizon Communications, Inc. sr. unsec. unsub. notes 4.329%, 9/21/28	200,000	192,297
		2,625,154
Conglomerates (0.1%)		
General Electric Co. jr. unsec. sub. FRN (ICE LIBOR USD 3 Month + 3.33%), 8.099%, perpetual maturity	114,000	111,998
		111,998
Consumer cyclicals (1.1%)		
Alimentation Couche-Tard, Inc. 144A company guaranty sr. unsec. notes 3.55%, 7/26/27 (Canada)	120,000	110,700
Alimentation Couche-Tard, Inc. 144A sr. unsec. notes 2.95%, 1/25/30 (Canada)	131,000	111,017
Amazon.com, Inc. sr. unsec. notes 3.15%, 8/22/27	98,000	92,088
Amazon.com, Inc. sr. unsec. unsub. bonds 2.70%, 6/3/60	174,000	104,806
Amazon.com, Inc. sr. unsec. unsub. notes 2.10%, 5/12/31	87,000	71,049
Autonation, Inc. company guaranty sr. unsec. notes 4.50%, 10/1/25	24,000	23,341
Autonation, Inc. company guaranty sr. unsec. unsub. notes 3.80%, 11/15/27	52,000	47,164

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Consumer cyclicals cont.		
BMW US Capital, LLC 144A company guaranty sr. unsec. notes 3.95%, 8/14/28	\$77,000	\$72,701
Booking Holdings, Inc. sr. unsec. sub. notes 4.625%, 4/13/30	155,000	149,696
Discovery Communications, LLC company guaranty sr. unsec. unsub. notes 3.625%, 5/15/30	3,000	2,472
Ecolab, Inc. sr. unsec. unsub. notes 3.25%, 12/1/27	122,000	113,517
General Motors Co. sr. unsec. bonds 5.95%, 4/1/49	76,000	66,235
General Motors Co. sr. unsec. bonds 5.20%, 4/1/45	30,000	24,383
General Motors Financial Co., Inc. company guaranty sr. unsec. notes 4.00%, 10/6/26	40,000	37,650
General Motors Financial Co., Inc. sr. unsec. notes 1.25%, 1/8/26	47,000	41,387
General Motors Financial Co., Inc. sr. unsec. sub. notes 1.50%, 6/10/26	40,000	34,738
Global Payments, Inc. sr. unsec. notes 2.90%, 5/15/30	33,000	27,039
Interpublic Group of Cos., Inc. (The) sr. unsec. sub. bonds 4.65%, 10/1/28	197,000	188,488
Lennar Corp. company guaranty sr. unsec. unsub. notes 4.75%, 11/29/27	189,000	182,198
Omnicom Group, Inc. company guaranty sr. unsec. unsub. notes 3.60%, 4/15/26	42,000	40,289
Paramount Global sr. unsec. unsub. notes 4.20%, 6/1/29	60,000	53,421
Paramount Global sr. unsec. unsub. notes 4.00%, 1/15/26	17,000	16,301
Paramount Global sr. unsec. unsub. notes 2.90%, 1/15/27	48,000	43,076
S&P Global, Inc. company guaranty sr. unsec. bonds 2.50%, 12/1/29	175,000	149,607
S&P Global, Inc. company guaranty sr. unsec. notes 1.25%, 8/15/30	56,000	43,069
Stellantis Finance US, Inc. 144A company guaranty sr. unsec. notes 1.711%, 1/29/27	200,000	171,785
Warnermedia Holdings, Inc. 144A company guaranty sr. unsec. notes 3.755%, 3/15/27	298,000	268,358
	2,286,575	
Consumer staples (0.6%)		
Anheuser-Busch InBev Worldwide, Inc. company guaranty sr. unsec. unsub. bonds 4.60%, 4/15/48	143,000	124,260
Ashtead Capital, Inc. 144A notes 4.375%, 8/15/27	200,000	186,910
CVS Pass-Through Trust 144A sr. mtge. notes 7.507%, 1/10/32	104,019	108,260
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 7.00%, 10/15/37	150,000	162,962
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 5.625%, 3/15/42	87,000	82,251
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 3.85%, 11/15/24	130,000	125,606
Keurig Dr Pepper, Inc. company guaranty sr. unsec. bonds 3.20%, 5/1/30	41,000	35,729
Keurig Dr Pepper, Inc. company guaranty sr. unsec. unsub. notes 2.55%, 9/15/26	100,000	91,489
Kraft Heinz Foods Co. company guaranty sr. unsec. sub. notes 3.875%, 5/15/27	29,000	27,707
Netflix, Inc. sr. unsec. unsub. notes 5.875%, 11/15/28	74,000	75,001
Netflix, Inc. sr. unsec. unsub. notes 4.375%, 11/15/26	215,000	206,938
	1,227,113	

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Energy (0.7%)		
BP Capital Markets America, Inc. company guaranty sr. unsec. notes 3.119%, 5/4/26	\$80,000	\$75,831
BP Capital Markets America, Inc. company guaranty sr. unsec. unsub. notes 3.937%, 9/21/28	88,000	84,031
Cheniere Corpus Christi Holdings, LLC company guaranty sr. notes 5.875%, 3/31/25	56,000	56,340
Cheniere Corpus Christi Holdings, LLC company guaranty sr. notes 5.125%, 6/30/27	110,000	108,672
Cheniere Energy Partners LP company guaranty sr. unsec. unsub. notes 3.25%, 1/31/32	70,000	55,629
Continental Resources, Inc. 144A company guaranty sr. unsec. bonds 2.875%, 4/1/32	245,000	181,469
Diamondback Energy, Inc. company guaranty sr. unsec. notes 3.25%, 12/1/26	105,000	97,660
DT Midstream, Inc. 144A sr. bonds 4.30%, 4/15/32	70,000	61,498
EQT Corp. sr. unsec. notes 5.678%, 10/1/25	80,000	79,611
Equinor ASA company guaranty sr. unsec. notes 5.10%, 8/17/40 (Norway)	80,000	78,559
Kinetik Holdings LP 144A company guaranty sr. unsec. notes 5.875%, 6/15/30	115,000	107,845
ONEOK, Inc. company guaranty sr. unsec. unsub. notes 6.10%, 11/15/32	130,000	129,994
Patterson-UTI Energy, Inc. sr. unsec. sub. notes 5.15%, 11/15/29	28,000	25,096
Sabine Pass Liquefaction, LLC sr. bonds 4.20%, 3/15/28	24,000	22,559
Sabine Pass Liquefaction, LLC sr. notes 5.00%, 3/15/27	105,000	102,955
Transcanada Trust company guaranty jr. unsec. sub. FRB 5.30%, 3/15/77 (Canada)	135,000	113,400
		1,381,149
Financials (5.5%)		
AerCap Ireland Capital DAC/AerCap Global Aviation Trust company guaranty sr. unsec. bonds 3.30%, 1/30/32 (Ireland)	270,000	211,075
AerCap Ireland Capital DAC/AerCap Global Aviation Trust company guaranty sr. unsec. notes 4.50%, 9/15/23 (Ireland)	150,000	149,015
Air Lease Corp. sr. unsec. notes Ser. MTN, 3.00%, 2/1/30	195,000	162,625
Air Lease Corp. sr. unsec. sub. bonds 4.625%, 10/1/28	27,000	25,254
Air Lease Corp. sr. unsec. sub. notes 3.25%, 10/1/29	32,000	27,247
Air Lease Corp. sr. unsec. unsub. notes 3.00%, 9/15/23	115,000	113,049
Ally Financial, Inc. company guaranty sr. unsec. notes 8.00%, 11/1/31	90,000	92,911
American Express Co. sr. unsec. unsub. notes 3.375%, 5/3/24	180,000	176,335
Aon PLC company guaranty sr. unsec. unsub. notes 4.25%, 12/12/42	220,000	172,796
Ares Capital Corp. sr. unsec. sub. notes 3.875%, 1/15/26	205,000	187,872
Australia and New Zealand Banking Group, Ltd. 144A unsec. sub. FRB 2.57%, 11/25/35 (Australia)	200,000	146,745
Banco Santander SA sr. unsec. unsub. FRN 1.722%, 9/14/27 (Spain)	600,000	512,500
Bank of America Corp. jr. unsec. sub. FRN Ser. AA, 6.10%, perpetual maturity	32,000	30,880
Bank of America Corp. sr. unsec. FRN Ser. MTN, 2.496%, 2/13/31	75,000	60,959

