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# Putnam Variable Trust

**Semiannual report**

**6 | 30 | 17**

Putnam VT

Absolute Return 500 Fund®

# Message from the Trustees

August 15, 2017

Dear Shareholder:

A fair amount of investor optimism has helped to fuel financial markets in 2017, and global stock and bond markets have generally fared well. At the same time, however, a number of macroeconomic and political risks around the world could disrupt the positive momentum.

While calm markets are generally welcome, we believe investors should continue to remember time-tested strategies: maintain a well-diversified portfolio, keep a long-term view, and speak regularly with your financial advisor. In the following pages, you will find a summary of your fund's performance for the reporting period.

We would like to take this opportunity to announce some changes to your fund's Board of Trustees. First, we are pleased to welcome the arrival of Catharine Bond Hill and Manoj P. Singh, who bring extensive professional and directorship experience to their new roles as Putnam Trustees. In addition, we would like to extend our appreciation and best wishes to Robert J. Darretta, John A. Hill, and W. Thomas Stephens, who retired from the Board, effective June 30, 2017. We are grateful for their years of work on behalf of you and your fellow shareholders, and we wish them well in their future endeavors.

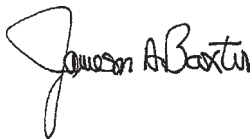
Thank you for investing with Putnam.

Respectfully yours,



**Robert L. Reynolds**

President and Chief Executive Officer  
Putnam Investments



**Jameson A. Baxter**

Chair, Board of Trustees

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*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.*

**Consider these risks before investing:** Allocation of assets among asset classes may hurt performance. The value of stocks and bonds in the fund's portfolio may fall or fail to rise over extended periods of time for a variety of reasons, including general financial market conditions, changing market perceptions (including perceptions about the risk of default and expectations about monetary policy or interest rates), changes in government intervention in the financial markets, and factors related to a specific issuer or industry. These and other factors may also 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 greater for longer-term bonds, and credit risk is greater for below-investment-grade bonds. Unlike bonds, funds that invest in bonds have fees and expenses. Lower-rated bonds may offer higher yields in return for more risk. Funds that invest in government securities are not guaranteed. Mortgage-backed securities are subject to prepayment risk and the risk that they may increase in value less when interest rates decline and decline in value more when interest rates rise. International investing involves currency, economic, and political risks. Emerging-market securities have illiquidity and volatility risks. Our alpha strategy may lose money or not earn a return sufficient to cover associated trading and other costs. Our use of leverage obtained through derivatives increases these risks by increasing investment exposure. 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. The fund's efforts to produce lower-volatility returns may not be successful and may make it more difficult at times for the fund to achieve its targeted return. Under certain market conditions, the fund may accept greater-than-typical volatility to seek its targeted return. The fund may not achieve its goal, and it is not intended to be a complete investment program. You can lose money by investing in the fund. The fund's prospectus lists additional risks. The fund is not intended to outperform stocks and bonds during strong market rallies.

## Performance summary (as of 6/30/17)

### Investment objective

To earn a positive total return that exceeds the return on U.S. Treasury bills by 500 basis points (or 5.00%) on an annualized basis over a reasonable period of time (generally at least three years or more) regardless of market conditions

### Net asset value June 30, 2017

Class IA: \$10.44      Class IB: \$10.31

### Total return at net asset value

(as of 6/30/17)	Class IA shares*	Class IB shares*	BofA Merrill Lynch U.S. Treasury Bill Index	Bloomberg Barclays U.S. Aggregate Bond Index	S&P 500 Index	Fund's target†
6 months	2.86%	2.79%	0.30%	2.27%	9.34%	—
1 year	3.98	3.72	0.46	-0.31	17.90	5.46%
5 years	13.44	11.96	0.98	11.57	97.92	—
Annualized	2.55	2.28	0.20	2.21	14.63	5.20
Life	13.44	11.62	1.09	21.11	102.90	—
Annualized	2.07	1.80	0.18	3.15	12.15	5.18

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

\* Class inception date: May 2, 2011.

† Fund's benchmark plus 5.00%. No information for the target return is provided for periods of less than one year.

