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Putnam Variable Trust

Putnam VT George Putnam Balanced Fund

Semiannual report

6 | 30 | 22

Message from the Trustees

August 9, 2022

Dear Shareholder:

Financial markets are reminding us that the journey to long-term returns often involves weathering periods of heightened volatility. Both stocks and bonds have experienced sharp declines in the first half of 2022. Inflation has shaken consumer confidence, while higher interest rates are helping to slow the U.S. economy. Globally, the Russia-Ukraine War, supply chain disruptions, and China's continued deceleration could prolong market volatility.

While this difficult environment may test investors' patience, you can be confident that Putnam portfolio managers are actively working for you. They are assessing risks while researching new and attractive investment opportunities for your fund.

We also have changes to the Board of Trustees to announce. In July 2022, we welcomed Jennifer Williams Murphy and Marie Pillai as new Trustees. Both have a wealth of investment advisory and executive management experience. We also want to thank our Trustees who retired from the Board on June 30, 2022: Paul Joskow served with us since 1997, and Ravi Akhoury joined the Board in 2009. We wish them well.

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

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.

Performance summary (as of 6/30/22)

Investment objective

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

Net asset value June 30, 2022

Class IA: \$11.52

Class IB: \$11.46

Annualized total return at net asset value (as of 6/30/22)

	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
6 months	-16.47%	-16.58%	-15.92%	-19.96%	-10.35%
1 year	-11.77	-12.04	-10.03	-10.62	-10.29
5 years	7.40	7.13	7.62	11.31	0.88
10 years	8.68	8.41	8.67	12.96	1.54
Life of fund	5.07	4.82	6.52	7.18	4.15

Returns for periods of less than one year are not annualized.

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

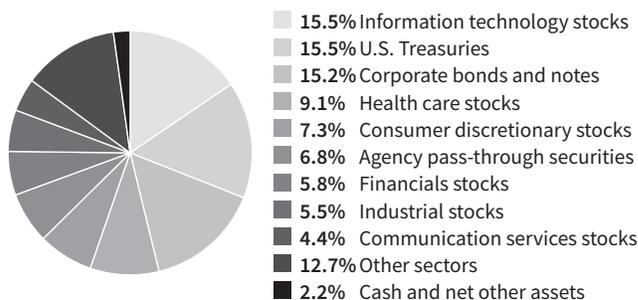
The George Putnam Blended Index is an unmanaged index administered by Putnam Management, 60% of which is based on the S&P 500® Index and 40% of which is based on the Bloomberg U.S. Aggregate Bond Index. The S&P 500® Index is an unmanaged index of common stock performance. The Bloomberg U.S. Aggregate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

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.

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 1/1/22 to 6/30/22. 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 6/30/22*	0.68%	0.93%

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.

*Includes one-time proxy cost of 0.01%.

Expenses per \$1,000

	Expenses and value for a \$1,000 investment, assuming actual returns for the 6 months ended 6/30/22		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 6/30/22	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$3.09	\$4.23	\$3.41	\$4.66
Ending value (after expenses)	\$835.30	\$834.20	\$1,021.42	\$1,020.18

*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 6/30/22. 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 (181); 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 (181); and then dividing that result by the number of days in the year (365).

Your fund's managers



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



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

The fund's portfolio 6/30/22 (Unaudited)

COMMON STOCKS (59.4%)*	Shares	Value
Basic materials (1.9%)		
Agnico-Eagle Mines, Ltd. (Canada)	6,073	\$277,984
Alamos Gold, Inc. Class A (Canada)	37,690	264,584
Anglo American PLC (London Exchange) (United Kingdom)	1,673	59,813
Avery Dennison Corp.	3,910	632,912
Corteva, Inc.	13,849	749,785
CRH PLC ADR (Ireland) [§]	8,202	285,594
Eastman Chemical Co.	2,849	255,755
Linde PLC	1,415	406,855
PPG Industries, Inc.	3,306	378,008
Sherwin-Williams Co. (The)	2,669	597,616
		3,908,906
Capital goods (3.7%)		
Boeing Co. (The) †	1,276	174,455
CAE, Inc. (Canada) †	10,006	246,574
Deere & Co.	1,438	430,638
Emerson Electric Co.	7,135	567,518
Honeywell International, Inc.	4,966	863,140
Ingersoll Rand, Inc.	10,672	449,078
Johnson Controls International PLC	21,307	1,020,179
Northrop Grumman Corp.	2,914	1,394,553
Otis Worldwide Corp.	15,038	1,062,735
Raytheon Technologies Corp.	13,400	1,287,874
		7,496,744
Communication services (1.2%)		
Charter Communications, Inc. Class A †	977	457,754
T-Mobile US, Inc. †	15,184	2,042,855
		2,500,609
Computers (3.5%)		
Apple, Inc.	41,546	5,680,169
CDW Corp./DE	8,775	1,382,589
		7,062,758
Conglomerates (0.1%)		
General Electric Co.	3,833	244,047
		244,047
Consumer cyclicals (10.0%)		
4Front Ventures Corp. †	416,285	228,957
Adyen NV (Netherlands) †	135	196,365
Amazon.com, Inc. †	49,060	5,210,663
Aramark	8,668	265,501
Bath & Body Works, Inc.	2,784	74,945
BJ's Wholesale Club Holdings, Inc. †	1,791	111,615
Booking Holdings, Inc. †	503	879,742
Booz Allen Hamilton Holding Corp.	2,488	224,816
CarMax, Inc. † [§]	2,799	253,254
General Motors Co. †	5,543	176,046
Hilton Worldwide Holdings, Inc.	4,648	517,973
Home Depot, Inc. (The)	8,480	2,325,810
Levi Strauss & Co. Class A [§]	8,554	139,601
Lululemon Athletica, Inc. (Canada) †	492	134,124
Mastercard, Inc. Class A	9,043	2,852,886
Nike, Inc. Class B	3,577	365,569
O'Reilly Automotive, Inc. †	762	481,401
Penn National Gaming, Inc. †	8,210	249,748
PulteGroup, Inc.	19,088	756,457
Target Corp.	5,020	708,975
Tesla, Inc. †	2,508	1,688,937
TJX Cos., Inc. (The)	3,376	188,550
United Rentals, Inc. †	1,551	376,753

COMMON STOCKS (59.4%)* cont.	Shares	Value
Consumer cyclicals cont.		
Walmart, Inc.	10,136	\$1,232,335
Walt Disney Co. (The) †	5,915	558,376
Warby Parker, Inc. Class A † [§]	3,931	44,263
		20,243,662
Consumer staples (3.9%)		
Altria Group, Inc.	5,703	238,214
Chipotle Mexican Grill, Inc. †	365	477,150
Coca-Cola Co. (The)	23,376	1,470,584
Constellation Brands, Inc. Class A	603	140,535
Costco Wholesale Corp.	1,604	768,765
McCormick & Co., Inc. (non-voting shares)	3,943	328,255
PepsiCo, Inc.	11,945	1,990,754
Procter & Gamble Co. (The)	16,506	2,373,398
Sea, Ltd. ADR (Singapore) †	3,298	220,504
		8,008,159
Electronics (1.7%)		
Advanced Micro Devices, Inc. †	17,773	1,359,101
Qualcomm, Inc.	13,624	1,740,330
Vontier Corp.	19,386	445,684
		3,545,115
Energy (2.9%)		
Cenovus Energy, Inc. (Canada)	96,787	1,841,449
ConocoPhillips	7,316	657,050
Exxon Mobil Corp.	30,612	2,621,612
Shell PLC (London Exchange) (United Kingdom)	25,606	665,172
TotalEnergies SE (France)	3,868	204,173
		5,989,456
Financials (6.9%)		
AIA Group, Ltd. (Hong Kong)	47,400	513,760
Apollo Global Management, Inc. [§]	18,315	887,911
Assured Guaranty, Ltd.	32,862	1,833,371
AXA SA (France)	21,501	488,043
Bank of America Corp.	40,567	1,262,851
Charles Schwab Corp. (The)	15,856	1,001,782
Citigroup, Inc.	41,801	1,922,428
Gaming and Leisure Properties, Inc. ^R	22,416	1,027,998
Goldman Sachs Group, Inc. (The)	5,497	1,632,719
KKR & Co., Inc.	15,243	705,598
Prudential PLC (United Kingdom)	58,489	723,379
Quilter PLC (United Kingdom)	263,982	329,379
Silergate Capital Corp. Class A †	5,121	274,127
Visa, Inc. Class A [§]	5,934	1,168,345
Vornado Realty Trust ^R	8,731	249,619
		14,021,310
Health care (9.0%)		
Abbott Laboratories	5,891	640,057
Ascendis Pharma A/SADR (Denmark) † [§]	3,744	348,042
Avantor, Inc. †	13,501	419,881
Baxter International, Inc.	4,972	319,352
Bio-Rad Laboratories, Inc. Class A †	986	488,070
Boston Scientific Corp. †	17,892	666,835
Cigna Corp.	5,396	1,421,954
Danaher Corp.	4,228	1,071,883
DexCom, Inc. †	3,498	260,706
Edwards Lifesciences Corp. †	738	70,176
Elevance Health, Inc.	2,309	1,114,277
Eli Lilly and Co.	3,356	1,088,116
IDEXX Laboratories, Inc. †	165	57,870
Intuitive Surgical, Inc. †	1,775	356,260
Ironwood Pharmaceuticals, Inc. †	24,990	288,135
Johnson & Johnson	8,845	1,570,076