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Financials cont.		
Bank of America Corp. unsec. sub. FRB 3.846%, 3/8/37	\$440,000	\$364,347
Bank of America Corp. unsec. sub. notes 6.11%, 1/29/37	150,000	151,704
Bank of Montreal unsec. sub. FRN 3.803%, 12/15/32 (Canada)	45,000	39,623
Berkshire Hathaway Finance Corp. company guaranty sr. unsec. bonds 2.85%, 10/15/50	30,000	20,036
Berkshire Hathaway Finance Corp. company guaranty sr. unsec. notes 4.30%, 5/15/43	83,000	74,405
BNP Paribas SA 144A jr. unsec. sub. FRN 4.625%, perpetual maturity (France)	200,000	154,520
Boston Properties, LP sr. unsec. notes 6.75%, 12/1/27 ^R	31,000	31,964
BPCE SA 144A unsec. sub. notes 5.15%, 7/21/24 (France)	200,000	195,782
Capital One Financial Corp. sr. unsec. unsub. notes 3.75%, 3/9/27	142,000	134,930
Capital One Financial Corp. unsec. sub. notes 4.20%, 10/29/25	63,000	60,879
Citigroup, Inc. jr. unsec. sub. FRN 3.875%, perpetual maturity	205,000	174,763
Citigroup, Inc. sr. unsec. FRB 3.668%, 7/24/28	10,000	9,184
Citigroup, Inc. sr. unsec. FRN 5.61%, 9/29/26	265,000	266,133
Citigroup, Inc. unsec. sub. bonds 4.75%, 5/18/46	270,000	224,359
Citigroup, Inc. unsec. sub. bonds 4.45%, 9/29/27	264,000	251,700
CNO Financial Group, Inc. sr. unsec. unsub. notes 5.25%, 5/30/25	28,000	27,778
Corebridge Financial, Inc. 144A sr. unsec. notes 3.85%, 4/5/29	95,000	86,527
Credit Suisse AG sr. unsec. notes 1.00%, 5/5/23	400,000	390,723
Credit Suisse Group AG 144A sr. unsec. FRN 2.193%, 6/5/26 (Switzerland)	250,000	213,523
Deutsche Bank AG sr. unsec. unsub. FRN 2.222%, 9/18/24 (Germany)	150,000	144,874
Deutsche Bank AG/New York, NY sr. unsec. unsub. FRN 2.311%, 11/16/27 (Germany)	150,000	127,182
Deutsche Bank AG/New York, NY unsec. sub. FRB 3.729%, 1/14/32 (Germany)	225,000	164,973
Digital Realty Trust LP company guaranty sr. unsec. bonds 4.45%, 7/15/28 ^R	185,000	175,148
Fairfax Financial Holdings, Ltd. sr. unsec. notes 4.85%, 4/17/28 (Canada)	145,000	137,038
Fairfax US, Inc. 144A company guaranty sr. unsec. notes 4.875%, 8/13/24	40,000	39,017
Fidelity National Financial, Inc. sr. unsec. bonds 3.20%, 9/17/51	72,000	41,819
Fifth Third Bancorp jr. unsec. sub. FRB 5.10%, perpetual maturity	29,000	27,550
First-Citizens Bank & Trust Co. unsec. sub. notes 6.125%, 3/9/28	157,000	159,555
GLP Capital LP/GLP Financing II, Inc. company guaranty sr. unsec. bonds 3.25%, 1/15/32 ^R	65,000	51,960
Goldman Sachs Group, Inc. (The) jr. unsec. sub. FRN 3.65%, 7/28/51	79,000	63,793
Goldman Sachs Group, Inc. (The) sr. unsec. FRB 4.223%, 5/1/29	97,000	90,367
Goldman Sachs Group, Inc. (The) sr. unsec. unsub. notes 3.85%, 1/26/27	192,000	182,808
Goldman Sachs Group, Inc. (The) sr. unsec. unsub. notes 2.60%, 2/7/30	450,000	375,534
Goldman Sachs Group, Inc. (The) sr. unsec. unsub. notes 5.70%, 11/1/24	185,000	187,202

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Financials cont.		
Intercontinental Exchange, Inc. sr. unsec. bonds 2.65%, 9/15/40	\$127,000	\$88,079
Intercontinental Exchange, Inc. sr. unsec. bonds 1.85%, 9/15/32	63,000	47,390
Intesa Sanpaolo SpA 144A unsec. sub. bonds 4.198%, 6/1/32 (Italy)	220,000	161,636
iStar, Inc. sr. unsec. notes 4.25%, 8/1/25 ^R	115,000	112,691
JPMorgan Chase & Co. jr. unsec. bonds 6.10%, perpetual maturity	26,000	25,305
JPMorgan Chase & Co. jr. unsec. sub. FRB Ser. HH, 4.60%, perpetual maturity	146,000	128,663
JPMorgan Chase & Co. jr. unsec. sub. FRB Ser. W, (ICE LIBOR USD 3 Month + 1.00%), 5.606%, 5/15/47	87,000	66,605
JPMorgan Chase & Co. jr. unsec. sub. FRN 3.65%, perpetual maturity	26,000	22,263
JPMorgan Chase & Co. sr. unsec. unsub. FRB 3.964%, 11/15/48	185,000	144,300
JPMorgan Chase & Co. sr. unsec. unsub. FRN 3.782%, 2/1/28	324,000	302,712
KKR Group Finance Co. VI, LLC 144A company guaranty sr. unsec. bonds 3.75%, 7/1/29	25,000	22,482
Marsh & McLennan Cos., Inc. sr. unsec. sub. notes 4.375%, 3/15/29	185,000	178,689
Massachusetts Mutual Life Insurance Co. 144A unsec. sub. bonds 3.729%, 10/15/70	175,000	114,687
MetLife Capital Trust IV 144A jr. unsec. sub. notes 7.875%, 12/15/37	400,000	432,043
Morgan Stanley unsec. sub. notes Ser. GMTN, 4.35%, 9/8/26	450,000	436,609
Neuberger Berman Group, LLC/Neuberger Berman Finance Corp. 144A sr. unsec. notes 4.875%, 4/15/45	40,000	32,272
PNC Financial Services Group, Inc. (The) unsec. sub. FRB 4.626%, 6/6/33	260,000	240,193
Prologis LP sr. unsec. unsub. notes 2.25%, 4/15/30 ^R	62,000	51,653
Prologis LP sr. unsec. unsub. notes 2.125%, 4/15/27 ^R	26,000	23,279
Prudential Financial, Inc. jr. unsec. sub. FRN 5.625%, 6/15/43	15,000	14,661
Prudential Financial, Inc. jr. unsec. sub. FRN 5.20%, 3/15/44	173,000	163,957
Prudential Financial, Inc. sr. unsec. notes 6.625%, 6/21/40	35,000	37,807
Royal Bank of Canada unsec. sub. notes Ser. GMTN, 4.65%, 1/27/26 (Canada)	35,000	34,532
Societe Generale SA 144A jr. unsec. sub. notes 5.375%, perpetual maturity (France)	205,000	166,078
Teachers Insurance & Annuity Association of America 144A unsec. sub. notes 6.85%, 12/16/39	40,000	44,026
Toronto-Dominion Bank (The) sr. unsec. notes 4.108%, 6/8/27 (Canada)	76,000	73,465
Trust Financial Corp. jr. unsec. sub. FRB Ser. N, 4.80%, 9/1/24	75,000	67,519
UBS AG unsec. sub. notes 5.125%, 5/15/24 (Switzerland)	360,000	354,406
US Bancorp unsec. sub. FRB 2.491%, 11/3/36	225,000	171,219
VICI Properties LP sr. unsec. unsub. notes 4.75%, 2/15/28 ^R	95,000	90,123