The S&P 500 Index is an unmanaged index of common stock performance. The BofA Merrill Lynch U.S. Treasury Bill Index is an unmanaged index that tracks the performance of U.S. dollar-denominated U.S. Treasury bills publicly issued in the U.S. domestic market. Qualifying securities must have a remaining term of at least one month to final maturity and a minimum amount outstanding of \$1 billion. The Bloomberg Barclays U.S. Aggregate Bond Index is an unmanaged index of U.S. investment-grade fixed-income securities.

Merrill Lynch, Pierce, Fenner & Smith Incorporated ("BofAML"), used with permission. BofAML permits use of the BofAML indices and related data on an "as is" basis, makes no warranties regarding same, does not guarantee the suitability, quality, accuracy, timeliness, and/or completeness of the BofAML indices or any data included in, related to, or derived therefrom, assumes no liability in connection with the use of the foregoing, and does not sponsor, endorse, or recommend Putnam Investments, or any of its products or services.

**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

U.S. stocks	20.3%
High-yield corporate bonds	16.9%
Agency pass-through	12.2%
Commodities	7.0%
Commercial MBS	6.1%
Agency CMO	5.3%
International stocks	5.1%
Emerging-market bonds	1.8%
Residential MBS (non-agency)	1.6%
Investment-grade corporate bonds	0.1%
Asset-backed securities (ABS)	0.1%
Emerging-market stocks	-0.7%
U.S. Treasury/agency	-7.6%
Cash and net other assets	50.9%

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, and rounding. Allocations may not total 100% because the table includes the notional value of certain derivatives (the economic value for purposes of calculating periodic payment obligations), in addition to the market value of securities. Holdings and allocations may vary over time.

Negative weights may result from timing differences between trade and settlement dates of securities, such as TBAs, or from the use of derivatives.

## 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. In the most recent six-month period, your fund's expenses were limited; had expenses not been limited, they would have been higher. 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 1/1/17 to 6/30/17. 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
Net expenses for the fiscal year ended 12/31/16*	0.92%	1.17%
Total annual operating expenses for the fiscal year ended 12/31/16	1.43%	1.68%
Annualized expense ratio for the six-month period ended 6/30/17	0.90%	1.15%

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.

Prospectus expense information also includes the impact of acquired fund fees and expenses of 0.02%, which is not included in the financial highlights or annualized expense ratios. Expenses are shown as a percentage of average net assets.

\*Reflects Putnam Management's contractual obligation to limit certain fund expenses through 4/30/18.

### Expenses per \$1,000

	Expenses and value for a \$1,000 investment, assuming actual returns for the 6 months ended 6/30/17		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 6/30/17	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$4.53	\$5.78	\$4.51	\$5.76
Ending value (after expenses)	\$1,028.60	\$1,027.90	\$1,020.33	\$1,019.09

\*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 6/30/17. 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; and then dividing that result by the number of days in the year. 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; and then dividing that result by the number of days in the year.

## Your fund's managers



Portfolio Manager **James A. Fetch** is Co-Head of Global Asset Allocation at Putnam. He has been in the investment industry since he joined Putnam in 1994.

In addition to Jim, your fund is managed by Co-Head of Global Asset Allocation Robert J. Kea, CFA; Chief Investment Officer, Global Asset Allocation, Robert J. Schoen; and Co-Head of Global Asset Allocation Jason R. Vaillancourt, CFA.

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.

## ABOUT DERIVATIVES

Derivatives are an increasingly common type of investment instrument, the performance of which is *derived* from an underlying security, index, currency, or other area of the capital markets. Derivatives employed by the fund's managers generally serve one of two main purposes: to implement a strategy that may be difficult or more expensive to invest in through traditional securities, or to hedge unwanted risk associated with a particular position.

For example, the fund's managers might use currency forward contracts to capitalize on an anticipated change in exchange rates between two currencies. This approach would require a significantly smaller outlay of capital than purchasing traditional bonds denominated in the underlying currencies. In another example, the managers may identify a bond that they believe is undervalued relative to its risk of default, but may seek to reduce the interest-rate risk of that bond by using interest-rate swaps, a derivative through which two parties "swap" payments based on the movement of certain rates. In other examples, the managers may use options and futures contracts to hedge against a variety of risks by establishing a combination of long and short exposures to specific equity markets or sectors.