COMMON STOCKS (59.4%)* cont.	Shares	Value
Health care cont.		
McKesson Corp.	1,398	\$456,042
Medtronic PLC	2,625	235,594
Merck & Co., Inc.	13,786	1,256,870
Pfizer, Inc.	24,701	1,295,073
Regeneron Pharmaceuticals, Inc. †	1,785	1,055,167
Thermo Fisher Scientific, Inc.	1,868	1,014,847
UnitedHealth Group, Inc.	4,678	2,402,761
Vertex Pharmaceuticals, Inc. †	1,773	499,614
		18,397,658
Software (6.7%)		
Adobe, Inc. †	3,392	1,241,676
Intuit, Inc.	4,859	1,872,853
Microsoft Corp.	31,917	8,197,243
Oracle Corp.	26,830	1,874,612
Unity Software, Inc. † §	11,020	405,756
		13,592,140
Technology services (4.5%)		
Alphabet, Inc. Class A †	2,014	4,389,030
Fidelity National Information Services, Inc.	21,806	1,998,956
Meta Platforms, Inc. Class A †	7,610	1,227,113
salesforce.com, Inc. †	8,721	1,439,314
		9,054,413
Transportation (1.4%)		
CSX Corp.	12,808	372,200
Southwest Airlines Co. †	11,568	417,836
Union Pacific Corp.	9,478	2,021,468
		2,811,504
Utilities and power (2.0%)		
Ameren Corp.	4,907	443,397
American Electric Power Co., Inc.	5,542	531,699
Exelon Corp.	9,431	427,413
NextEra Energy, Inc.	10,738	831,765
NRG Energy, Inc.	44,287	1,690,435
Vistra Corp.	4,561	104,219
		4,028,928
Total common stocks (cost \$106,490,183)		\$120,905,409
U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (8.7%)*		
U.S. Government Guaranteed Mortgage Obligations (1.4%)		
Government National Mortgage Association		
Pass-Through Certificates		
4.50%, 3/20/49	\$426,858	\$437,908
3.50%, with due dates from 11/20/47 to 4/20/51	1,296,671	1,264,726
3.00%, 7/20/46	267,447	255,288
2.00%, 1/20/51	967,962	854,034
		2,811,956
U.S. Government Agency Mortgage Obligations (7.3%)		
Federal Home Loan Mortgage Corporation		
Pass-Through Certificates		
2.50%, with due dates from 7/1/50 to 2/1/51	215,589	195,882
Federal National Mortgage Association		
Pass-Through Certificates		
5.50%, with due dates from 7/1/33 to 11/1/38	70,693	75,631
5.00%, 8/1/33	29,335	30,654
4.50%, 2/1/49	649,903	666,979
4.00%, with due dates from 4/1/49 to 5/1/49	771,050	769,465
3.50%, with due dates from 11/1/49 to 12/1/49	789,917	768,445
3.00%, 6/1/46	339,877	323,371
2.50%, with due dates from 7/1/50 to 7/1/51	5,503,205	4,968,467
2.00%, 10/1/50	2,361,628	2,062,300

U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (8.7%)* cont.	Principal amount	Value
U.S. Government Agency Mortgage Obligations cont.		
Uniform Mortgage-Backed Securities		
5.00%, TBA, 8/1/52	\$1,000,000	\$1,017,148
5.00%, TBA, 7/1/52	1,000,000	1,020,156
4.50%, TBA, 8/1/52	1,000,000	1,001,524
4.50%, TBA, 7/1/52	2,000,000	2,007,344
		14,907,366
Total U.S. government and agency mortgage obligations (cost \$19,310,556)		\$17,719,322
U.S. TREASURY OBLIGATIONS (15.5%)*		
U.S. Treasury Bonds		
3.00%, 2/15/47	\$880,000	\$818,125
2.75%, 8/15/42 #	4,350,000	3,883,055
1.875%, 2/15/51	1,350,000	1,012,658
1.25%, 5/15/50	1,490,000	948,014
U.S. Treasury Inflation Index Notes		
0.125%, 10/15/25 †	121,406	135,302
U.S. Treasury Notes		
2.75%, 2/15/24	1,600,000	1,594,188
2.375%, 8/15/24	2,550,000	2,515,934
2.25%, 11/15/27	3,580,000	3,430,927
1.75%, 12/31/24	320,000	310,125
1.625%, 5/15/31	2,410,000	2,153,373
1.625%, 9/30/26	2,210,000	2,084,738
1.625%, 2/15/26	3,530,000	3,355,155
1.50%, 2/15/30	760,000	682,634
1.125%, 2/28/25	4,710,000	4,482,963
0.625%, 10/15/24	4,330,000	4,102,506
Total U.S. treasury obligations (cost \$34,687,366)		\$31,509,697
CORPORATE BONDS AND NOTES (15.0%)*		
Basic materials (0.9%)		
Cabot Corp. sr. unsec. bonds 5.00%, 6/30/32	\$125,000	\$121,357
Celanese US Holdings, LLC company guaranty sr. unsec. notes 3.50%, 5/8/24 (Germany)	45,000	44,455
Celanese US Holdings, LLC company guaranty sr. unsec. notes 1.40%, 8/5/26 (Germany)	95,000	81,710
CF Industries, Inc. company guaranty sr. unsec. bonds 4.95%, 6/1/43	174,000	156,600
CF Industries, Inc. 144A company guaranty sr. notes 4.50%, 12/1/26	13,000	12,947
Georgia-Pacific, LLC 144A sr. unsec. sub. notes 2.10%, 4/30/27	200,000	182,870
Glencore Finance Canada, Ltd. 144A company guaranty sr. unsec. unsub. notes 6.00%, 11/15/41 (Canada)	5,000	4,857
Glencore Funding, LLC 144A company guaranty sr. unsec. notes 2.50%, 9/1/30	258,000	210,173
Huntsman International, LLC sr. unsec. notes 4.50%, 5/1/29	210,000	198,018
International Flavors & Fragrances, Inc. sr. unsec. notes 4.45%, 9/26/28	80,000	78,168
International Flavors & Fragrances, Inc. 144A company guaranty sr. unsec. bonds 3.468%, 12/1/50	27,000	19,671
International Flavors & Fragrances, Inc. 144A sr. unsec. notes 2.30%, 11/1/30	48,000	39,449
International Paper Co. sr. unsec. notes 8.70%, 6/15/38	10,000	13,106

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Basic materials cont.		
Nutrien, Ltd. sr. unsec. notes 2.95%, 5/13/30 (Canada)	\$170,000	\$151,276
Sherwin-Williams Co. (The) sr. unsec. unsub. bonds 3.45%, 6/1/27	87,000	82,918
Westlake Corp. sr. unsec. bonds 3.125%, 8/15/51	233,000	162,557
Westlake Corp. sr. unsec. bonds 2.875%, 8/15/41	117,000	82,982
WestRock MWV, LLC company guaranty sr. unsec. unsub. notes 8.20%, 1/15/30	140,000	166,776
WestRock MWV, LLC company guaranty sr. unsec. unsub. notes 7.95%, 2/15/31	10,000	11,939
Weyerhaeuser Co. sr. unsec. unsub. notes 7.375%, 3/15/32 ^R	24,000	27,761
		1,849,590
Capital goods (0.7%)		
Berry Global, Inc. 144A company guaranty sr. notes 1.65%, 1/15/27	135,000	118,164
Berry Global, Inc. 144A company guaranty sr. notes 1.57%, 1/15/26	160,000	142,675
Boeing Co. (The) sr. unsec. bonds 5.93%, 5/1/60	85,000	77,386
Boeing Co. (The) sr. unsec. notes 4.875%, 5/1/25	90,000	89,668
Howmet Aerospace, Inc. sr. unsec. unsub. notes 3.00%, 1/15/29	155,000	128,377
Johnson Controls International PLC sr. unsec. unsub. bonds 4.50%, 2/15/47	125,000	109,356
L3Harris Technologies, Inc. sr. unsec. bonds 1.80%, 1/15/31	90,000	71,823
L3Harris Technologies, Inc. sr. unsec. notes 3.85%, 12/15/26	100,000	97,987
L3Harris Technologies, Inc. sr. unsec. sub. notes 4.40%, 6/15/28	68,000	66,784
Northrop Grumman Corp. sr. unsec. unsub. notes 3.25%, 1/15/28	210,000	199,610
Oshkosh Corp. sr. unsec. sub. notes 4.60%, 5/15/28	99,000	97,828
Oshkosh Corp. sr. unsec. unsub. notes 3.10%, 3/1/30	21,000	17,983
Otis Worldwide Corp. sr. unsec. notes 2.565%, 2/15/30	90,000	77,747
Waste Connections, Inc. sr. unsec. bonds 3.20%, 6/1/32	49,000	43,677
Waste Connections, Inc. sr. unsec. sub. bonds 3.50%, 5/1/29	130,000	122,022
		1,461,087
Communication services (1.5%)		
American Tower Corp. sr. unsec. bonds 2.70%, 4/15/31 ^R	263,000	216,436
American Tower Corp. sr. unsec. notes 2.90%, 1/15/30 ^R	130,000	111,296
American Tower Corp. sr. unsec. sub. notes 2.75%, 1/15/27 ^R	66,000	60,358
AT&T, Inc. company guaranty sr. unsec. unsub. notes 2.30%, 6/1/27	205,000	187,133
AT&T, Inc. sr. unsec. unsub. bonds 2.55%, 12/1/33	213,000	172,793
AT&T, Inc. sr. unsec. unsub. bonds 2.25%, 2/1/32	147,000	120,097
AT&T, Inc. sr. unsec. unsub. notes 4.75%, 5/15/46	12,000	11,107
Charter Communications Operating, LLC/ Charter Communications Operating Capital Corp. company guaranty sr. bonds 2.80%, 4/1/31	44,000	35,238
Charter Communications Operating, LLC/Charter Communications Operating Capital Corp. company guaranty sr. notes 3.75%, 2/15/28	55,000	50,790