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Financials cont.		
VICI Properties LP/VICI Note Co., Inc. 144A company guaranty sr. unsec. notes 3.75%, 2/15/27 ^R	\$35,000	\$31,771
Wells Fargo & Co. jr. unsec. sub. FRB Ser. U, 5.875%, perpetual maturity	65,000	62,725
Wells Fargo & Co. jr. unsec. sub. FRN 3.90%, perpetual maturity	80,000	70,021
Westpac Banking Corp. unsec. sub. bonds 4.421%, 7/24/39 (Australia)	85,000	70,161
Westpac Banking Corp. unsec. sub. bonds 2.963%, 11/16/40 (Australia)	79,000	52,161
		11,047,146
Health care (1.1%)		
Amgen, Inc. sr. unsec. bonds 4.663%, 6/15/51	83,000	71,412
Amgen, Inc. sr. unsec. unsub. notes 2.60%, 8/19/26	33,000	30,491
Becton Dickinson and Co. sr. unsec. notes 2.823%, 5/20/30	110,000	94,408
Bristol-Myers Squibb Co. sr. unsec. notes 2.75%, 2/15/23	400,000	399,027
Cigna Corp. company guaranty sr. unsec. unsub. notes 3.75%, 7/15/23	118,000	117,221
CVS Pass-Through Trust 144A sr. mtge. notes 4.704%, 1/10/36	10,690	9,607
DH Europe Finance II SARL company guaranty sr. unsec. notes 2.60%, 11/15/29 (Luxembourg)	80,000	69,980
GE Healthcare Holding, LLC 144A company guaranty sr. unsec. notes 5.65%, 11/15/27	100,000	101,170
HCA, Inc. company guaranty sr. bonds 5.25%, 6/15/26	67,000	66,191
HCA, Inc. company guaranty sr. unsec. notes 5.375%, 9/1/26	58,000	57,355
HCA, Inc. company guaranty sr. unsec. unsub. notes 5.375%, 2/1/25	10,000	9,988
Humana, Inc. sr. unsec. unsub. notes 5.75%, 3/1/28	130,000	132,738
Service Corp. International sr. unsec. notes 4.625%, 12/15/27	30,000	28,022
Service Corp. International sr. unsec. notes 3.375%, 8/15/30	20,000	16,258
Service Corp. International sr. unsec. sub. notes 4.00%, 5/15/31	165,000	138,967
Thermo Fisher Scientific, Inc. sr. unsec. notes 4.80%, 11/21/27	210,000	210,682
UnitedHealth Group, Inc. sr. unsec. notes 2.95%, 10/15/27	190,000	175,896
UnitedHealth Group, Inc. sr. unsec. unsub. notes 5.25%, 2/15/28	230,000	235,113
Viatis, Inc. company guaranty sr. unsec. notes 2.30%, 6/22/27	75,000	64,084
Zoetis, Inc. sr. unsec. notes 3.90%, 8/20/28	150,000	142,483
Zoetis, Inc. sr. unsec. sub. notes 3.00%, 9/12/27	90,000	83,204
		2,254,297
Technology (1.1%)		
Alphabet, Inc. sr. unsec. bonds 2.25%, 8/15/60	160,000	90,134
Alphabet, Inc. sr. unsec. notes 1.998%, 8/15/26	84,000	77,228
Apple, Inc. sr. unsec. unsub. notes 4.375%, 5/13/45	150,000	138,622
Broadcom, Inc. company guaranty sr. unsec. bonds 4.15%, 11/15/30	152,000	136,215
Broadcom, Inc. 144A sr. unsec. bonds 4.926%, 5/15/37	205,000	178,835

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Technology cont.		
Broadcom, Inc. 144A sr. unsec. bonds 3.187%, 11/15/36	\$72,000	\$51,717
Dell International, LLC/EMC Corp. company guaranty sr. bonds 8.35%, 7/15/46	7,000	7,975
Meta Platforms, Inc. sr. unsec. unsub. bonds 4.45%, 8/15/52	108,000	85,822
Meta Platforms, Inc. sr. unsec. unsub. notes 3.50%, 8/15/27	60,000	55,920
Microchip Technology, Inc. company guaranty sr. notes 4.333%, 6/1/23	83,000	82,646
Microsoft Corp. sr. unsec. unsub. bonds 2.921%, 3/17/52	371,000	262,483
Microsoft Corp. sr. unsec. unsub. bonds 2.40%, 8/8/26	66,000	61,542
Oracle Corp. sr. unsec. bonds 3.95%, 3/25/51	50,000	35,622
Oracle Corp. sr. unsec. bonds 3.65%, 3/25/41	225,000	166,094
Oracle Corp. sr. unsec. notes 1.65%, 3/25/26	180,000	161,140
salesforce.com, Inc. sr. unsec. bonds 3.05%, 7/15/61	185,000	117,470
salesforce.com, Inc. sr. unsec. bonds 2.90%, 7/15/51	185,000	121,252
Sensata Technologies, Inc. 144A company guaranty sr. unsec. notes 3.75%, 2/15/31	170,000	139,849
ServiceNow, Inc. sr. unsec. notes 1.40%, 9/1/30	200,000	153,003
Workday, Inc. sr. unsec. notes 3.70%, 4/1/29	70,000	64,428
		2,187,997
Transportation (0.2%)		
Penske Truck Leasing Co. LP/PTL Finance Corp. 144A sr. unsec. bonds 3.40%, 11/15/26	86,000	78,887
Penske Truck Leasing Co. LP/PTL Finance Corp. 144A sr. unsec. notes 4.40%, 7/1/27	260,000	246,725
		325,612
Utilities and power (1.1%)		
AES Corp. (The) sr. unsec. unsub. notes 2.45%, 1/15/31	135,000	107,395
American Electric Power Co., Inc. sr. unsec. unsub. notes Ser. J, 4.30%, 12/1/28	66,000	63,031
American Transmission Systems, Inc. 144A sr. unsec. bonds 2.65%, 1/15/32	50,000	41,033
Appalachian Power Co. sr. unsec. unsub. notes Ser. L, 5.80%, 10/1/35	60,000	58,838
Boardwalk Pipelines LP company guaranty sr. unsec. notes 3.60%, 9/1/32	33,000	27,307
Commonwealth Edison Co. sr. mtge. bonds 5.875%, 2/1/33	15,000	15,450
Consolidated Edison Co. of New York, Inc. sr. unsec. unsub. notes 4.20%, 3/15/42	40,000	33,476
Duke Energy Ohio, Inc. sr. bonds 3.65%, 2/1/29	130,000	120,375
El Paso Natural Gas Co., LLC company guaranty sr. unsec. unsub. notes 8.375%, 6/15/32	75,000	84,813
Enbridge, Inc. sr. unsec. unsub. bonds 4.25%, 12/1/26 (Canada)	42,000	40,379
Energy Transfer LP jr. unsec. sub. FRN 6.625%, perpetual maturity	257,000	190,823
Energy Transfer LP sr. unsec. unsub. notes 7.60%, 2/1/24	30,000	30,499
Energy Transfer LP sr. unsec. unsub. notes 6.50%, 2/1/42	20,000	19,768
Enterprise Products Operating, LLC company guaranty sr. unsec. notes 2.80%, 1/31/30	230,000	195,391
Enterprise Products Operating, LLC company guaranty sr. unsec. unsub. bonds 4.25%, 2/15/48	65,000	52,157
IPALCO Enterprises, Inc. sr. notes 4.25%, 5/1/30	116,000	103,051

CORPORATE BONDS AND NOTES (14.4%)* cont.	Principal amount	Value
Utilities and power cont.		
IPALCO Enterprises, Inc. sr. sub. notes 3.70%, 9/1/24	\$35,000	\$33,916
Kinder Morgan Energy Partners LP company guaranty sr. unsec. notes 5.40%, 9/1/44	16,000	14,376
NRG Energy, Inc. 144A company guaranty sr. notes 3.75%, 6/15/24	80,000	77,051
NRG Energy, Inc. 144A sr. notes 2.45%, 12/2/27	114,000	94,455
Oncor Electric Delivery Co., LLC sr. notes 5.75%, 3/15/29	55,000	57,042
Pacific Gas and Electric Co. notes 2.10%, 8/1/27	30,000	25,621
Pacific Gas and Electric Co. sr. bonds 5.90%, 6/15/32	68,000	66,354
Pacific Gas and Electric Co. sr. bonds 4.95%, 7/1/50	70,000	54,239
Pacific Gas and Electric Co. sr. notes 3.30%, 12/1/27	130,000	114,729
PacifiCorp sr. bonds 2.70%, 9/15/30	86,000	73,934
Sunoco Logistics Partners Operations LP company guaranty sr. unsec. unsub. notes 5.95%, 12/1/25	25,000	25,350
Vistra Operations Co., LLC 144A company guaranty sr. notes 4.30%, 7/15/29	58,000	52,249
Vistra Operations Co., LLC 144A company guaranty sr. notes 3.55%, 7/15/24	67,000	64,257
WEC Energy Group, Inc. jr. unsec. sub. FRN Ser. A, (ICE LIBOR USD 3 Month + 2.11%), 6.719%, 5/15/67	300,000	250,962
		2,188,321
Total corporate bonds and notes (cost \$32,685,943)		\$28,847,463