Like any other investment, derivatives may not appreciate in value and may lose money. Derivatives may amplify traditional investment risks through the creation of leverage and may be less liquid than traditional securities. And because derivatives typically represent contractual agreements between two financial institutions, derivatives entail "counterparty risk," which is the risk that the other party is unable or unwilling to pay. Putnam monitors the counterparty risks we assume. For example, Putnam often enters into collateral agreements that require the counterparties to post collateral on a regular basis to cover their obligations to the fund. Counterparty risk for exchange-traded futures and centrally cleared swaps is mitigated by the daily exchange of margin and other safeguards against default through their respective clearinghouses.

## The fund's portfolio 6/30/17 (Unaudited)

<b>COMMON STOCKS (27.3%)*</b>	<b>Shares</b>	<b>Value</b>
<b>Basic materials (1.3%)</b>		
Adecoagro SA (Argentina) †	1,189	\$11,878
Anhui Conch Cement Co., Ltd. (China)	10,000	34,774
China Lesso Group Holdings, Ltd. (China)	36,000	27,666
China Railway Construction Corp., Ltd. (China)	33,500	43,680
Lotte Chemical Corp. (South Korea)	165	49,609
PTT Global Chemical PCL (Thailand)	29,600	59,688
Sappi, Ltd. (South Africa)	5,530	36,813
Sherwin-Williams Co. (The)	210	73,702
Siam Cement PCL (The) (Thailand)	3,950	58,372
Sinopec Shanghai Petrochemical Co., Ltd. (China)	74,000	39,619
Sonoco Products Co.	186	9,564
		<b>445,365</b>
<b>Capital goods (1.7%)</b>		
Avery Dennison Corp.	274	24,213
Berry Plastics Group, Inc. †	225	12,827
BWX Technologies, Inc.	259	12,626
China Railway Group, Ltd. (China)	56,000	44,112
General Dynamics Corp.	287	56,855
HEICO Corp.	60	4,310
Honeywell International, Inc.	654	87,172
Huntington Ingalls Industries, Inc.	42	7,819
L3 Technologies, Inc.	207	34,586
Northrop Grumman Corp.	328	84,201
Raytheon Co.	568	91,721
Republic Services, Inc.	329	20,967
United Tractors Tbk PT (Indonesia)	20,300	41,811
Waste Management, Inc.	560	41,076
		<b>564,296</b>
<b>Communication services (2.2%)</b>		
AT&T, Inc.	838	31,618
China Mobile, Ltd. (China)	1,000	10,612
DISH Network Corp. Class A †	4,808	301,750
Juniper Networks, Inc.	2,313	64,486
LG Uplus Corp. (South Korea)	4,728	64,464
SK Telecom Co., Ltd. (South Korea)	260	60,447
Telecom Argentina SA ADR (Argentina)	663	16,800
Telekomunikasi Indonesia Persero Tbk PT (Indonesia)	209,800	71,147
Telkom SA SOC, Ltd. (South Africa)	10,103	47,532
Verizon Communications, Inc.	1,186	52,967
		<b>721,823</b>
<b>Conglomerates (0.3%)</b>		
Danaher Corp.	1,091	92,069
		<b>92,069</b>
<b>Consumer cyclicals (3.4%)</b>		
Amazon.com, Inc. †	4	3,872
Aramark	179	7,335
Automatic Data Processing, Inc.	712	72,952
CBS Corp. Class B (non-voting shares)	1,302	83,042
CDK Global, Inc.	389	24,141
China Dongxiang Group Co., Ltd. (China)	45,000	8,012
Ecolab, Inc.	151	20,045
Euronet Worldwide, Inc. †	122	10,659
Ford Otomotiv Sanayi AS (Turkey)	1,390	16,972
Genting Bhd (Malaysia)	15,900	34,855
Great Wall Motor Co., Ltd. (China)	23,500	29,016
Hasbro, Inc.	159	17,730