CORPORATE BONDS AND NOTES (15.0%)* 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	\$107,911
Charter Communications Operating, LLC/ Charter Communications Operating Capital Corp. sr. bonds 3.70%, 4/1/51	5,000	3,383
Charter Communications Operating, LLC/ Charter Communications Operating Capital Corp. company guaranty sr. sub. bonds 5.375%, 5/1/47	74,000	63,008
Comcast Corp. company guaranty sr. unsec. bonds 2.887%, 11/1/51	26,000	18,680
Comcast Corp. company guaranty sr. unsec. notes 3.45%, 2/1/50	201,000	159,731
Comcast Corp. company guaranty sr. unsec. unsub. bonds 3.999%, 11/1/49	127,000	110,744
Comcast Corp. company guaranty sr. unsec. unsub. bonds 2.35%, 1/15/27	113,000	105,334
Comcast Corp. company guaranty sr. unsec. unsub. notes 6.50%, 11/15/35	6,000	7,002
Comcast Corp. company guaranty sr. unsec. unsub. notes 3.15%, 3/1/26	20,000	19,468
Cox Communications, Inc. 144A company guaranty sr. unsec. bonds 2.95%, 10/1/50	101,000	66,869
Cox Communications, Inc. 144A sr. unsec. bonds 3.50%, 8/15/27	73,000	69,264
Cox Communications, Inc. 144A sr. unsec. notes 3.35%, 9/15/26	76,000	72,656
Crown Castle International Corp. sr. unsec. bonds 3.80%, 2/15/28 ^R	134,000	126,426
Crown Castle International Corp. sr. unsec. bonds 3.65%, 9/1/27 ^R	66,000	62,505
Crown Castle International Corp. sr. unsec. notes 4.75%, 5/15/47 ^R	30,000	27,046
Crown Castle International Corp. sr. unsec. sub. bonds 2.25%, 1/15/31	130,000	105,448
Equinix, Inc. sr. unsec. sub. notes 3.20%, 11/18/29 ^R	194,000	172,338
Rogers Communications, Inc. company guaranty sr. unsec. bonds 8.75%, 5/1/32 (Canada)	10,000	12,348
T-Mobile USA, Inc. company guaranty sr. notes 3.875%, 4/15/30	6,000	5,600
T-Mobile USA, Inc. company guaranty sr. notes 3.75%, 4/15/27	229,000	220,509
T-Mobile USA, Inc. company guaranty sr. notes 2.55%, 2/15/31	90,000	75,730
Verizon Communications, Inc. sr. unsec. bonds 3.70%, 3/22/61	123,000	96,607
Verizon Communications, Inc. sr. unsec. notes 3.15%, 3/22/30	140,000	127,287
Verizon Communications, Inc. sr. unsec. notes 2.55%, 3/21/31	62,000	53,010
Verizon Communications, Inc. sr. unsec. unsub. notes 4.329%, 9/21/28	200,000	198,911
		3,053,063
Conglomerates (—%)		
General Electric Co. jr. unsec. sub. FRN (ICE LIBOR USD 3 Month + 3.33%), 5.159%, perpetual maturity	89,000	77,982
		77,982

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Communication services (1.5%)		
Alimentation Couche-Tard, Inc. 144A company guaranty sr. unsec. notes 3.55%, 7/26/27 (Canada)	\$120,000	\$111,750
Alimentation Couche-Tard, Inc. 144A sr. unsec. notes 2.95%, 1/25/30 (Canada)	131,000	112,858
Amazon.com, Inc. sr. unsec. notes 4.05%, 8/22/47	125,000	117,000
Amazon.com, Inc. sr. unsec. notes 3.15%, 8/22/27	98,000	95,283
Amazon.com, Inc. sr. unsec. unsub. notes 2.10%, 5/12/31	87,000	74,529
Autonation, Inc. company guaranty sr. unsec. notes 4.50%, 10/1/25	24,000	23,900
Autonation, Inc. sr. unsec. bonds 2.40%, 8/1/31	63,000	48,592
BMW US Capital, LLC 144A company guaranty sr. unsec. notes 3.95%, 8/14/28	77,000	75,565
Booking Holdings, Inc. sr. unsec. sub. notes 4.625%, 4/13/30	155,000	154,114
Discovery Communications, LLC company guaranty sr. unsec. unsub. notes 3.625%, 5/15/30	3,000	2,667
Dollar General Corp. sr. unsec. sub. notes 3.25%, 4/15/23	60,000	59,705
Ecolab, Inc. sr. unsec. unsub. notes 3.25%, 12/1/27	122,000	118,862
Ford Motor Co. sr. unsec. unsub. notes 3.625%, 6/17/31	235,000	182,125
General Motors Co. sr. unsec. bonds 5.95%, 4/1/49	76,000	70,575
General Motors Co. sr. unsec. bonds 5.20%, 4/1/45	30,000	25,198
General Motors Financial Co., Inc. company guaranty sr. unsec. notes 4.00%, 10/6/26	40,000	38,197
General Motors Financial Co., Inc. sr. unsec. notes 3.10%, 1/12/32	41,000	32,954
General Motors Financial Co., Inc. sr. unsec. notes 1.25%, 1/8/26	47,000	41,387
Global Payments, Inc. sr. unsec. notes 2.90%, 5/15/30	33,000	27,845
Interpublic Group of Cos., Inc. (The) sr. unsec. sub. bonds 4.65%, 10/1/28	197,000	194,654
Lennar Corp. company guaranty sr. unsec. unsub. notes 4.75%, 11/29/27	189,000	183,494
Magallanes, Inc. 144A company guaranty sr. unsec. bonds 4.279%, 3/15/32	310,000	276,291
Moody's Corp. sr. unsec. bonds 2.55%, 8/18/60	80,000	49,852
News Corp. 144A company guaranty sr. unsec. unsub. bonds 5.125%, 2/15/32	28,000	24,794
Omnicom Group, Inc. company guaranty sr. unsec. unsub. notes 3.60%, 4/15/26	42,000	40,775
Omnicom Group, Inc. sr. unsec. sub. notes 2.45%, 4/30/30	185,000	155,969
Paramount Global sr. unsec. unsub. notes 4.20%, 6/1/29	60,000	56,394
Paramount Global sr. unsec. unsub. notes 4.00%, 1/15/26	17,000	16,583
Paramount Global sr. unsec. unsub. notes 2.90%, 1/15/27	48,000	44,195
S&P Global, Inc. company guaranty sr. unsec. bonds 2.50%, 12/1/29	175,000	154,649
S&P Global, Inc. company guaranty sr. unsec. notes 1.25%, 8/15/30	56,000	44,327

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Communication services cont.		
SiriusXM Radio, Inc. 144A company guaranty sr. unsec. bonds 3.875%, 9/1/31	\$205,000	\$163,231
SiriusXM Radio, Inc. 144A sr. unsec. bonds 5.00%, 8/1/27	150,000	138,750
Stellantis Finance US, Inc. 144A company guaranty sr. unsec. notes 2.691%, 9/15/31	200,000	158,604
		3,115,668
Consumer staples (0.9%)		
Anheuser-Busch InBev Worldwide, Inc. company guaranty sr. unsec. unsub. bonds 5.55%, 1/23/49	151,000	154,219
Anheuser-Busch InBev Worldwide, Inc. company guaranty sr. unsec. unsub. bonds 4.60%, 4/15/48	196,000	175,967
Anheuser-Busch InBev Worldwide, Inc. company guaranty sr. unsec. unsub. notes 4.75%, 1/23/29	112,000	113,945
Ashtead Capital, Inc. 144A notes 4.375%, 8/15/27	200,000	185,915
CVS Pass-Through Trust 144A sr. mtg. notes 7.507%, 1/10/32	108,079	117,860
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 7.00%, 10/15/37	150,000	175,925
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 5.625%, 3/15/42	87,000	87,268
ERAC USA Finance, LLC 144A company guaranty sr. unsec. notes 3.85%, 11/15/24	130,000	128,228
Keurig Dr Pepper, Inc. company guaranty sr. unsec. bonds 3.20%, 5/1/30	41,000	36,680
Keurig Dr Pepper, Inc. company guaranty sr. unsec. notes 2.25%, 3/15/31	115,000	94,456
Kraft Heinz Foods Co. company guaranty sr. unsec. bonds 4.375%, 6/1/46	140,000	116,677
Kraft Heinz Foods Co. company guaranty sr. unsec. sub. notes 4.875%, 10/1/49	115,000	101,574
Kraft Heinz Foods Co. company guaranty sr. unsec. sub. notes 3.875%, 5/15/27	29,000	28,044
Netflix, Inc. sr. unsec. unsub. notes 5.875%, 11/15/28	74,000	72,351
Netflix, Inc. sr. unsec. unsub. notes 4.375%, 11/15/26	215,000	207,155
		1,796,264
Energy (0.6%)		
BP Capital Markets America, Inc. company guaranty sr. unsec. notes 3.119%, 5/4/26	80,000	77,588
BP Capital Markets America, Inc. company guaranty sr. unsec. unsub. notes 3.937%, 9/21/28	88,000	86,055
Cheniere Corpus Christi Holdings, LLC company guaranty sr. notes 5.125%, 6/30/27	110,000	110,405
Cheniere Energy Partners LP 144A company guaranty sr. unsec. unsub. bonds 3.25%, 1/31/32	70,000	54,950
Continental Resources, Inc. 144A company guaranty sr. unsec. bonds 2.875%, 4/1/32	245,000	191,325
Diamondback Energy, Inc. company guaranty sr. unsec. notes 3.25%, 12/1/26	105,000	102,442
DT Midstream, Inc. 144A sr. bonds 4.30%, 4/15/32	70,000	64,177
Equinor ASA company guaranty sr. unsec. notes 5.10%, 8/17/40 (Norway)	80,000	82,938
Kinetik Holdings LP 144A company guaranty sr. unsec. notes 5.875%, 6/15/30	115,000	109,551
Occidental Petroleum Corp. sr. unsec. sub. bonds 6.20%, 3/15/40	122,000	120,170
Sabine Pass Liquefaction, LLC sr. bonds 4.20%, 3/15/28	24,000	23,082