MORTGAGE-BACKED SECURITIES (0.7%)*	Principal amount	Value
Citigroup Commercial Mortgage Trust Ser. 14-GC21, Class C, 4.78%, 5/10/47 W	\$124,000	\$116,823
Ser. 18-B2, Class A4, 4.009%, 3/10/51	251,000	235,032
COMM Mortgage Trust FRB Ser. 14-UBS6, Class C, 4.436%, 12/10/47 W	20,000	18,315
CSAIL Commercial Mortgage Trust Ser. 19-C17, Class AS, 3.278%, 9/15/52	215,000	180,189
FIRSTPLUS Home Loan Owner Trust Ser. 97-3, Class B1, 7.79%, 11/10/23 (In default) †	14,822	1
GS Mortgage Securities Trust FRB Ser. 14-GC22, Class C, 4.686%, 6/10/47 W	127,000	120,027
LSTAR Commercial Mortgage Trust 144A FRB Ser. 15-3, Class AS, 3.142%, 4/20/48 W	22,799	21,763
Morgan Stanley Bank of America Merrill Lynch Trust Ser. 16-C28, Class A4, 3.544%, 1/15/49	340,000	320,012
Morgan Stanley Capital I Trust Ser. 18-L1, Class A4, 4.407%, 10/15/51 W	408,000	385,602
Morgan Stanley Capital I Trust 144A FRB Ser. 12-C4, Class D, 5.164%, 3/15/45 W	62,803	58,093
TIAA Real Estate CDO, Ltd. 144A Ser. 03-1A, Class E, 8.00%, 12/28/38 (In default) †	220,229	2
WF-RBS Commercial Mortgage Trust 144A FRB Ser. 11-C3, Class D, 5.378%, 3/15/44 W	63,020	32,153
Total mortgage-backed securities (cost \$1,846,608)		\$1,488,012

UNITS (0.1%)*	Units	Value
GoGreen Investments Corp. †	17,958	\$188,559
Total units (cost \$179,580)		\$188,559

MUNICIPAL BONDS AND NOTES (0.1%)*	Principal amount	Value
CA State G.O. Bonds, (Build America Bonds), 7.50%, 4/1/34	\$30,000	\$36,299
North TX, Tollway Auth. Rev. Bonds, (Build America Bonds), 6.718%, 1/1/49	55,000	65,347
OH State U. Rev. Bonds, (Build America Bonds), 4.91%, 6/1/40	40,000	40,198
Total municipal bonds and notes (cost \$125,146)		\$141,844

SHORT-TERM INVESTMENTS (3.6%)*	Shares	Value
Putnam Cash Collateral Pool, LLC 4.62% ^d	2,117,626	\$2,117,626
Putnam Short Term Investment Fund Class P 4.53% ^L	5,127,083	5,127,083
Total short-term investments (cost \$7,244,709)		\$7,244,709

Total investments (cost \$193,283,301) \$204,266,039

Key to holding's abbreviations

ADR	American Depository Receipts: Represents ownership of foreign securities on deposit with a custodian bank.
DAC	Designated Activity Company
FRB	Floating Rate Bonds: The rate shown is the current interest rate 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.
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.
GMTN	Global Medium Term Notes
G.O. Bonds	General Obligation Bonds
ICE	Intercontinental Exchange
LIBOR	London Interbank Offered Rate
MTN	Medium Term Notes
TBA	To Be Announced Commitments

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, 2022 through December 31, 2022 (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 and references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures*.

* Percentages indicated are based on net assets of \$200,447,176.

† This security is non-income-producing.

This security, in part or in entirety, was pledged and segregated with the broker to cover margin requirements for futures contracts at the close of the reporting period. Collateral at period end totaled \$115,852 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 8).

^d Affiliated company. See Notes 1 and 5 to the financial statements regarding securities lending. The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.

^L Affiliated company (Note 5). The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.

^R Real Estate Investment Trust.

^S Security on loan, in part or in entirety, at the close of the reporting period (Note 1).

^W The rate shown represents the weighted average coupon associated with the underlying mortgage pools. Rates may be subject to a cap or floor.

Debt obligations are considered secured unless otherwise indicated.

144A after the name of an issuer represents securities exempt from registration under Rule 144A of the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration, normally to qualified institutional buyers.

See Note 1 to the financial statements regarding TBA commitments. The dates shown on debt obligations are the original maturity dates.

FORWARD CURRENCY CONTRACTS at 12/31/22 (aggregate face value \$6,828,984)						
Counterparty	Currency	Contract type*	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
Bank of America N.A.						
	Canadian Dollar	Sell	1/18/23	\$385,996	\$381,253	\$(4,743)
Barclays Bank PLC						
	British Pound	Sell	3/15/23	1,284,079	1,296,731	12,652
	Canadian Dollar	Sell	1/18/23	407,932	404,503	(3,429)
	Euro	Sell	3/15/23	302,131	297,028	(5,103)
Citibank, N.A.						
	Canadian Dollar	Sell	1/18/23	500,775	496,568	(4,207)
	Euro	Sell	3/15/23	442,603	435,008	(7,595)
Goldman Sachs International						
	British Pound	Sell	3/15/23	549,818	555,001	5,183
	Euro	Sell	3/15/23	211,030	207,407	(3,623)
HSBC Bank USA, National Association						
	Danish Krone	Sell	3/15/23	348,181	337,666	(10,515)
	Hong Kong Dollar	Sell	2/15/23	317,528	318,182	654
JPMorgan Chase Bank N.A.						
	Singapore Dollar	Sell	2/15/23	293,318	278,399	(14,919)
Morgan Stanley & Co. International PLC						
	Canadian Dollar	Sell	1/18/23	386,882	394,486	7,604
State Street Bank and Trust Co.						
	Canadian Dollar	Buy	1/18/23	35,970	35,649	321
	Hong Kong Dollar	Sell	2/15/23	325,004	323,228	(1,776)
UBS AG						
	Canadian Dollar	Sell	1/18/23	357,706	354,739	(2,967)
	Euro	Sell	3/15/23	238,672	234,642	(4,030)
WestPac Banking Corp.						
	Canadian Dollar	Sell	1/18/23	482,384	478,494	(3,890)
Unrealized appreciation						26,414
Unrealized (depreciation)						(66,797)
Total						\$(40,383)

* The exchange currency for all contracts listed is the United States Dollar.

FUTURES CONTRACTS OUTSTANDING at 12/31/22	Number of contracts	Notional amount	Value	Expiration date	Unrealized appreciation/ (depreciation)
S&P 500 Index E-Mini (Long)	10	\$1,919,750	\$1,930,500	Mar-23	\$(36,777)
Unrealized appreciation					—
Unrealized (depreciation)					(36,777)
Total					\$(36,777)

TBA SALE COMMITMENTS OUTSTANDING at 12/31/22 (proceeds receivable \$2,783,203)	Principal amount	Settlement date	Value
Uniform Mortgage-Backed Securities, 5.00%, 1/1/53	\$1,000,000	1/12/23	\$986,094
Uniform Mortgage-Backed Securities, 4.50%, 1/1/53	1,000,000	1/12/23	963,906
Uniform Mortgage-Backed Securities, 2.00%, 1/1/53	1,000,000	1/12/23	816,219
Total			\$2,766,219

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
Common stocks*:			
Basic materials	\$4,321,114	\$—	\$—
Capital goods	7,601,458	—	—
Communication services	2,393,233	—	—
Conglomerates	209,307	—	—
Consumer cyclicals	19,173,442	—	—
Consumer staples	8,630,328	—	—
Energy	7,443,023	—	—
Financials	14,413,387	—	—
Health care	19,997,880	—	—
Technology	29,855,190	—	—
Transportation	3,119,701	—	—
Utilities and power	4,178,054	—	—
Total common stocks	121,336,117	—	—
Corporate bonds and notes	—	28,847,463	—
Mortgage-backed securities	—	1,488,012	—
Municipal bonds and notes	—	141,844	—
U.S. government and agency mortgage obligations	—	18,956,761	—
U.S. treasury obligations	—	26,062,574	—
Units	188,559	—	—
Short-term investments	—	7,244,709	—
Totals by level	\$121,524,676	\$82,741,363	\$—