<b>COMMON STOCKS (27.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>
<b>Consumer cyclicals cont.</b>		
Home Depot, Inc. (The)	87	\$13,346
Itausa - Investimentos Itau SA (Preference) (Brazil)	1,100	2,995
John Wiley & Sons, Inc. Class A	51	2,690
Kimberly-Clark Corp.	703	90,764
Kimberly-Clark de Mexico SAB de CV Class A (Mexico)	7,762	16,427
KOC Holding AS (Turkey)	7,623	35,055
Lear Corp.	159	22,591
Lowe's Cos., Inc.	961	74,506
Marriott International, Inc./MD Class A	39	3,912
Naspers, Ltd. Class N (South Africa)	34	6,614
News Corp. Class B	211	2,986
NVR, Inc. †	11	26,517
Pou Chen Corp. (Taiwan)	23,000	31,831
President Chain Store Corp. (Taiwan) †	3,000	26,972
Priceline Group, Inc. (The) †	11	20,576
Qualicorp SA (Brazil)	6,300	54,578
Ross Stores, Inc.	821	47,396
Scotts Miracle-Gro Co. (The) Class A	97	8,678
ServiceMaster Global Holdings, Inc. †	475	18,615
Smiles SA (Brazil)	3,300	60,145
TJX Cos., Inc. (The)	1,065	76,861
Twenty-First Century Fox, Inc.	471	13,348
Vantiv, Inc. Class A †	481	30,467
Walt Disney Co. (The)	812	86,275
World Fuel Services Corp.	202	7,767
		<b>1,110,543</b>
<b>Consumer staples (2.1%)</b>		
Altria Group, Inc.	1,575	117,290
Colgate-Palmolive Co.	39	2,891
ConAgra Foods, Inc.	464	16,593
CVS Health Corp.	790	63,563
Graham Holdings Co. Class B	8	4,797
Gruma SAB de CV Class B (Mexico)	4,385	57,209
Hanwha Corp. (South Korea)	1,041	43,127
Hershey Co. (The)	362	38,868
Indofood Sukses Makmur Tbk PT (Indonesia)	64,500	41,621
J.M. Smucker Co. (The)	334	39,522
Liberty Expedia Holdings, Inc. Class A †	64	3,457
McDonald's Corp.	745	114,104
PepsiCo, Inc.	62	7,160
Pinnacle Foods, Inc.	387	22,988
Pool Corp.	80	9,406
Procter & Gamble Co. (The)	323	28,149
Sysco Corp.	872	43,888
Ulta Salon, Cosmetics & Fragrance, Inc. †	40	11,494
US Foods Holding Corp. †	113	3,076
Walgreens Boots Alliance, Inc.	146	11,433
		<b>680,636</b>
<b>Energy (1.0%)</b>		
Baker Hughes, Inc.	1,015	55,328
Exxon Mobil Corp.	1,183	95,504
Marathon Petroleum Corp.	897	46,940
Petrobras Argentina SAADR (Argentina) †	801	9,620
Phillips 66	269	22,244
SK Innovation Co., Ltd. (South Korea)	303	41,975
YPF SAADR (Argentina)	3,292	72,095
		<b>343,706</b>