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Energy cont.		
Sabine Pass Liquefaction, LLC sr. notes 5.00%, 3/15/27	\$105,000	\$105,254
Transcanada Trust company guaranty jr. unsec. sub. FRB 5.30%, 3/15/77 (Canada)	135,000	120,150
		1,248,087
Financials (5.5%)		
ABN AMRO Bank NV 144A unsec. sub. FRB 3.324%, 3/13/37 (Netherlands)	200,000	160,221
AerCap Ireland Capital DAC/AerCap Global Aviation Trust company guaranty sr. unsec. bonds 3.30%, 1/30/32 (Ireland)	270,000	216,133
Air Lease Corp. sr. unsec. notes Ser. MTN, 3.00%, 2/1/30	195,000	159,133
Air Lease Corp. sr. unsec. sub. bonds 4.625%, 10/1/28	27,000	24,968
Air Lease Corp. sr. unsec. sub. notes 3.25%, 10/1/29	32,000	26,958
Air Lease Corp. sr. unsec. unsub. notes 3.00%, 9/15/23	115,000	112,427
Ally Financial, Inc. company guaranty sr. unsec. notes 8.00%, 11/1/31	90,000	100,050
American Express Co. sr. unsec. unsub. notes 3.375%, 5/3/24	180,000	178,705
Aon PLC company guaranty sr. unsec. unsub. notes 4.25%, 12/12/42	220,000	185,590
Ares Capital Corp. sr. unsec. sub. notes 3.875%, 1/15/26	205,000	188,260
Australia & New Zealand Banking Group, Ltd. 144A unsec. sub. FRB 2.57%, 11/25/35 (Australia)	200,000	160,481
Banco Santander SA unsec. sub. FRB 3.225%, 11/22/32 (Spain)	600,000	474,542
Bank of America Corp. jr. unsec. sub. bonds Ser. JJ, 5.125%, perpetual maturity	95,000	88,592
Bank of America Corp. jr. unsec. sub. FRN Ser. AA, 6.10%, perpetual maturity	32,000	31,480
Bank of America Corp. sr. unsec. FRN Ser. MTN, 2.496%, 2/13/31	75,000	63,384
Bank of America Corp. unsec. sub. FRB 3.846%, 3/8/37	440,000	380,314
Bank of America Corp. unsec. sub. notes 6.11%, 1/29/37	150,000	161,999
Bank of Montreal unsec. sub. FRN 3.803%, 12/15/32 (Canada)	45,000	41,710
Bank of Nova Scotia (The) sr. unsec. notes 2.00%, 11/15/22 (Canada)	400,000	398,907
Berkshire Hathaway Finance Corp. company guaranty sr. unsec. bonds 2.85%, 10/15/50	30,000	21,597
Berkshire Hathaway Finance Corp. company guaranty sr. unsec. notes 4.30%, 5/15/43	83,000	77,494
BNP Paribas SA 144A jr. unsec. sub. FRN 4.625%, perpetual maturity (France)	200,000	147,600
BPCE SA 144A unsec. sub. notes 5.15%, 7/21/24 (France)	200,000	200,225
Capital One Financial Corp. unsec. sub. FRB 2.359%, 7/29/32	178,000	135,767
Capital One Financial Corp. unsec. sub. notes 4.20%, 10/29/25	63,000	62,159
Citigroup, Inc. jr. unsec. sub. FRN 3.875%, perpetual maturity	205,000	170,150
Citigroup, Inc. sr. unsec. FRB 3.668%, 7/24/28	10,000	9,457
Citigroup, Inc. unsec. sub. bonds 4.75%, 5/18/46	270,000	241,066
Citigroup, Inc. unsec. sub. bonds 4.45%, 9/29/27	264,000	258,544

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Financials cont.		
CNO Financial Group, Inc. sr. unsec. unsub. notes 5.25%, 5/30/25	\$28,000	\$28,432
Corebridge Financial, Inc. 144A sr. unsec. notes 3.85%, 4/5/29	95,000	87,792
Credit Suisse AG sr. unsec. notes 1.00%, 5/5/23	400,000	391,434
Credit Suisse Group AG 144A sr. unsec. FRN 2.193%, 6/5/26 (Switzerland)	250,000	227,180
Deutsche Bank AG/New York, NY sr. unsec. unsub. FRN 2.311%, 11/16/27 (Germany)	150,000	129,447
Deutsche Bank AG/New York, NY unsec. sub. FRB 3.729%, 1/14/32 (Germany)	225,000	169,152
Digital Realty Trust LP company guaranty sr. unsec. bonds 4.45%, 7/15/28 ^R	185,000	179,550
Fairfax Financial Holdings, Ltd. sr. unsec. notes 4.85%, 4/17/28 (Canada)	145,000	144,085
Fairfax US, Inc. 144A company guaranty sr. unsec. notes 4.875%, 8/13/24	40,000	39,894
Fidelity National Financial, Inc. sr. unsec. bonds 3.20%, 9/17/51	72,000	45,340
Fifth Third Bancorp jr. unsec. sub. FRB 5.10%, perpetual maturity	29,000	24,346
First-Citizens Bank & Trust Co. unsec. sub. notes 6.125%, 3/9/28	157,000	163,589
GLP Capital LP/GLP Financing II, Inc. company guaranty sr. unsec. bonds 3.25%, 1/15/32 ^R	65,000	52,096
Goldman Sachs Group, Inc. (The) jr. unsec. sub. FRN 3.65%, 7/28/51	135,000	104,625
Goldman Sachs Group, Inc. (The) sr. unsec. FRB 4.223%, 5/1/29	97,000	93,236
Goldman Sachs Group, Inc. (The) sr. unsec. unsub. notes 3.85%, 1/26/27	192,000	185,606
Goldman Sachs Group, Inc. (The) sr. unsec. unsub. notes 2.60%, 2/7/30	450,000	383,802
Intercontinental Exchange, Inc. sr. unsec. bonds 2.65%, 9/15/40	127,000	93,137
Intercontinental Exchange, Inc. sr. unsec. bonds 1.85%, 9/15/32	63,000	49,205
Intesa Sanpaolo SpA 144A unsec. sub. bonds 4.198%, 6/1/32 (Italy)	220,000	164,438
iStar, Inc. sr. unsec. notes 4.25%, 8/1/25 ^R	115,000	106,209
JPMorgan Chase & Co. jr. unsec. bonds 6.10%, perpetual maturity	26,000	24,279
JPMorgan Chase & Co. jr. unsec. sub. FRB Ser. HH, 4.60%, perpetual maturity	146,000	123,300
JPMorgan Chase & Co. jr. unsec. sub. FRB Ser. W, (ICE LIBOR USD 3 Month + 1.00%), 2.411%, 5/15/47	87,000	66,122
JPMorgan Chase & Co. jr. unsec. sub. FRN 3.65%, perpetual maturity	26,000	21,294
JPMorgan Chase & Co. sr. unsec. unsub. FRB 3.964%, 11/15/48	185,000	156,750
JPMorgan Chase & Co. unsec. sub. FRB 2.956%, 5/13/31	363,000	313,408
KKR Group Finance Co. VI, LLC 144A company guaranty sr. unsec. bonds 3.75%, 7/1/29	25,000	23,370
Marsh & McLennan Cos., Inc. sr. unsec. sub. notes 4.375%, 3/15/29	185,000	182,838
Massachusetts Mutual Life Insurance Co. 144A unsec. sub. bonds 3.729%, 10/15/70	175,000	127,585
MetLife Capital Trust IV 144A jr. unsec. sub. notes 7.875%, 12/15/37	400,000	431,147

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Financials cont.		
Morgan Stanley unsec. sub. notes Ser. GMTN, 4.35%, 9/8/26	\$450,000	\$445,349
Neuberger Berman Group, LLC/Neuberger Berman Finance Corp. 144A sr. unsec. notes 4.875%, 4/15/45	40,000	36,248
PNC Financial Services Group, Inc. (The) unsec. sub. FRB 4.626%, 6/6/33	260,000	251,100
Prologis LP sr. unsec. unsub. notes 2.25%, 4/15/30 R	62,000	53,654
Prologis LP sr. unsec. unsub. notes 2.125%, 4/15/27 R	26,000	23,723
Prudential Financial, Inc. jr. unsec. sub. FRN 5.625%, 6/15/43	15,000	14,645
Prudential Financial, Inc. jr. unsec. sub. FRN 5.20%, 3/15/44	173,000	164,018
Prudential Financial, Inc. sr. unsec. notes 6.625%, 6/21/40	35,000	40,739
Royal Bank of Canada unsec. sub. notes Ser. GMTN, 4.65%, 1/27/26 (Canada)	35,000	35,293
Societe Generale SA 144A jr. unsec. sub. notes 5.375%, perpetual maturity (France)	205,000	158,875
Teachers Insurance & Annuity Association of America 144A unsec. sub. notes 6.85%, 12/16/39	40,000	47,048
Toronto-Dominion Bank (The) unsec. sub. FRB 3.625%, 9/15/31 (Canada)	78,000	75,182
Truist Financial Corp. jr. unsec. sub. FRB Ser. N, 4.80%, 9/1/24	75,000	67,118
UBSAG unsec. sub. notes 5.125%, 5/15/24 (Switzerland)	360,000	359,302
US Bancorp unsec. sub. FRB 2.491%, 11/3/36	225,000	183,345
VICI Properties LP sr. unsec. unsub. notes 4.75%, 2/15/28 R	95,000	90,675
VICI Properties LP/VICI Note Co., Inc. 144A company guaranty sr. unsec. notes 3.75%, 2/15/27 R	35,000	30,785
Wells Fargo & Co. jr. unsec. sub. FRB Ser. U, 5.875%, perpetual maturity	65,000	63,375
Wells Fargo & Co. jr. unsec. sub. FRN 3.90%, perpetual maturity	80,000	68,900
Westpac Banking Corp. unsec. sub. bonds 4.421%, 7/24/39 (Australia)	85,000	76,081
Westpac Banking Corp. unsec. sub. bonds 2.963%, 11/16/40 (Australia)	79,000	57,154
		11,153,210
Health care (1.1%)		
Amgen, Inc. sr. unsec. bonds 4.663%, 6/15/51	83,000	77,622
Amgen, Inc. sr. unsec. unsub. notes 2.60%, 8/19/26	33,000	31,210
Becton Dickinson and Co. sr. unsec. notes 2.823%, 5/20/30	110,000	96,755
Bristol-Myers Squibb Co. sr. unsec. notes 2.75%, 2/15/23	400,000	400,502
Bristol-Myers Squibb Co. sr. unsec. sub. notes 3.40%, 7/26/29	92,000	88,806
Cigna Corp. company guaranty sr. unsec. unsub. notes 3.75%, 7/15/23	118,000	118,256
CVS Health Corp. sr. unsec. unsub. notes 4.78%, 3/25/38	213,000	201,616
CVS Pass-Through Trust 144A sr. mtge. notes 4.704%, 1/10/36	10,982	10,527
DH Europe Finance II SARL company guaranty sr. unsec. bonds 3.40%, 11/15/49 (Luxembourg)	185,000	148,200