Other financial instruments:	Valuation inputs		
	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$(40,383)	\$—
Futures contracts	(36,777)	—	—
TBA sale commitments	—	(2,766,219)	—
Totals by level	\$(36,777)	\$(2,806,602)	\$—

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

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

Statement of assets and liabilities

12/31/22

Assets	
Investment in securities, at value, including \$2,069,137 of securities on loan (Notes 1 and 8):	
Unaffiliated issuers (identified cost \$186,038,592)	\$197,021,330
Affiliated issuers (identified cost \$7,244,709) (Note 5)	7,244,709
Cash	4,570
Foreign currency (cost \$184) (Note 1)	180
Dividends, interest and other receivables	675,038
Receivable for shares of the fund sold	47,917
Receivable for investments sold	1,104,229
Receivable for sales of TBA securities (Note 1)	2,786,717
Unrealized appreciation on forward currency contracts (Note 1)	26,414
Total assets	208,911,104
Liabilities	
Payable for investments purchased	1,061,030
Payable for purchases of TBA securities (Note 1)	1,967,161
Payable for shares of the fund repurchased	159,405
Payable for compensation of Manager (Note 2)	90,196
Payable for custodian fees (Note 2)	15,460
Payable for investor servicing fees (Note 2)	23,731
Payable for Trustee compensation and expenses (Note 2)	69,266
Payable for administrative services (Note 2)	2,452
Payable for distribution fees (Note 2)	30,293
Payable for variation margin on futures contracts (Note 1)	3,184
Unrealized depreciation on forward currency contracts (Note 1)	66,797
TBA sale commitments, at value (proceeds receivable \$2,783,203) (Note 1)	2,766,219
Collateral on securities loaned, at value (Note 1)	2,117,626
Other accrued expenses	91,108
Total liabilities	8,463,928
Net assets	\$200,447,176
Represented by	
Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$190,442,518
Total distributable earnings (Note 1)	10,004,658
Total — Representing net assets applicable to capital shares outstanding	\$200,447,176
Computation of net asset value Class IA	
Net assets	\$59,555,653
Number of shares outstanding	5,128,083
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$11.61
Computation of net asset value Class IB	
Net assets	\$140,891,523
Number of shares outstanding	12,208,597
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$11.54

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

Statement of operations

Year ended 12/31/22

Investment income

Interest (including interest income of \$108,544 from investments in affiliated issuers) (Note 5)	\$2,202,194
Dividends (net of foreign tax of \$17,989)	1,958,732
Securities lending (net of expenses) (Notes 1 and 5)	5,749
Total investment income	4,166,675

Expenses

Compensation of Manager (Note 2)	1,121,719
Investor servicing fees (Note 2)	151,612
Custodian fees (Note 2)	33,706
Trustee compensation and expenses (Note 2)	9,159
Distribution fees (Note 2)	378,186
Administrative services (Note 2)	6,777
Other	146,789
Total expenses	1,847,948
Expense reduction (Note 2)	(132)
Net expenses	1,847,816
Net investment income	2,318,859

Realized and unrealized gain (loss)

Net realized gain (loss) on:

Securities from unaffiliated issuers (Notes 1 and 3)	(1,982,077)
Foreign currency transactions (Note 1)	168
Forward currency contracts (Note 1)	653,310
Futures contracts (Note 1)	(965,562)
Written options (Note 1)	1,993
Total net realized loss	(2,292,168)

Change in net unrealized appreciation (depreciation) on:

Securities from unaffiliated issuers and TBA sale commitments	(39,729,488)
Assets and liabilities in foreign currencies	(217)
Forward currency contracts	(25,526)
Futures contracts	(69,031)
Total change in net unrealized depreciation	(39,824,262)
Net loss on investments	(42,116,430)
Net decrease in net assets resulting from operations	\$(39,797,571)

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

Statement of changes in net assets

	Year ended 12/31/22	Year ended 12/31/21
Increase (decrease) in net assets		
Operations:		
Net investment income	\$2,318,859	\$1,777,055
Net realized gain (loss) on investments and foreign currency transactions	(2,292,168)	16,994,512
Change in net unrealized appreciation (depreciation) of investments and assets and liabilities in foreign currencies	(39,824,262)	12,713,211
Net increase (decrease) in net assets resulting from operations	(39,797,571)	31,484,778
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(794,852)	(748,675)
Class IB	(1,453,152)	(1,369,975)
Net realized short-term gain on investments		
Class IA	(1,508,149)	(1,395,258)
Class IB	(3,533,551)	(3,170,830)
From net realized long-term gain on investments		
Class IA	(3,529,793)	(2,741,902)
Class IB	(8,270,204)	(6,231,178)
Increase from capital share transactions (Note 4)	6,869,282	11,788,547
Total increase (decrease) in net assets	(52,017,990)	27,615,507
Net assets:		
Beginning of year	252,465,166	224,849,659
End of year	\$200,447,176	\$252,465,166

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) ^a	Net realized and unrealized gain (loss) on investments	Total from investment operations	From net investment income	From net realized gain on investments	Total distributions	Net asset value, end of period	Total return at net asset value (%) ^{b,c}	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) ^{b,d}	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%) ^e
Class IA													
12/31/22	\$15.02	.15	(2.39)	(2.24)	(.16)	(1.01)	(1.17)	\$11.61	(15.82)	\$59,556	.68 ^f	1.25	69
12/31/21	14.13	.13	1.76	1.89	(.15)	(.85)	(1.00)	15.02	14.28	77,232	.64	.91	97
12/31/20	13.26	.15	1.64	1.79	(.18)	(.74)	(.92)	14.13	15.61	69,648	.68	1.20	113
12/31/19	11.38	.20	2.46	2.66	(.20)	(.58)	(.78)	13.26	24.35	66,059	.69	1.62	128
12/31/18	11.82	.19	(.52)	(.33)	(.11)	—	(.11)	11.38	(2.82)	56,636	.71	1.56	264
Class IB													
12/31/22	\$14.93	.12	(2.38)	(2.26)	(.12)	(1.01)	(1.13)	\$11.54	(15.99)	\$140,892	.93 ^f	1.00	69
12/31/21	14.05	.09	1.76	1.85	(.12)	(.85)	(.97)	14.93	14.04	175,233	.89	.66	97
12/31/20	13.19	.12	1.63	1.75	(.15)	(.74)	(.89)	14.05	15.32	155,202	.93	.93	113
12/31/19	11.33	.17	2.45	2.62	(.18)	(.58)	(.76)	13.19	24.00	123,280	.94	1.36	128
12/31/18	11.78	.16	(.53)	(.37)	(.08)	—	(.08)	11.33	(3.14)	78,718	.96	1.31	264

^a Per share net investment income (loss) has been determined on the basis of the weighted average number of shares outstanding during the period.

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

^c Total return assumes dividend reinvestment.

^d Includes amounts paid through expense offset arrangements and/or brokerage/service arrangements, if any (Note 2). Also excludes acquired fund fees and expenses, if any.

^e Portfolio turnover includes TBA purchase and sale commitments.

^f Includes one-time proxy cost of 0.01%.

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

Notes to financial statements 12/31/22

Within the following Notes to financial statements, references to “State Street” represent State Street Bank and Trust Company, references to “the SEC” represent the Securities and Exchange Commission, references to “Putnam Management” represent Putnam Investment Management, LLC, the fund’s manager, an indirect wholly-owned subsidiary of Putnam Investments, LLC and references to “OTC”, if any, represent over-the-counter. Unless otherwise noted, the “reporting period” represents the period from January 1, 2022 through December 31, 2022.

Putnam VT George Putnam Balanced 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 to provide a balanced investment composed of a well-diversified portfolio of stocks and bonds which produce both capital growth and current income. The fund invests mainly in a combination of bonds and common stocks (growth or value stocks or both) of large U.S. companies, with a greater focus on common stocks. For example, the fund may purchase stocks of companies with stock prices that reflect a value lower than that which Putnam Management places on the company. Putnam Management may also consider other factors that Putnam Management believes will cause the stock price to rise. The fund buys bonds of governments and private companies that are mostly investment-grade in quality with intermediate- to long-term maturities (three years or longer). Putnam Management may consider, among other factors, a company’s valuation, financial strength, growth potential, competitive position in its industry, projected future earnings, cash flows and dividends when deciding whether to buy or sell equity investments, and, among other factors, credit, interest rate and prepayment risks, as well as general market conditions, when deciding whether to buy or sell fixed-income investments. Putnam Management may also use derivatives, such as futures, options, warrants and swap contracts, for both hedging and non-hedging purposes.