<b>COMMON STOCKS (27.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>
<b>Financials (6.2%)</b>		
Aflac, Inc.	766	\$59,503
AGNC Investment Corp. <sup>R</sup>	1,819	38,727
Agricultural Bank of China, Ltd. (China)	146,000	69,003
Allstate Corp. (The)	705	62,350
American Homes 4 Rent <sup>R</sup>	565	12,752
Annaly Capital Management, Inc. <sup>R</sup>	2,658	32,029
Apple Hospitality REIT, Inc. <sup>R</sup>	314	5,875
Aspen Insurance Holdings, Ltd.	117	5,832
Assured Guaranty, Ltd.	182	7,597
Banco do Brasil SA (Brazil)	3,500	28,314
Banco Macro SAADR (Argentina)	484	44,620
Bank Negara Indonesia Persero Tbk PT (Indonesia)	81,900	40,558
Bank of China, Ltd. (China)	81,000	39,735
Bank of Communications Co., Ltd. (China)	65,000	45,873
BBVA Banco Frances SAADR (Argentina)	709	13,421
Berkshire Hathaway, Inc. Class B <sup>†</sup>	312	52,843
Brandywine Realty Trust <sup>R</sup>	321	5,627
Broadridge Financial Solutions, Inc.	104	7,858
Camden Property Trust <sup>R</sup>	219	18,727
Chailease Holding Co., Ltd. (Taiwan)	2,000	5,575
Chimera Investment Corp. <sup>R</sup>	826	15,388
China Cinda Asset Management Co., Ltd. (China)	107,000	39,881
China Construction Bank Corp. (China)	109,000	84,464
China Huarong Asset Management Co., Ltd. (China)	16,000	6,209
Chongqing Rural Commercial Bank Co., Ltd. (China)	41,000	27,675
CIFI Holdings Group Co., Ltd. (China)	24,000	10,667
CME Group, Inc.	419	52,476
CoreLogic, Inc. <sup>†</sup>	268	11,626
Corporate Office Properties Trust <sup>R</sup>	313	10,964
Empire State Realty Trust, Inc. Class A <sup>R</sup>	235	4,881
EPR Properties <sup>R</sup>	287	20,627
Equity Commonwealth <sup>†</sup> <sup>R</sup>	174	5,498
Equity Residential Trust <sup>R</sup>	702	46,213
Fubon Financial Holding Co., Ltd. (Taiwan)	35,000	55,745
Gaming and Leisure Properties, Inc. <sup>R</sup>	542	20,417
Grupo Financiero Galicia SAADR (Argentina)	1,156	49,292
Guangzhou R&F Properties Co., Ltd. (China)	33,600	52,245
Highwoods Properties, Inc. <sup>R</sup>	204	10,345
Hyundai Marine & Fire Insurance Co., Ltd. (South Korea)	501	17,231
Industrial & Commercial Bank of China, Ltd. (China)	148,000	99,899
Industrial Bank of Korea (South Korea)	5,218	64,988
Intercontinental Exchange, Inc.	109	7,185
Itau Unibanco Holding SAADR (Preference) (Brazil)	2,761	30,509
JPMorgan Chase & Co.	1,524	139,294
KB Financial Group, Inc. (South Korea)	100	5,043
Lamar Advertising Co. Class A <sup>R</sup>	230	16,921
Liberty Property Trust <sup>R</sup>	200	8,142
Macquarie Mexico Real Estate Management SA de CV (Mexico) <sup>R</sup>	10,529	12,392
MFA Financial, Inc. <sup>R</sup>	1,038	8,709
MRV Engenharia e Participacoes SA (Brazil)	6,691	27,306
Old Mutual PLC (South Africa)	22,373	56,356
Park Hotels & Resorts, Inc. <sup>R</sup>	167	4,502
People's Insurance Co. Group of China, Ltd. (China)	85,000	35,709

<b>COMMON STOCKS (27.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>
<b>Financials cont.</b>		
PNC Financial Services Group, Inc. (The)	760	\$94,901
Popular, Inc. (Puerto Rico)	201	8,384
Quality Care Properties, Inc. <sup>†</sup> <sup>R</sup>	249	4,559
Reinsurance Group of America, Inc.	112	14,380
Retail Properties of America, Inc. Class A <sup>R</sup>	788	9,621
Shinhan Financial Group Co., Ltd. (South Korea)	640	27,577
Spirit Realty Capital, Inc. <sup>R</sup>	1,604	11,886
Starwood Property Trust, Inc. <sup>R</sup>	763	17,084
SunTrust Banks, Inc.	577	32,727
Travelers Cos., Inc. (The)	311	39,351
Turkiye Garanti Bankasi AS (Turkey)	12,939	36,002
Turkiye Halk Bankasi AS (Turkey)	2,596	9,702
Turkiye Is Bankasi Class C (Turkey)	17,474	37,000
Two Harbors Investment Corp. <sup>R</sup>	1,054	10,445
U.S. Bancorp	730	37,902
Voya Financial, Inc.	626	23,093
		<b>2,070,232</b>
<b>Health care (2.2%)</b>		
Baxter International, Inc.	156	9,444
Bio-Rad Laboratories, Inc. Class A <sup>†</sup>	70	15,842
Charles River Laboratories International, Inc. <sup>†</sup>	78	7,890
DaVita Inc. <sup>†</sup>	42	2,720
Humana, Inc.	381	91,676
Intuitive Surgical, Inc. <sup>†</sup>	4	3,741
Johnson & Johnson	1,281	169,463
Merck & Co., Inc.	753	48,260
Pfizer, Inc.	3,780	126,970
Richter Gedeon Nyrt (Hungary)	2,381	62,226
Thermo Fisher Scientific, Inc.	42	7,328
UnitedHealth Group, Inc.	535	99,200
WellCare Health Plans, Inc. <sup>†</sup>	131	23,522
Zoetis, Inc.	1,197	74,669
		<b>742,951</b>
<b>Technology (5.2%)</b>		
Adobe Systems, Inc. <sup>†</sup>	296	41,866
Alibaba Group Holding, Ltd. ADR (China) <sup>†</sup> <sup>S</sup>	387	54,528
Alphabet, Inc. Class A <sup>†</sup>	66	61,359
Amdocs, Ltd.	177	11,409
Apple, Inc.	735	105,855
Applied Materials, Inc.	2,161	89,271
AU Optronics Corp. (Taiwan)	11,000	5,026
Cisco Systems, Inc.	80	2,504
CommerceHub, Inc. Ser. C <sup>†</sup>	272	4,744
Corning, Inc.	625	18,781
Dell Technologies, Inc. Class V <sup>†</sup>	187	11,428
eBay, Inc. <sup>†</sup>	2,616	91,351
F5 Networks, Inc. <sup>†</sup>	455	57,812
Fidelity National Information Services, Inc.	613	52,350
Fiserv, Inc. <sup>†</sup>	306	37,436
Genpact, Ltd.	328	9,128
Globant SA (Luxembourg) <sup>†</sup>	734	31,885
Harris Corp.	326	35,560
Hon Hai Precision Industry Co., Ltd. (Taiwan)	32,100	123,462
Intuit, Inc.	686	91,108
Microsoft Corp.	595	41,013
NetApp, Inc.	845	33,842
NetEase, Inc. ADR (China)	63	18,940
Paychex, Inc.	578	32,911