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Health care cont.		
DH Europe Finance II SARL company guaranty sr. unsec. notes 2.60%, 11/15/29 (Luxembourg)	\$80,000	\$71,735
HCA, Inc. company guaranty sr. bonds 5.25%, 6/15/26	67,000	66,660
HCA, Inc. company guaranty sr. bonds 3.50%, 7/15/51	43,000	29,366
HCA, Inc. company guaranty sr. notes 4.125%, 6/15/29	65,000	59,266
HCA, Inc. company guaranty sr. sub. bonds 5.50%, 6/15/47	35,000	31,221
HCA, Inc. company guaranty sr. unsec. unsub. notes 5.375%, 2/1/25	10,000	9,948
Service Corp. International sr. unsec. notes 4.625%, 12/15/27	30,000	28,200
Service Corp. International sr. unsec. notes 3.375%, 8/15/30	20,000	16,375
Service Corp. International sr. unsec. sub. notes 4.00%, 5/15/31	165,000	140,869
UnitedHealth Group, Inc. sr. unsec. unsub. notes 2.00%, 5/15/30	211,000	180,809
Viatis, Inc. company guaranty sr. unsec. notes 2.30%, 6/22/27	75,000	64,788
Zoetis, Inc. sr. unsec. notes 3.90%, 8/20/28	150,000	145,210
Zoetis, Inc. sr. unsec. sub. notes 3.00%, 9/12/27	90,000	84,827
		2,102,768
Technology (1.1%)		
Alphabet, Inc. sr. unsec. bonds 2.25%, 8/15/60	160,000	103,954
Alphabet, Inc. sr. unsec. notes 1.998%, 8/15/26	84,000	79,537
Apple, Inc. sr. unsec. bonds 2.80%, 2/8/61	430,000	308,653
Apple, Inc. sr. unsec. unsub. notes 4.375%, 5/13/45	150,000	148,361
Broadcom, Inc. company guaranty sr. unsec. bonds 4.15%, 11/15/30	152,000	139,264
Broadcom, Inc. 144A sr. unsec. bonds 4.926%, 5/15/37	205,000	183,791
Broadcom, Inc. 144A sr. unsec. bonds 3.187%, 11/15/36	72,000	54,733
Dell International, LLC/EMC Corp. company guaranty sr. bonds 8.35%, 7/15/46	7,000	8,717
Microchip Technology, Inc. company guaranty sr. notes 4.333%, 6/1/23	83,000	83,044
Microsoft Corp. sr. unsec. unsub. bonds 2.921%, 3/17/52	371,000	292,650
Microsoft Corp. sr. unsec. unsub. bonds 2.40%, 8/8/26	66,000	63,431
Oracle Corp. sr. unsec. bonds 3.95%, 3/25/51	50,000	36,725
Oracle Corp. sr. unsec. bonds 3.65%, 3/25/41	225,000	167,675
salesforce.com, Inc. sr. unsec. bonds 3.05%, 7/15/61	185,000	135,267
salesforce.com, Inc. sr. unsec. bonds 2.90%, 7/15/51	185,000	139,898
Sensata Technologies, Inc. 144A company guaranty sr. unsec. notes 3.75%, 2/15/31	170,000	136,248
ServiceNow, Inc. sr. unsec. notes 1.40%, 9/1/30	200,000	156,505
Workday, Inc. sr. unsec. notes 3.70%, 4/1/29	70,000	65,501
		2,303,954
Transportation (0.2%)		
Penske Truck Leasing Co. LP/PTL Finance Corp. 144A sr. unsec. bonds 3.40%, 11/15/26	86,000	81,578
Penske Truck Leasing Co. LP/PTL Finance Corp. 144A sr. unsec. notes 4.40%, 7/1/27	260,000	254,869
		336,447

CORPORATE BONDS AND NOTES (15.0%)* cont.	Principal amount	Value
Utilities and power (1.0%)		
AES Corp. (The) sr. unsec. unsub. notes 2.45%, 1/15/31	\$135,000	\$108,576
American Electric Power Co., Inc. sr. unsec. unsub. notes Ser. J, 4.30%, 12/1/28	66,000	64,290
American Transmission Systems, Inc. 144A sr. unsec. bonds 2.65%, 1/15/32	50,000	42,347
Appalachian Power Co. sr. unsec. unsub. notes Ser. L, 5.80%, 10/1/35	60,000	61,630
Boardwalk Pipelines LP company guaranty sr. unsec. notes 3.60%, 9/1/32	33,000	27,920
Commonwealth Edison Co. sr. mtge. bonds 5.875%, 2/1/33	15,000	16,408
Consolidated Edison Co. of New York, Inc. sr. unsec. notes 4.20%, 3/15/42	40,000	35,236
Duke Energy Ohio, Inc. sr. bonds 3.65%, 2/1/29	130,000	124,132
El Paso Natural Gas Co., LLC company guaranty sr. unsec. unsub. notes 8.375%, 6/15/32	75,000	87,528
Enbridge, Inc. sr. unsec. unsub. bonds 4.25%, 12/1/26 (Canada)	42,000	41,462
Energy Transfer LP jr. unsec. sub. FRN 6.625%, perpetual maturity	257,000	189,253
Energy Transfer LP sr. unsec. unsub. notes 7.60%, 2/1/24	30,000	31,246
Energy Transfer LP sr. unsec. unsub. notes 6.50%, 2/1/42	20,000	19,933
Enterprise Products Operating, LLC company guaranty sr. unsec. notes 2.80%, 1/31/30	230,000	201,359
Enterprise Products Operating, LLC company guaranty sr. unsec. unsub. bonds 4.25%, 2/15/48	65,000	54,667
IPALCO Enterprises, Inc. sr. notes 4.25%, 5/1/30	116,000	107,700
IPALCO Enterprises, Inc. sr. sub. notes 3.70%, 9/1/24	35,000	34,607
Kinder Morgan Energy Partners LP company guaranty sr. unsec. notes 5.40%, 9/1/44	16,000	14,544
NRG Energy, Inc. 144A company guaranty sr. notes 3.75%, 6/15/24	80,000	78,530
NRG Energy, Inc. 144A company guaranty sr. unsec. bonds 3.875%, 2/15/32	120,000	95,314
Oncor Electric Delivery Co., LLC sr. notes 5.75%, 3/15/29	55,000	59,411
Pacific Gas and Electric Co. notes 2.10%, 8/1/27	30,000	25,148
Pacific Gas and Electric Co. sr. bonds 5.90%, 6/15/32	68,000	65,735
Pacific Gas and Electric Co. sr. bonds 4.95%, 7/1/50	70,000	55,854
PacifiCorp sr. bonds 2.70%, 9/15/30	86,000	76,228
Sunoco Logistics Partners Operations LP company guaranty sr. unsec. unsub. notes 5.95%, 12/1/25	25,000	25,875
Vistra Operations Co., LLC 144A company guaranty sr. notes 4.30%, 7/15/29	58,000	52,526
Vistra Operations Co., LLC 144A company guaranty sr. notes 3.55%, 7/15/24	67,000	64,669
WEC Energy Group, Inc. jr. unsec. sub. FRN Ser. A, (ICE LIBOR USD 3 Month + 2.11%), 3.524%, 5/15/67	300,000	231,579
	2,093,707	2,093,707
Total corporate bonds and notes (cost \$35,036,792)		\$30,591,827

MORTGAGE-BACKED SECURITIES (0.9%)*	Principal amount	Value
BANK Ser. 19-BN19, Class AS, 3.446%, 8/15/61	\$81,000	\$74,525
Citigroup Commercial Mortgage Trust Ser. 14-GC21, Class C, 4.78%, 5/10/47 W	124,000	120,176
Ser. 14-GC21, Class AS, 4.026%, 5/10/47	107,000	105,826
Ser. 18-B2, Class A4, 4.009%, 3/10/51	251,000	247,057
COMM Mortgage Trust FRB Ser. 14-UBS6, Class C, 4.588%, 12/10/47 W	20,000	19,199
CSAIL Commercial Mortgage Trust Ser. 19-C17, Class AS, 3.278%, 9/15/52	215,000	194,679
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, 4.843%, 6/10/47 W	127,000	123,044
LSTAR Commercial Mortgage Trust 144A FRB Ser. 15-3, Class AS, 3.296%, 4/20/48 W	26,330	26,067
Morgan Stanley Bank of America Merrill Lynch Trust Ser. 16-C28, Class A4, 3.544%, 1/15/49	340,000	331,673
Morgan Stanley Capital I Trust Ser. 18-L1, Class A4, 4.407%, 10/15/51 W	408,000	407,876
Morgan Stanley Capital I Trust 144A FRB Ser. 12-C4, Class D, 5.336%, 3/15/45 W	69,789	66,516
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, 5.415%, 3/15/44 W	63,290	28,658
Total mortgage-backed securities (cost \$2,061,428)		\$1,745,299

UNITS (0.1%)*	Units	Value
GoGreen Investments Corp. †	17,958	\$181,196
Total units (cost \$179,580)		\$181,196

MUNICIPAL BONDS AND NOTES (0.1%)*	Principal amount	Value
CA State G.O. Bonds, (Build America Bonds), 7.50%, 4/1/34	\$30,000	\$38,569
North TX, Tollway Auth. Rev. Bonds, (Build America Bonds), 6.718%, 1/1/49	55,000	74,292
OH State U. Rev. Bonds, (Build America Bonds), 4.91%, 6/1/40	40,000	43,551
Total municipal bonds and notes (cost \$125,150)		\$156,412

SHORT-TERM INVESTMENTS (4.4%)*	Shares	Value
Putnam Short Term Investment Fund Class P 1.36% L	5,713,779	\$5,713,779
Putnam Cash Collateral Pool, LLC 1.61% d	3,192,939	3,192,939
Total short-term investments (cost \$8,906,718)		\$8,906,718

Total investments (cost \$206,797,773) \$211,715,880

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
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 June 30, 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 \$203,546,096.

† 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 \$72,237 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.

i This security was pledged, or purchased with cash that was pledged, to the fund for collateral on certain derivative contracts (Note 1).

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.

At the close of the reporting period, the fund maintained liquid assets totaling \$2,912,040 to cover certain derivative contracts and delayed delivery securities.

Unless otherwise noted, the rates quoted in Short-term investments security descriptions represent the weighted average yield to maturity.