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 fund’s Amended and Restated Agreement and Declaration of Trust, any claims asserted against or on behalf of the Putnam Funds, 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 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 and unrealized 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. If the fund were liquidated, shares of each class would receive their pro-rata share of the net

assets of the fund. 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.

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 Accounting Standards Codification 820 *Fair Value Measurements and Disclosures* (ASC 820). If no sales are reported, as in the case of some securities that are traded OTC, a security is valued at its last reported bid price and is generally categorized as a Level 2 security.

Investments in open-end investment companies (excluding exchange-traded funds), if any, which can be classified as Level 1 or Level 2 securities, are valued based on their net asset value. The net asset value of such investment companies equals the total value of their assets less their liabilities and divided by the number of their outstanding shares.

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

Many securities markets and exchanges outside the U.S. close prior to the scheduled close of the New York Stock Exchange and therefore the closing prices for securities in such markets or on such exchanges may not fully reflect events that occur after such close but before the scheduled close of the New York Stock Exchange. Accordingly, on certain days, the fund will fair value certain foreign equity securities taking into account multiple factors including movements in the U.S. securities markets, currency valuations and comparisons to the valuation of American Depository Receipts, exchange-traded funds and futures contracts. The foreign equity securities, which would generally be classified as Level 1 securities, will be transferred to Level 2 of the fair value hierarchy when they are valued at fair value. The number of days on which fair value prices will be used will depend on market activity and it is possible that fair value prices will be used by the fund to a significant extent. Securities quoted in foreign currencies, if any, are translated into U.S. dollars at the current exchange rate.

To the extent a pricing service or dealer is unable to value a security or provides a valuation that Putnam Management does not believe accurately reflects the security’s fair value, the security will be valued at fair value by Putnam Management 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. Certain securities may be valued on the basis of a price provided by a single source. 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.

Security transactions and related investment income Security transactions are recorded on the trade date (the date the order to buy or sell is executed). Gains or losses on securities sold are determined on the identified cost basis.

Interest income, net of any applicable withholding taxes, if any, is recorded on the accrual basis. Amortization and accretion of premiums and discounts on debt securities, if any, is recorded on the accrual basis.

Dividend income, net of any applicable withholding taxes, is recognized on the ex-dividend date except that certain dividends from foreign securities, if any, are recognized as soon as the fund is informed of the ex-dividend date. Non-cash dividends, if any, are recorded at the fair value of the securities received. Dividends representing a return of capital or capital gains, if any, are reflected as a reduction of cost and/or as a realized gain.

Foreign currency translation The accounting records of the fund are maintained in U.S. dollars. The fair value of foreign securities, currency holdings, and other assets and liabilities is recorded in the books and records of the fund after translation to U.S. dollars based on the exchange rates on that day. The cost of each security is determined using historical exchange rates. Income and withholding taxes are translated at prevailing exchange rates when earned or incurred. The fund does not isolate that portion of realized or unrealized gains or losses resulting from changes in the foreign exchange rate on investments from fluctuations arising from changes in the market prices of the securities. Such gains and losses are included with the net realized and unrealized gain or loss on investments. Net realized gains and losses on foreign currency transactions represent net realized exchange gains or losses on disposition of foreign currencies, currency gains and losses realized between the trade and settlement dates on securities transactions and the difference between the amount of investment income and foreign withholding taxes recorded on the fund's books and the U.S. dollar equivalent amounts actually received or paid. Net unrealized appreciation and depreciation of assets and liabilities in foreign currencies arise from changes in the value of assets and liabilities other than investments at the period end, resulting from changes in the exchange rate.

Options contracts The fund uses options contracts to hedge duration and convexity, to isolate prepayment risk, to gain exposure to interest rates, to hedge against changes in values of securities it owns, owned or expects to own, to hedge prepayment risk, to generate additional income for the portfolio, to enhance returns on securities owned, to enhance the return on a security owned, to gain exposure to securities and to manage downside risks.

The potential risk to the fund is that the change in value of options contracts may not correspond to the change in value of the hedged instruments. In addition, losses may arise from changes in the value of the underlying instruments if there is an illiquid secondary market for the contracts, if interest or exchange rates move unexpectedly or if the counterparty to the contract is unable to perform. Realized gains and losses on purchased options are included in realized gains and losses on investment securities. If a written call option is exercised, the premium originally received is recorded as an addition to sales proceeds. If a written put option is exercised, the premium originally received is recorded as a reduction to the cost of investments.

Exchange-traded options are valued at the last sale price or, if no sales are reported, the last bid price for purchased options and the last ask price for written options. OTC traded options are valued using prices supplied by dealers.

Options on swaps are similar to options on securities except that the premium paid or received is to buy or grant the right to enter into a previously agreed upon interest rate or credit default contract. Forward premium swap option contracts include premiums that have extended settlement dates. The delayed settlement of the premiums is factored into the daily valuation of the option contracts. In the case of interest rate cap and floor contracts, in return for a premium, ongoing payments between two parties are based on interest rates exceeding a specified rate, in the case of a cap contract, or falling below a specified rate in the case of a floor contract.

Written option contracts outstanding at period end, if any, are listed after the fund's portfolio.

Futures contracts The fund uses futures contracts to manage exposure to market risk, to hedge prepayment risk, to hedge interest rate risk, to gain exposure to interest rates, for hedging treasury term structure risk, for yield curve positioning and to equitize cash.

The potential risk to the fund is that the change in value of futures contracts may not correspond to the change in value of the hedged instruments. In addition, losses may arise from changes in the value of the underlying instruments, if there is an illiquid secondary market for the contracts, if interest or exchange rates

move unexpectedly or if the counterparty to the contract is unable to perform. With futures, there is minimal counterparty credit risk to the fund since futures are exchange traded and the exchange's clearinghouse, as counterparty to all exchange traded futures, guarantees the futures against default. Risks may exceed amounts recognized on the Statement of assets and liabilities. When the contract is closed, the fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

Futures contracts are valued at the quoted daily settlement prices established by the exchange on which they trade. The fund and the broker agree to exchange an amount of cash equal to the daily fluctuation in the value of the futures contract. Such receipts or payments are known as "variation margin."

Futures contracts outstanding at period end, if any, are listed after the fund's portfolio.

Forward currency contracts The fund buys and sells forward currency contracts, which are agreements between two parties to buy and sell currencies at a set price on a future date. These contracts are used for hedging currency exposures.

The U.S. dollar value of forward currency contracts is determined using current forward currency exchange rates supplied by a quotation service. The fair value of the contract will fluctuate with changes in currency exchange rates. The contract is marked to market daily and the change in fair value is recorded as an unrealized gain or loss. The fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed when the contract matures or by delivery of the currency. The fund could be exposed to risk if the value of the currency changes unfavorably, if the counterparties to the contracts are unable to meet the terms of their contracts or if the fund is unable to enter into a closing position. Risks may exceed amounts recognized on the Statement of assets and liabilities.

Forward currency contracts outstanding at period end, if any, are listed after the fund's portfolio.

TBA commitments The fund may enter into TBA (to be announced) commitments to purchase securities for a fixed unit price at a future date beyond customary settlement time. Although the unit price and par amount have been established, the actual securities have not been specified. However, it is anticipated that the amount of the commitments will not significantly differ from the principal amount. The fund holds, and maintains until settlement date, cash or high-grade debt obligations in an amount sufficient to meet the purchase price, or the fund may enter into offsetting contracts for the forward sale of other securities it owns. Income on the securities will not be earned until settlement date.

The fund may also enter into TBA sale commitments to hedge its portfolio positions, to sell mortgage-backed securities it owns under delayed delivery arrangements or to take a short position in mortgage-backed securities. Proceeds of TBA sale commitments are not received until the contractual settlement date. During the time a TBA sale commitment is outstanding, either equivalent deliverable securities or an offsetting TBA purchase commitment deliverable on or before the sale commitment date are held as "cover" for the transaction, or other liquid assets in an amount equal to the notional value of the TBA sale commitment are segregated. If the TBA sale commitment is closed through the acquisition of an offsetting TBA purchase commitment, the fund realizes a gain or loss. If the fund delivers securities under the commitment, the fund realizes a gain or a loss from the sale of the securities based upon the unit price established at the date the commitment was entered into.