<b>COMMON STOCKS (27.3%)* cont.</b>	<b>Shares</b>	<b>Value</b>
<b>Technology cont.</b>		
Radiant Opto-Electronics Corp. (Taiwan)	8,000	\$17,804
Samsung Electronics Co., Ltd. (South Korea)	127	263,846
SK Hynix, Inc. (South Korea)	786	46,302
Synopsys, Inc. †	354	25,817
Taiwan Semiconductor Manufacturing Co., Ltd. ADR (Taiwan)	2,272	79,429
Tencent Holdings, Ltd. (China)	2,700	96,554
Texas Instruments, Inc.	1,231	94,701
Tripod Technology Corp. (Taiwan)	6,000	19,112
YY, Inc. ADR (China) †	617	35,805
		<b>1,742,939</b>
<b>Transportation (0.5%)</b>		
Aeroflot – Russian Airlines PJSC (Russia) †	2,569	8,465
AirAsia Bhd (Malaysia)	29,800	22,562
Landstar System, Inc.	111	9,502
MISC Bhd (Malaysia)	14,900	25,894
Norfolk Southern Corp.	711	86,529
		<b>152,952</b>
<b>Utilities and power (1.2%)</b>		
American Electric Power Co., Inc.	512	35,569
Cia de Saneamento Basico do Estado de Sao Paulo (Brazil)	6,100	58,295
Edison International	563	44,021
Great Plains Energy, Inc.	1,431	41,900
Kinder Morgan, Inc.	2,903	55,621
Korea Electric Power Corp. (South Korea)	154	5,492
Pampa Energia SAADR (Argentina) †	562	33,074
PG&E Corp.	807	53,561
Southern Co. (The)	318	15,226
Tenaga Nasional Bhd (Malaysia)	20,500	67,527
		<b>410,286</b>
<b>Total common stocks (cost \$7,770,201)</b>		<b>\$9,077,798</b>

<b>U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (15.3%)*</b>	<b>Principal amount</b>	<b>Value</b>
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<b>U.S. Government Agency Mortgage Obligations (15.3%)</b>		
Federal National Mortgage Association Pass-Through Certificates		
3.50%, TBA, 8/1/47	\$1,000,000	\$1,025,195
3.50%, TBA, 7/1/47	2,000,000	2,053,750
3.00%, TBA, 7/1/47	2,000,000	1,997,344
		<b>5,076,289</b>