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 6/30/22 (aggregate face value \$7,662,875) (Unaudited)

Counterparty	Currency	Contract type*	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
Bank of America N.A.						
	Danish Krone	Sell	9/21/22	\$355,402	\$363,277	\$7,875
Barclays Bank PLC						
	British Pound	Sell	9/21/22	1,629,842	1,680,991	51,149
	Canadian Dollar	Sell	7/20/22	429,077	442,284	13,207
	Euro	Sell	9/21/22	296,007	303,422	7,415
Citibank, N.A.						
	Canadian Dollar	Sell	7/20/22	526,732	542,956	16,224
	Euro	Sell	9/21/22	433,631	444,823	11,192
Goldman Sachs International						
	British Pound	Sell	9/21/22	553,481	570,837	17,356
	Euro	Sell	9/21/22	465,456	476,921	11,465
JPMorgan Chase Bank N.A.						
	Canadian Dollar	Sell	7/20/22	455,646	480,465	24,819
	Singapore Dollar	Sell	8/17/22	282,620	283,526	906
State Street Bank and Trust Co.						
	British Pound	Buy	9/21/22	337,209	337,440	(231)
	Canadian Dollar	Sell	7/20/22	444,148	451,753	7,605
	Hong Kong Dollar	Sell	8/17/22	323,435	323,568	133
UBSAG						
	Canadian Dollar	Sell	7/20/22	376,248	387,378	11,130
WestPac Banking Corp.						
	Canadian Dollar	Sell	7/20/22	556,176	573,234	17,058
Unrealized appreciation						197,534
Unrealized (depreciation)						(231)
Total						\$197,303

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

FUTURES CONTRACTS OUTSTANDING at 6/30/22 (Unaudited)	Number of contracts	Notional amount	Value	Expiration date	Unrealized appreciation/ (depreciation)
S&P 500 Index E-Mini (Long)	4	\$757,076	\$757,900	Sep-22	\$(22,201)
Unrealized appreciation					—
Unrealized (depreciation)					(22,201)
Total					\$(22,201)

WRITTEN OPTIONS OUTSTANDING at 6/30/22 (premiums \$751) (Unaudited)	Expiration date/strike price	Notional Amount	Contract amount	Value
Counterparty				
Morgan Stanley & Co. International PLC				
Charles Schwab Corp. (The) (Put)	Jul-22/\$61.00	\$24,324	\$385	\$874
Total				\$874

TBA SALE COMMITMENTS OUTSTANDING at 6/30/22 (proceeds receivable \$3,866,211) (Unaudited)	Principal amount	Settlement date	Value
Uniform Mortgage-Backed Securities, 5.00%, 7/1/52	\$1,000,000	7/14/22	\$1,020,156
Uniform Mortgage-Backed Securities, 4.50%, 7/1/52	2,000,000	7/14/22	2,007,344
Uniform Mortgage-Backed Securities, 2.00%, 8/1/52	1,000,000	8/11/22	866,703
Total			\$3,894,203

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	\$3,908,906	\$—	\$—
Capital goods	7,496,744	—	—
Communication services	2,500,609	—	—
Conglomerates	244,047	—	—
Consumer cyclicals	20,243,662	—	—
Consumer staples	8,008,159	—	—
Energy	5,989,456	—	—
Financials	14,021,310	—	—
Health care	18,397,658	—	—
Technology	33,254,426	—	—
Transportation	2,811,504	—	—
Utilities and power	4,028,928	—	—
Total common stocks	120,905,409	—	—
Corporate bonds and notes	—	30,591,827	—
Mortgage-backed securities	—	1,745,299	—
Municipal bonds and notes	—	156,412	—
U.S. government and agency mortgage obligations	—	17,719,322	—
U.S. treasury obligations	—	31,509,697	—
Units	181,196	—	—
Short-term investments	—	8,906,718	—
Totals by level	\$121,086,605	\$90,629,275	\$—

Other financial instruments:	Valuation inputs		
	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$197,303	\$—
Futures contracts	(22,201)	—	—
Written options outstanding	—	(874)	—
TBA sale commitments	—	(3,894,203)	—
Totals by level	\$(22,201)	\$(3,697,774)	\$—

* 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

6/30/22 (Unaudited)

Assets

Investment in securities, at value, including \$3,062,022 of securities on loan (Notes 1 and 8):	
Unaffiliated issuers (identified cost \$197,891,055)	\$202,809,162
Affiliated issuers (identified cost \$8,906,718) (Note 5)	8,906,718
Foreign currency (cost \$6,726) (Note 1)	6,735
Dividends, interest and other receivables	640,721
Receivable for shares of the fund sold	12,166
Receivable for investments sold	37,807
Receivable for sales of TBA securities (Note 1)	5,618,423
Unrealized appreciation on forward currency contracts (Note 1)	197,534
Total assets	218,229,266

Liabilities

Payable to custodian	877
Payable for investments purchased	72,881
Payable for purchases of TBA securities (Note 1)	6,778,280
Payable for shares of the fund repurchased	292,072
Payable for compensation of Manager (Note 2)	88,967
Payable for custodian fees (Note 2)	14,535
Payable for investor servicing fees (Note 2)	24,694
Payable for Trustee compensation and expenses (Note 2)	70,940
Payable for administrative services (Note 2)	782
Payable for distribution fees (Note 2)	29,842
Payable for variation margin on futures contracts (Note 1)	6,385
Unrealized depreciation on forward currency contracts (Note 1)	231
Written options outstanding, at value (premiums \$751) (Note 1)	874
TBA sale commitments, at value (proceeds receivable \$3,866,211) (Note 1)	3,894,203
Collateral on securities loaned, at value (Note 1)	3,192,939
Collateral on certain derivative contracts and TBA commitments, at value (Notes 1 and 8)	135,302
Other accrued expenses	79,366
Total liabilities	14,683,170
Net assets	\$203,546,096

Represented by

Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$195,051,593
Total distributable earnings (Note 1)	8,494,503
Total — Representing net assets applicable to capital shares outstanding	\$203,546,096

Computation of net asset value Class IA

Net assets	\$61,549,723
Number of shares outstanding	5,343,504
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$11.52

Computation of net asset value Class IB

Net assets	\$141,996,373
Number of shares outstanding	12,390,145
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$11.46

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

Statement of operations

Six months ended 6/30/22 (Unaudited)

Investment income

Dividends (net of foreign tax of \$12,711)	\$1,053,417
Interest (including interest income of \$15,246 from investments in affiliated issuers) (Note 5)	1,009,184
Securities lending (net of expenses) (Notes 1 and 5)	2,065
Total investment income	2,064,666

Expenses

Compensation of Manager (Note 2)	581,690
Investor servicing fees (Note 2)	79,659
Custodian fees (Note 2)	17,224
Trustee compensation and expenses (Note 2)	4,899
Distribution fees (Note 2)	196,997
Administrative services (Note 2)	2,327
Other	85,874
Total expenses	968,670

Expense reduction (Note 2) (19)

Net expenses **968,651**

Net investment income **1,096,015**

Realized and unrealized gain (loss)

Net realized gain (loss) on:

Securities from unaffiliated issuers (Notes 1 and 3)	3,622,855
Foreign currency transactions (Note 1)	(459)
Forward currency contracts (Note 1)	244,947
Futures contracts (Note 1)	(590,820)
Written options (Note 1)	1,435

Total net realized gain **3,277,958**

Change in net unrealized appreciation (depreciation) on:

Securities from unaffiliated issuers and TBA sale commitments	(45,839,095)
Assets and liabilities in foreign currencies	(188)
Forward currency contracts	212,160
Futures contracts	(54,455)
Written options	(123)

Total change in net unrealized depreciation **(45,681,701)**

Net loss on investments **(42,403,743)**

Net decrease in net assets resulting from operations **\$(41,307,728)**

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

Statement of changes in net assets

	Six months ended 6/30/22*	Year ended 12/31/21
Increase (decrease) in net assets		
Operations:		
Net investment income	\$1,096,015	\$1,777,055
Net realized gain on investments and foreign currency transactions	3,277,958	16,994,512
Change in net unrealized appreciation (depreciation) of investments and assets and liabilities in foreign currencies	(45,681,701)	12,713,211
Net increase (decrease) in net assets resulting from operations	(41,307,728)	31,484,778
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(753,423)	(748,675)
Class IB	(1,356,086)	(1,369,975)
Net realized short-term gain on investments		
Class IA	(1,526,804)	(1,395,258)
Class IB	(3,577,260)	(3,170,830)
From net realized long-term gain on investments		
Class IA	(3,552,566)	(2,741,902)
Class IB	(8,323,560)	(6,231,178)
Increase from capital share transactions (Note 4)	11,478,357	11,788,547
Total increase (decrease) in net assets	(48,919,070)	27,615,507
Net assets:		
Beginning of period	252,465,166	224,849,659
End of period	\$203,546,096	\$252,465,166

* Unaudited.

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													
6/30/22†	\$15.02	.07	(2.40)	(2.33)	(.15)	(1.02)	(1.17)	\$11.52	(16.47)*	\$61,550	.34* ^f	.57*	51*
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
12/31/17	10.44	.15	1.43	1.58	(.20)	—	(.20)	11.82	15.29	65,849	.72	1.39	191
Class IB													
6/30/22†	\$14.93	.06	(2.39)	(2.33)	(.12)	(1.02)	(1.14)	\$11.46	(16.58)*	\$141,996	.46* ^f	.44*	51*
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
12/31/17	10.40	.13	1.42	1.55	(.17)	—	(.17)	11.78	15.08	77,464	.97	1.14	191

* Not annualized.

† Unaudited.

^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 6/30/22 (Unaudited)

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 June 30, 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, and including amortization and accretion of premiums and discounts on debt securities, 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.

Securities purchased or sold on a delayed delivery basis may be settled at a future date beyond customary settlement time; interest income is accrued based on the terms of the securities. Losses may arise due to changes in the fair value of the underlying securities or if the counterparty does not perform under the contract.

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 against changes in values of securities it owns, owned or expects to own.

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

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

Options on swaps are similar to options on securities except that the premium paid or received is to buy or grant the right to enter into a previously agreed upon interest rate or credit default contract. Forward premium swap 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 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 to hedge foreign exchange risk.

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 \$874 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 \$3,192,939 and the value of securities loaned amounted to \$3,062,022.

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 \$317.5 million 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.

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 aggregate identified cost on a tax basis is \$203,505,138, resulting in gross unrealized appreciation and depreciation of \$24,968,411 and \$20,477,644, respectively, or net unrealized appreciation of \$4,490,767.

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. Dividend sources are estimated at the time of declaration. Actual results may vary. Any non-taxable return of capital cannot be determined until final tax calculations are completed after the end of the fund's fiscal year. 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.