TBA commitments, which are accounted for as purchase and sale transactions, may be considered securities themselves, and involve a risk of loss due to changes in the value of the security prior to the settlement date as well as the risk that the counterparty to the transaction will not perform its obligations. Counterparty risk is mitigated by having a master agreement between the fund and the counterparty.

Unsettled TBA commitments are valued at their fair value according to the procedures described under "Security valuation" above. The contract is marked to market daily and the change in fair value is recorded by the fund as an unrealized gain or loss. Based on market circumstances, Putnam Management will determine whether to take delivery of the underlying securities or to dispose of the TBA commitments prior to settlement.

TBA purchase commitments outstanding at period end, if any, are listed within the fund's portfolio and TBA sale commitments outstanding at period end, if any, are listed after the fund's portfolio.

Master agreements The fund is a party to ISDA (International Swaps and Derivatives Association, Inc.) Master Agreements that govern OTC derivative

and foreign exchange contracts and Master Securities Forward Transaction Agreements that govern transactions involving mortgage-backed and other asset-backed securities that may result in delayed delivery (Master Agreements) with certain counterparties 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 pledged 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, are 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.

With respect to ISDA Master Agreements, 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 or 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 \$53,667 on open derivative contracts subject to the Master Agreements. There was no collateral pledged by the fund at period end for these agreements.

Securities lending 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. Income from securities lending, net of expenses, is included in investment income on the Statement of operations. Cash collateral 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. At the close of the reporting period, the fund received cash collateral of \$2,117,626 and the value of securities loaned amounted to \$2,069,137.

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 borrow from or 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 \$100 million (\$317.5 million prior to October 14, 2022) unsecured committed line of credit and a \$235.5 million unsecured uncommitted line of credit, both 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. 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.

The fund may also be subject to taxes imposed by governments of countries in which it invests. Such taxes are generally based on either income or gains earned or repatriated. The fund accrues and applies such taxes to net investment income, net realized gains and net unrealized gains as income and/or capital gains are earned. In some cases, the fund may be entitled to reclaim all or a portion of such taxes, and such reclaim amounts, if any, are reflected as an asset on the fund's books. In many cases, however, the fund may not receive such amounts for an extended period of time, depending on the country of investment.

Under the Regulated Investment Company Modernization Act of 2010, the fund will be permitted to carry forward capital losses incurred for an unlimited period and the carry forwards will retain their character as either short-term or long-term capital losses. At December 31, 2022, the fund had the following capital loss carryovers available, to the extent allowed by the Code, to offset future net capital gain, if any:

Loss carryover			
Short-term	Long-term		Total
\$2,158,508	\$—		\$2,158,508

Distributions to shareholders Distributions to shareholders from net investment income are recorded by the fund on the ex-dividend date. Distributions from capital gains, if any, are recorded on the ex-dividend date and 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. These differences include temporary and/or permanent differences from losses on wash sale transactions, from foreign currency gains and losses, from interest-only securities, and from a redesignation of taxable income distributions. 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 \$692,716 to increase undistributed net investment income and \$692,716 to increase accumulated net realized loss.

Tax cost of investments includes adjustments to net unrealized appreciation (depreciation) which may not necessarily be final tax cost basis adjustments, but closely approximate the tax basis unrealized gains and losses that may be realized and distributed to shareholders. The tax basis components of distributable earnings and the federal tax cost as of the close of the reporting period were as follows:

Unrealized appreciation	\$30,186,720
Unrealized depreciation	(20,673,049)
Net unrealized appreciation	9,513,671
Undistributed ordinary income	2,649,549
Capital loss carryforward	(2,158,508)
Cost for federal income tax purposes	\$191,908,989

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 42.5% 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:

0.680%	of the first \$5 billion,
0.630%	of the next \$5 billion,
0.580%	of the next \$10 billion,
0.530%	of the next \$10 billion,
0.480%	of the next \$50 billion,
0.460%	of the next \$50 billion,
0.450%	of the next \$100 billion and
0.445%	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 0.518% of the fund’s average net assets.

Putnam Management has contractually agreed, through April 30, 2024, 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 Investments Limited (PIL), an affiliate of Putnam Management, 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 0.25% of the average net assets of the equity and asset allocation portion of the fund managed by PIL and 0.20% of the average net assets of the fixed income portion of the fund managed by PIL (prior to July 1, 2022, the annual rate was 0.40% of the average net assets of the portion of the fund managed by PIL.)

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	\$45,663
Class IB	105,949
Total	\$151,612

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 \$132 under the expense offset arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$171, 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 on or after July 1, 1995. 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 Putnam Investments, LLC, 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, excluding short-term investments, were as follows:

	Cost of purchases	Proceeds from sales
Investments in securities, including TBA commitments (Long-term)	\$134,214,630	\$136,401,851
U.S. government securities (Long-term)	11,477,812	16,349,479
Total	\$145,692,442	\$152,751,330

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 of long-term securities 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 12/31/22		Year ended 12/31/21		Year ended 12/31/22		Year ended 12/31/21	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	316,671	\$3,895,020	510,078	\$7,217,230	1,355,962	\$16,993,116	1,271,742	\$18,249,402
Shares issued in connection with reinvestment of distributions	444,573	5,832,794	365,160	4,885,835	1,015,077	13,256,907	808,101	10,771,983
	761,244	9,727,814	875,238	12,103,065	2,371,039	30,250,023	2,079,843	29,021,385
Shares repurchased	(775,735)	(9,704,224)	(662,136)	(9,547,111)	(1,899,742)	(23,404,331)	(1,385,141)	(19,788,792)
Net increase (decrease)	(14,491)	\$23,590	213,102	\$2,555,954	471,297	\$6,845,692	694,702	\$9,232,593

Note 5 — Affiliated transactions

Transactions during the reporting period with any company which is under common ownership or control were as follows:

Name of affiliate	Fair value as of 12/31/21	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 12/31/22
Short-term investments					
Putnam Cash Collateral Pool, LLC*	\$240,810	\$32,096,098	\$30,219,282	\$44,074	\$2,117,626
Putnam Short Term Investment Fund**	8,194,304	40,653,265	43,720,486	108,544	5,127,083
Total Short-term investments	\$8,435,114	\$72,749,363	\$73,939,768	\$152,618	\$7,244,709

*No management fees are charged to Putnam Cash Collateral Pool, LLC (Note 1). Investment income shown is included in securities lending income on the Statement of operations. There were no realized or unrealized gains or losses during the period.

**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.

Note 6 — 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. Investments in foreign securities involve certain risks, including those related to economic instability, unfavorable political developments, and currency fluctuations.

The fund may invest a significant portion of its assets in securitized debt instruments, including mortgage-backed and asset-backed investments. The yields and values of these investments are sensitive to changes in interest rates, the rate of principal payments on the underlying assets and the market's perception of the issuers. The market for these investments may be volatile and limited, which may make them difficult to buy or sell.

On July 27, 2017, the United Kingdom's Financial Conduct Authority ("FCA"), which regulates LIBOR, announced its intention to cease compelling banks to provide the quotations needed to sustain LIBOR after 2021. ICE Benchmark Administration, the administrator of LIBOR, ceased publication of most LIBOR settings on a representative basis at the end of 2021 and is expected to cease publication of a majority of U.S. dollar LIBOR settings on a representative basis after June 30, 2023. In addition, global regulators have announced that, with limited exceptions, no new LIBOR-based contracts should be entered into after 2021. LIBOR has historically been a common benchmark interest rate index used to make adjustments to variable-rate loans. It is used throughout global banking and financial industries to determine interest rates for a variety of financial instruments and borrowing arrangements. Actions by regulators have resulted in the establishment of alternative reference rates to LIBOR in most major currencies. Various financial industry groups have been planning for the transition away from LIBOR, but there are obstacles to converting certain longer-term securities and transactions to new reference rates. Markets are developing slowly and questions around liquidity in these rates and how to appropriately adjust these rates to mitigate any economic value transfer at the time of transition remain a significant concern. Neither the effect of the transition process nor its ultimate success can yet be known. The transition process might lead to increased volatility and illiquidity in markets that rely on LIBOR to determine interest rates. It could also lead to a reduction in the value of some LIBOR-based investments and reduce the effectiveness of related transactions, such as hedges. While some LIBOR-based instruments may contemplate a scenario where LIBOR is no longer available by providing for an alternative rate-setting methodology, not all may have such provisions and there may be significant uncertainty regarding the effectiveness of any such alternative methodologies. Since the usefulness of LIBOR as a benchmark could deteriorate during the transition period, these effects could occur at any time.