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 40.7% 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 0.256% 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	\$24,027
Class IB	55,632
Total	\$79,659

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 \$19 under the expense offset arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$174, 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

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			
	Six months ended 6/30/22		Year ended 12/31/21		Six months ended 6/30/22		Year ended 12/31/21	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	133,879	\$1,743,563	510,078	\$7,217,230	603,514	\$8,175,454	1,271,742	\$18,249,402
Shares issued in connection with reinvestment of distributions	444,572	5,832,793	365,160	4,885,835	1,015,078	13,256,906	808,101	10,771,983
	578,451	7,576,356	875,238	12,103,065	1,618,592	21,432,360	2,079,843	29,021,385
Shares repurchased	(377,521)	(5,022,414)	(662,136)	(9,547,111)	(965,747)	(12,507,945)	(1,385,141)	(19,788,792)
Net increase	200,930	\$2,553,942	213,102	\$2,555,954	652,845	\$8,924,415	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 6/30/22
Short-term investments					
Putnam Cash Collateral Pool, LLC*	\$240,810	\$14,957,021	\$12,004,892	\$2,418	\$3,192,939
Putnam Short Term Investment Fund**	8,194,304	17,693,255	20,173,780	15,246	5,713,779
Total Short-term investments	\$8,435,114	\$32,650,276	\$32,178,672	\$17,664	\$8,906,718

*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.

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)	\$105,651,569	\$106,409,803
U.S. government securities (Long-term)	7,454,894	8,667,516
Total	\$113,106,463	\$115,077,319

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 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.

Beginning in January 2020, global financial markets have experienced, and may continue to experience, significant volatility resulting from the spread of a virus known as Covid-19. The outbreak of Covid-19 has resulted in travel and border restrictions, quarantines, supply chain disruptions, lower consumer demand, and general market uncertainty. The effects of Covid-19 have adversely affected, and may continue to adversely affect, the global economy, the economies of certain nations, and individual issuers, all of which may negatively impact the fund's performance.

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)	\$200
Futures contracts (number of contracts)	9
Forward currency contracts (contract amount)	\$9,500,000

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	\$197,534	Payables	\$231
Equity contracts	Receivables, Net assets — Unrealized appreciation	—	Payables, Net assets — Unrealized depreciation	23,075
Total		\$197,534		\$23,306

*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	\$—	\$—	\$244,947	\$244,947
Equity contracts	1,435	(590,820)	—	(589,385)
Total	\$1,435	\$(590,820)	\$244,947	\$(344,438)

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	Options	Futures	Forward currency contracts	Total
Foreign exchange contracts	\$—	\$—	\$212,160	\$212,160
Equity contracts	(123)	(54,455)	—	(54,578)
Total	\$(123)	\$(54,455)	\$212,160	\$157,582

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	JPMorgan Chase Bank N.A.	Morgan Stanley & Co. International PLC	State Street Bank and Trust Co.	UBSAG	WestPac Banking Corp.	Total
Assets:											
Futures contracts [§]	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
Forward currency contracts [#]	7,875	71,771	—	27,416	28,821	25,725	—	7,738	11,130	17,058	197,534
Purchased options ^{**#}	—	—	—	—	—	—	—	—	—	—	—
Total Assets	\$7,875	\$71,771	\$—	\$27,416	\$28,821	\$25,725	\$—	\$7,738	\$11,130	\$17,058	\$197,534
Liabilities:											
Futures contracts [§]	—	—	6,385	—	—	—	—	—	—	—	6,385
Forward currency contracts [#]	—	—	—	—	—	—	—	231	—	—	231
Written options [#]	—	—	—	—	—	—	874	—	—	—	874
Total Liabilities	\$—	\$—	\$6,385	\$—	\$—	\$—	\$874	\$231	\$—	\$—	\$7,490
Total Financial and Derivative Net Assets	\$7,875	\$71,771	\$(6,385)	\$27,416	\$28,821	\$25,725	\$(874)	\$7,507	\$11,130	\$17,058	\$190,044
Total collateral received (pledged) ^{†##}	\$—	\$71,771	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	
Net amount	\$7,875	\$—	\$(6,385)	\$27,416	\$28,821	\$25,725	\$(874)	\$7,507	\$11,130	\$17,058	
<i>Controlled collateral received (including TBA commitments)**</i>	\$—	\$135,302	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$135,302
<i>Uncontrolled collateral received</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
<i>Collateral (pledged) (including TBA commitments)**</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—

* Excludes premiums, if any. Included in unrealized appreciation and depreciation on OTC swap contracts on the Statement of assets and liabilities.

** 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, which is not included in the table above, amounted to \$72,237.

Shareholder meeting results (Unaudited)

June 29, 2022 special meeting

At the meeting, each of the nominees for Trustees was elected, with all funds of the Trust voting together as a single class, as follows:

	Votes for	Votes withheld
Liaquat Ahamed	367,407,973	17,233,651
Barbara M. Baumann	368,543,732	16,097,891
Katinka Domotorffy	370,405,107	14,236,517
Catharine Bond Hill	368,981,588	15,660,035
Kenneth R. Leibler	368,097,861	16,543,762
Jennifer W. Murphy	369,061,225	15,580,398
Marie Pillai	369,504,026	15,137,598
George Putnam, III	368,189,409	16,452,215
Robert L. Reynolds	369,089,761	15,551,863
Manoj P. Singh	369,110,059	15,531,565
Mona K. Sutphen	371,262,782	13,378,842

A proposal to change an amendment to the fund's fundamental investment policy regarding the acquisition of voting securities of any issuer, was approved as follows:

Votes for	Votes against	Abstentions/Broker non-votes
15,455,212.00	793,610	1,721,431

All tabulations are rounded to the nearest whole number.

Trustee approval of management contract

General conclusions

The Board of Trustees of The Putnam Funds oversees the management of each fund and, as required by law, determines annually whether to approve the continuance of your fund's management contract with Putnam Investment Management, LLC ("Putnam Management") and the sub-management contract with respect to your fund between Putnam Management and its affiliate, Putnam Investments Limited ("PIL"). The Board, with the assistance of its Contract Committee, requests and evaluates all information it deems reasonably necessary under the circumstances in connection with its annual contract review. The Contract Committee consists solely of Trustees who are not "interested persons" (as this term is defined in the Investment Company Act of 1940, as amended (the "1940 Act")) of The Putnam Funds ("Independent Trustees").

At the outset of the review process, members of the Board's independent staff and independent legal counsel considered any possible changes to the annual contract review materials furnished to the Contract Committee during the course of the previous year's review and, as applicable, identified those changes to Putnam Management. Following these discussions and in consultation with the Contract Committee, the Independent Trustees' independent legal counsel requested that Putnam Management and its affiliates furnish specified information, together with any additional information that Putnam Management considered relevant, to the Contract Committee. Over the course of several months ending in June 2022, the Contract Committee met on a number of occasions with representatives of Putnam Management, and separately in executive session, to consider the information that Putnam Management provided. Throughout this process, the Contract Committee was assisted by the members of the Board's independent staff and by independent legal counsel for The Putnam Funds and the Independent Trustees.

In May 2022, the Contract Committee met in executive session to discuss and consider its recommendations with respect to the continuance of the contracts. At the Trustees' June 2022 meeting, the Contract Committee met in executive session with the other Independent Trustees to review a summary of the key financial, performance and other data that the Contract Committee considered in the course of its review. The Contract Committee then presented its written report, which summarized the key factors that the Committee had considered and set forth its recommendations. The Contract Committee recommended, and the Independent Trustees approved, the continuance of your fund's management contract and the approval of your fund's amended and restated sub-management contract, effective July 1, 2022. (Because PIL is an affiliate of Putnam Management and Putnam Management remains fully responsible for all services provided by PIL, the Trustees have not attempted to evaluate PIL as a separate entity, and all subsequent references to Putnam Management below should be deemed to include reference to PIL as necessary or appropriate in the context.)

The Independent Trustees' approval was based on the following conclusions:

- That the fee schedule in effect for your fund represented reasonable compensation in light of the nature and quality of the services being provided to the fund, the fees paid by competitive funds, the costs incurred by Putnam Management in providing services to the fund and the application of certain reductions and waivers noted below; and

- That the fee schedule in effect for your fund represented an appropriate sharing between fund shareholders and Putnam Management of any economies of scale as may exist in the management of the fund at current asset levels.

These conclusions were based on a comprehensive consideration of all information provided to the Trustees and were not the result of any single factor. Some of the factors that figured particularly in the Trustees' deliberations and how the Trustees considered these factors are described below, although individual Trustees may have evaluated the information presented differently, giving different weights to various factors. It is also important to recognize that the management arrangements for your fund and the other Putnam funds are the result of many years of review and discussion between the Independent Trustees and Putnam Management, that some aspects of the arrangements may receive greater scrutiny in some years than others and that the Trustees' conclusions may be based, in part, on their consideration of fee arrangements in previous years. For example, with certain exceptions primarily involving newer or repositioned funds, the current fee arrangements under the vast majority of the funds' management contracts were first implemented at the beginning of 2010 following extensive review by the Contract Committee and discussions with representatives of Putnam Management, as well as approval by shareholders.

Management fee schedules and total expenses

The Trustees reviewed the management fee schedules in effect for all Putnam funds, including fee levels and breakpoints. Under its management contract, your fund has the benefit of breakpoints in its management fee schedule that provide shareholders with reduced fee levels as assets under management in the Putnam family of funds increase. The Trustees also reviewed the total expenses of each Putnam fund, recognizing that in most cases management fees represented the major, but not the sole, determinant of total costs to fund shareholders. (Two funds have implemented so-called "all-in" management fees covering substantially all routine fund operating costs.) The Trustees considered that the proposed amended and restated sub-management contract would lower the sub-management fees paid by Putnam Management to PIL.

In reviewing fees and expenses, the Trustees generally focus their attention on material changes in circumstances — for example, changes in assets under management, changes in a fund's investment strategy, changes in Putnam Management's operating costs or profitability, or changes in competitive practices in the mutual fund industry — that suggest that consideration of fee changes might be warranted. The Trustees concluded that the circumstances did not indicate that changes to the management fee schedule for your fund would be appropriate at this time.

As in the past, the Trustees also focused on the competitiveness of each fund's total expense ratio. The Trustees and Putnam Management and the funds' investor servicing agent, Putnam Investor Services, Inc. ("PSERV"), have implemented expense limitations that were in effect during your fund's fiscal year ending in 2021. These expense limitations were: (i) a contractual expense limitation applicable to specified open-end funds, including your fund, of 25 basis points on investor servicing fees and expenses and (ii) a contractual expense limitation applicable to specified open-end funds, including your fund, of 20 basis points on so-called "other expenses" (i.e., all expenses exclusive of management fees,

distribution fees, investor servicing fees, investment-related expenses, interest, taxes, brokerage commissions, acquired fund fees and expenses and extraordinary expenses). These expense limitations attempt to maintain competitive expense levels for the funds. Most funds, including your fund, had sufficiently low expenses that these expense limitations were not operative during their fiscal years ending in 2021. Putnam Management and PSERV have agreed to maintain these expense limitations until at least April 30, 2024. Putnam Management and PSERV's commitment to these expense limitation arrangements, which were intended to support an effort to have fund expenses meet competitive standards, was an important factor in the Trustees' decision to approve the continuance of your fund's management contract and to approve your fund's amended and restated sub-management contract.