The Covid-19 pandemic and efforts to contain its spread have resulted in, among other effects, significant market volatility, exchange trading suspensions and closures, declines in global financial markets, higher default rates, significant changes in fiscal and monetary policies, and economic downturns and recessions. The effects of the Covid-19 pandemic have negatively affected, and may continue to negatively affect, the global economy, the economies of the United States and other individual countries, the financial performance of individual issuers, sectors, industries, asset classes, and markets, and the value, volatility, and liquidity of particular securities and other assets. The effects of the Covid-19 pandemic also are likely to exacerbate other risks that apply to the fund, which could negatively impact the fund's performance and lead to losses on your investment in the fund. The duration of the Covid-19 pandemic and its effects cannot be determined with certainty.

Note 7 — Summary of derivative activity

The volume of activity for the reporting period for any derivative type that was held during the period is listed below and was based on an average of the holdings at the end of each fiscal quarter:

Written equity option contracts (contract amount)	\$100
Futures contracts (number of contracts)	10
Forward currency contracts (contract amount)	\$8,700,000

The following is a summary of the fair value of derivative instruments as of the close of the reporting period:

Fair value of derivative instruments as of the close of the reporting period

Derivatives not accounted for as hedging instruments under ASC 815	Asset derivatives		Liability derivatives	
	Statement of assets and liabilities location	Fair value	Statement of assets and liabilities location	Fair value
Foreign exchange contracts	Receivables	\$26,414	Payables	\$66,797
Equity contracts	Receivables	—	Payables	36,777*
Total		\$26,414		\$103,574

*Includes cumulative appreciation/depreciation of futures contracts as reported in the fund's portfolio. Only current day's variation margin is reported within the Statement of assets and liabilities.

The following is a summary of realized and change in unrealized gains or losses of derivative instruments in the Statement of operations for the reporting period (Note 1):

Amount of realized gain or (loss) on derivatives recognized in net gain or (loss) on investments

Derivatives not accounted for as hedging instruments under ASC 815	Options	Futures	Forward currency contracts	Total
Foreign exchange contracts	\$—	\$—	\$653,310	\$653,310
Equity contracts	1,993	(965,562)	—	(963,569)
Total	\$1,993	\$(965,562)	\$653,310	\$(310,259)

Change in unrealized appreciation or (depreciation) on derivatives recognized in net gain or (loss) on investments

Derivatives not accounted for as hedging instruments under ASC 815	Futures	Forward currency contracts	Total
Foreign exchange contracts	\$—	\$(25,526)	\$(25,526)
Equity contracts	(69,031)	—	(69,031)
Total	\$(69,031)	\$(25,526)	\$(94,557)

Note 8 — 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.

	Bank of America N.A.	Barclays Bank PLC	BofA Securities, Inc.	Citibank, N.A.	Goldman Sachs International	HSBC Bank USA, National Association	JPMorgan Chase Bank N.A.	Morgan Stanley & Co. International PLC	State Street Bank and Trust Co.	UBS AG	WestPac Banking Corp.	Total
Assets:												
Futures contracts [§]	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Forward currency contracts [#]	—	12,652	—	—	5,183	654	—	7,604	321	—	—	26,414
Total Assets	\$—	\$12,652	\$—	\$—	\$5,183	\$654	\$—	\$7,604	\$321	\$—	\$—	\$26,414
Liabilities:												
Futures contracts [§]	—	—	3,184	—	—	—	—	—	—	—	—	3,184
Forward currency contracts [#]	4,743	8,532	—	11,802	3,623	10,515	14,919	—	1,776	6,997	3,890	66,797
Total Liabilities	\$4,743	\$8,532	\$3,184	\$11,802	\$3,623	\$10,515	\$14,919	\$—	\$1,776	\$6,997	\$3,890	\$69,981
Total Financial and Derivative Net Assets	\$(4,743)	\$4,120	\$(3,184)	\$(11,802)	\$1,560	\$(9,861)	\$(14,919)	\$7,604	\$(1,455)	\$(6,997)	\$(3,890)	\$(43,567)
Total collateral received (pledged) ^{†##}	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Net amount	\$(4,743)	\$4,120	\$(3,184)	\$(11,802)	\$1,560	\$(9,861)	\$(14,919)	\$7,604	\$(1,455)	\$(6,997)	\$(3,890)	\$—
Controlled collateral received (including TBA commitments) ^{**}	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Uncontrolled collateral received	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Collateral (pledged) (including TBA commitments) ^{**}	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—

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

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

[#]Covered by master netting agreement (Note 1).









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

[§]Includes current day's variation margin only as reported on the Statement of assets and liabilities, which is not collateralized. Cumulative appreciation/(depreciation) for futures contracts and centrally cleared swap contracts is represented in the tables listed after the fund's portfolio. Collateral pledged for initial margin on futures contracts, amounted to \$115,852.

Federal tax information (Unaudited)


The fund designated 21.73% of ordinary income distributions as qualifying for the dividends received deduction for corporations.

About the Trustees

Name	Year of birth	Position held	Principal occupations during past five years	Other directorships	
Independent Trustees					
Liaquat Ahamed 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 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.	Director of the Catholic Community Foundation of Minnesota; Investment Advisory Board Member of the University of Minnesota; 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; and previously a Board Member of Catholic Charities of St. Paul and Minneapolis.	
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 Trustee

Robert L. Reynolds* Born 1952 Trustee since 2008, President and Chief Executive Officer of Putnam Investments since 2008	President and Chief Executive Officer of Putnam Investments; member of Putnam Investments' Board of Directors; and 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.	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.	
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*Mr. Reynolds is an "interested person" (as defined in the Investment Company Act of 1940) of the fund and Putnam Investments. He is President and Chief Executive Officer of Putnam Investments, as well as the President of your fund and each of the other Putnam funds.

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

As of December 31, 2022, there were 92 mutual funds, 4 closed-end funds, and 7 exchange-traded funds in the Putnam funds complex. Each Trustee serves as Trustee of all funds in the Putnam funds complex.

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:

James F. Clark *(Born 1974)*

Vice President and Chief Compliance Officer
Since 2016
Chief Compliance Officer and Chief Risk Officer,
Putnam Investments, and Chief Compliance
Officer, Putnam Management

Nancy E. Florek *(Born 1957)*

Vice President, Director of Proxy Voting
and Corporate Governance, Assistant Clerk,
and Assistant Treasurer
Since 2000

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

Richard T. Kircher *(Born 1962)*

Vice President and BSA Compliance Officer
Since 2019
Assistant Director, Operational Compliance,
Putnam Investments and Putnam
Retail Management

Martin Lemaire *(Born 1984)*

Vice President and Derivatives Risk Manager
Since 2022
Risk Manager and Risk Analyst,
Putnam Investments

Susan G. Malloy *(Born 1957)*

Vice President and Assistant Treasurer
Since 2007
Head of Accounting and Middle Office Services,
Putnam Investments and Putnam Management

Alan G. McCormack *(Born 1964)*

Vice President and Derivatives Risk Manager
Since 2022
Head of Quantitative Equities and Risk,
Putnam Investments

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
Investments and Putnam Management

Stephen J. Tate *(Born 1974)*

Vice President and Chief Legal Officer
Since 2021
General Counsel, Putnam Investments, Putnam
Management, and Putnam Retail Management

Mark C. Trenchard *(Born 1962)*

Vice President
Since 2002
Director of Operational Compliance, Putnam
Investments 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 is 100 Federal Street, Boston, MA 02110.

Other important information

Proxy voting

Putnam is committed to managing our mutual funds in the best interests of our shareholders. 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, 2022, 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 Putnam's Shareholder Services at 1-800-225-1581.

Fund portfolio holdings

The fund will file a complete schedule of its portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-PORT within 60 days of the end of such fiscal quarter. Shareholders may obtain the fund's Form N-PORT from the SEC's website at www.sec.gov.

Prior to its use of Form N-PORT, the fund filed its complete schedule of its portfolio holdings with the SEC on Form N-Q, which is available online at www.sec.gov.

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

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.