The Trustees reviewed comparative fee and expense information for a custom group of competitive funds selected by Broadridge Financial Solutions, Inc. ("Broadridge"). This comparative information included your fund's percentile ranking for effective management fees and total expenses (excluding any applicable 12b-1 fees), which provides a general indication of your fund's relative standing. In the custom peer group, your fund ranked in the second quintile in effective management fees (determined for your fund and the other funds in the custom peer group based on fund asset size and the applicable contractual management fee schedule) and in the second quintile in total expenses (excluding any applicable 12b-1 fees) as of December 31, 2021. The first quintile represents the least expensive funds and the fifth quintile the most expensive funds. The fee and expense data reported by Broadridge as of December 31, 2021 reflected the most recent fiscal year-end data available in Broadridge's database at that time.

In connection with their review of fund management fees and total expenses, the Trustees also reviewed the costs of the services provided and the profits realized by Putnam Management and its affiliates from their contractual relationships with the funds. This information included trends in revenues, expenses and profitability of Putnam Management and its affiliates relating to the investment management, investor servicing and distribution services provided to the funds. In this regard, the Trustees also reviewed an analysis of the revenues, expenses and profitability of Putnam Management and its affiliates, allocated on a fund-by-fund basis, with respect to the funds' management, distribution and investor servicing contracts. For each fund, the analysis presented information about revenues, expenses and profitability for each of the agreements separately and for the agreements taken together on a combined basis. The Trustees concluded that, at current asset levels, the fee schedules in place for the Putnam funds, including the fee schedule for your fund, represented reasonable compensation for the services being provided and represented an appropriate sharing between fund shareholders and Putnam Management of any economies of scale as may exist in the management of the Putnam funds at that time.

The information examined by the Trustees in connection with their annual contract review for the Putnam funds included information regarding services provided and fees charged by Putnam Management and its affiliates to other clients, including collective investment trusts offered in the defined contribution and defined benefit retirement plan markets, sub-advised mutual funds, private funds sponsored by affiliates of Putnam Management, model-only separately managed accounts and Putnam Management's exchange-traded funds. This information included, in cases where a product's investment strategy corresponds with a fund's strategy, comparisons of those fees with fees charged to the Putnam funds, as well as an assessment of the differences in the services

provided to these clients as compared to the services provided to the Putnam funds. The Trustees observed that the differences in fee rates between these clients and the Putnam funds are by no means uniform when examined by individual asset sectors, suggesting that differences in the pricing of investment management services to these types of clients may reflect, among other things, historical competitive forces operating in separate marketplaces. The Trustees considered the fact that in many cases fee rates across different asset classes are higher on average for mutual funds than for other clients, and the Trustees also considered the differences between the services that Putnam Management provides to the Putnam funds and those that it provides to its other clients. The Trustees did not rely on these comparisons to any significant extent in concluding that the management fees paid by your fund are reasonable.

Investment performance

The quality of the investment process provided by Putnam Management represented a major factor in the Trustees' evaluation of the quality of services provided by Putnam Management under your fund's management contract. The Trustees were assisted in their review of Putnam Management's investment process and performance by the work of the investment oversight committees of the Trustees and the full Board of Trustees, which meet on a regular basis with individual portfolio managers and with senior management of Putnam Management's Investment Division throughout the year. The Trustees concluded that Putnam Management generally provides a high-quality investment process — based on the experience and skills of the individuals assigned to the management of fund portfolios, the resources made available to them and in general Putnam Management's ability to attract and retain high-quality personnel — but also recognized that this does not guarantee favorable investment results for every fund in every time period.

The Trustees considered that, in the aggregate, the Putnam funds' performance was generally solid in 2021 against a backdrop of strong U.S. economic and financial market growth. The Trustees considered Putnam Management's observation that, despite an environment of generally strong growth, there had been various headwinds experienced in 2021. For the one-year period ended December 31, 2021, the Trustees noted that the Putnam funds, on an asset-weighted basis, ranked in the 52nd percentile of their peers as determined by Lipper Inc. ("Lipper") and, on an asset-weighted-basis, delivered a gross return that trailed their benchmarks by 0.1%. Over the longer-term, the Committee noted that, on an asset-weighted basis, the Putnam funds delivered strong aggregate performance relative to their Lipper peers over the three-, five- and ten-year periods ended December 31, 2021, ranking in the 31st, 29th and 21st percentiles, respectively, and that the funds, in the aggregate, outperformed their benchmarks on a gross basis for each of those periods.

In addition to the performance of the individual Putnam funds, the Trustees considered, as they had in prior years, the performance of The Putnam Fund complex versus competitor fund complexes. In particular, the Trustees considered The Putnam Fund complex's performance as reported in the Barron's/Lipper Fund Families survey (the "Survey"), which ranks mutual fund companies based on their performance across a variety of asset types. The Trustees noted that The Putnam Fund complex continued to rank highly in the Survey, especially over the longer-term, with The Putnam Funds ranking as the 6th best performing mutual fund complex out of 45 complexes for the ten-year period and 13th out of 49 complexes for the five-year period. The Trustees noted that 2021 marked the fifth consecutive year that The Putnam Funds have ranked in the top ten fund complexes for the ten-year period. The Trustees also

considered that The Putnam Fund complex's Survey performance over the one-year period was solid, with The Putnam Funds ranking 27th out of 51 complexes. In addition to the Survey, the Trustees also considered the Putnam funds' ratings assigned by Morningstar Inc., noting that 25 of the funds were four- or five-star rated at the end of 2021 (representing a decrease of one fund year-over-year) and that this included nine funds that had achieved a five-star rating (representing an increase of two funds year-over-year). They also noted, however, the disappointing investment performance of some Putnam funds for periods ended December 31, 2021 and considered information provided by Putnam Management regarding the factors contributing to the underperformance and actions being taken to improve the performance of these particular funds. The Trustees indicated their intention to continue to monitor closely the performance of those funds and evaluate whether additional actions to address areas of underperformance may be warranted.

For purposes of the Trustees' evaluation of the Putnam funds' investment performance, the Trustees generally focus on a competitive industry ranking of each fund's total net return over a one-year, three-year and five-year period. For a number of Putnam funds with relatively unique investment mandates for which Putnam Management informed the Trustees that meaningful competitive performance rankings are not considered to be available, the Trustees evaluated performance based on their total gross and net returns and comparisons of those returns to the returns of selected investment benchmarks. In the case of your fund, the Trustees considered that its class IA share cumulative total return performance at net asset value was in the following quartiles of its Lipper peer group (Lipper VP (Underlying Funds) — Balanced Funds) for the one-year, three-year and five-year periods ended December 31, 2021 (the first quartile representing the best-performing funds and the fourth quartile the worst-performing funds):

One-year period	Three-year period	Five-year period
2nd	1st	1st

For the five-year period ended December 31, 2021, your fund's performance was in the top decile of its Lipper peer group. Over the one-year, three-year and five-year periods ended December 31, 2021, there were 161, 155 and 140 funds, respectively, in your fund's Lipper peer group. (When considering performance information, shareholders should be mindful that past performance is not a guarantee of future results.)

The Trustees considered Putnam Management's continued efforts to support fund performance through certain initiatives, including

structuring compensation for portfolio managers to enhance accountability for fund performance, emphasizing accountability in the portfolio management process and affirming its commitment to a fundamental-driven approach to investing. The Trustees noted further that Putnam Management had made selective hires and internal promotions in 2021 to strengthen its investment team.

Brokerage and soft-dollar allocations; investor servicing

The Trustees considered various potential benefits that Putnam Management may receive in connection with the services it provides under the management contract with your fund. These include benefits related to brokerage allocation and the use of soft dollars, whereby a portion of the commissions paid by a fund for brokerage may be used to acquire research services that are expected to be useful to Putnam Management in managing the assets of the fund and of other clients. Subject to policies established by the Trustees, soft dollars generated by these means are used predominantly to acquire brokerage and research services (including third-party research and market data) that enhance Putnam Management's investment capabilities and supplement Putnam Management's internal research efforts. The Trustees indicated their continued intent to monitor regulatory and industry developments in this area with the assistance of their Brokerage Committee. In addition, with the assistance of their Brokerage Committee, the Trustees indicated their continued intent to monitor the allocation of the Putnam funds' brokerage in order to ensure that the principle of seeking best price and execution remains paramount in the portfolio trading process.

Putnam Management may also receive benefits from payments that the funds make to Putnam Management's affiliates for investor or distribution services. In conjunction with the annual review of your fund's management and sub-management contracts, the Trustees reviewed your fund's investor servicing agreement with PSERV and its distributor's contract and distribution plans with Putnam Retail Management Limited Partnership ("PRM"), both of which are affiliates of Putnam Management. The Trustees concluded that the fees payable by the funds to PSERV and PRM, as applicable, for such services are fair and reasonable in relation to the nature and quality of such services, the fees paid by competitive funds and the costs incurred by PSERV and PRM, as applicable, in providing such services. Furthermore, the Trustees were of the view that the investor services provided by PSERV were required for the operation of the funds, and that they were of a quality at least equal to those provided by other providers.

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.

Liquidity risk management program

Putnam, as the administrator of the fund's liquidity risk management program (appointed by the Board of Trustees), presented the most recent annual report on the program to the Trustees in April 2022. The report covered the structure of the program, including the program documents and related policies and procedures adopted to comply with Rule 22e-4 under the Investment Company Act of 1940, and reviewed the operation of the program from January 2021 through December 2021. The report included a description of the annual liquidity assessment of the fund that Putnam performed in November 2021. The report noted that there were no material compliance exceptions identified under Rule 22e-4 during the period. The report included a review of the governance of the program and the methodology for classification of the fund's investments. The report also included a discussion of liquidity monitoring during the period, including during the market liquidity challenges caused by the Covid-19 pandemic, and the impact those challenges had on the liquidity of the fund's investments. Putnam concluded that the program has been operating effectively and adequately to ensure compliance with Rule 22e-4.

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

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.