<b>MORTGAGE-BACKED SECURITIES (7.5%)*</b>	<b>Principal amount</b>	<b>Value</b>
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<b>Agency collateralized mortgage obligations (5.1%)</b>		
Federal Home Loan Mortgage Corporation		
IFB Ser. 3747, Class SA, IO, 5.341%, 10/15/40	\$32,219	\$5,527
IFB Ser. 4073, Class AS, IO, 4.891%, 8/15/38	180,071	15,305
Ser. 4601, Class PI, IO, 4.50%, 12/15/45	67,220	11,447
Ser. 4322, Class ID, IO, 4.50%, 5/15/43	111,112	17,635
Ser. 4568, Class MI, IO, 4.00%, 4/15/46	103,830	16,224
Ser. 4193, Class PI, IO, 4.00%, 3/15/43	51,853	8,162
Ser. 4604, Class QI, IO, 3.50%, 7/15/46	254,267	41,824
Ser. 4121, Class AI, IO, 3.50%, 10/15/42	182,418	34,731
Ser. 4097, Class PI, IO, 3.50%, 11/15/40	101,321	13,152
Ser. 4099, Class BI, IO, 3.50%, 6/15/39	118,062	11,659
Ser. 4134, Class PI, IO, 3.00%, 11/15/42	202,132	24,080
Ser. 4206, Class IP, IO, 3.00%, 12/15/41	88,762	8,661

<b>MORTGAGE-BACKED SECURITIES (7.5%)* cont.</b>	<b>Principal amount</b>	<b>Value</b>
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<b>Agency collateralized mortgage obligations cont.</b>		
Federal National Mortgage Association		
Ser. 16-3, Class NI, IO, 6.00%, 2/25/46	\$73,697	\$17,470
IFB Ser. 12-68, Class BS, IO, 4.784%, 7/25/42	87,811	14,958
Ser. 17-2, Class KI, IO, 4.00%, 2/25/47	110,042	19,726
Ser. 16-98, Class QI, IO, 3.50%, 2/25/46	328,574	49,904
Ser. 12-136, Class PI, IO, 3.50%, 11/25/42	54,888	5,676
Ser. 14-76, IO, 3.50%, 11/25/39	166,390	17,207
Ser. 12-129, Class IJ, IO, 3.50%, 12/25/32	63,367	9,743
Ser. 12-151, Class PI, IO, 3.00%, 1/25/43	59,055	6,419
Ser. 13-1, Class MI, IO, 3.00%, 1/25/43	124,635	11,437
Ser. 13-35, Class PI, IO, 3.00%, 2/25/42	238,151	18,933
Ser. 13-31, Class NI, IO, 3.00%, 6/25/41	71,231	5,062
Ser. 12-147, Class AI, IO, 3.00%, 10/25/27	288,401	26,317
Government National Mortgage Association		
Ser. 09-79, Class IC, IO, 6.00%, 8/20/39	138,010	26,556
Ser. 16-168, Class AI, IO, 5.00%, 7/20/45	87,588	8,540
Ser. 15-35, Class AI, IO, 5.00%, 3/16/45	212,877	44,172
Ser. 14-182, Class KI, IO, 5.00%, 10/20/44	92,014	19,036
Ser. 14-133, Class IP, IO, 5.00%, 9/16/44	120,237	25,457
Ser. 14-122, Class IC, IO, 5.00%, 8/20/44	49,248	10,024
Ser. 14-163, Class NI, IO, 5.00%, 2/20/44	58,944	10,994
Ser. 11-116, Class IB, IO, 5.00%, 10/20/40	2,753	199
Ser. 10-20, Class UI, IO, 5.00%, 2/20/40	53,069	11,073
Ser. 10-9, Class UI, IO, 5.00%, 1/20/40	76,686	16,231
Ser. 09-121, Class UI, IO, 5.00%, 12/20/39	55,938	11,894
Ser. 15-105, Class LI, IO, 5.00%, 10/20/39	84,332	17,729
IFB Ser. 13-129, Class SN, IO, 4.938%, 9/20/43	36,641	5,790
IFB Ser. 16-77, Class SL, IO, 4.938%, 3/20/43	95,879	11,970
IFB Ser. 11-17, Class S, IO, 4.838%, 2/20/41	78,456	12,553
IFB Ser. 10-134, Class ES, IO, 4.788%, 11/20/39	148,266	14,966
Ser. 16-37, Class IW, IO, 4.50%, 2/20/46	91,803	19,164
Ser. 15-80, Class IA, IO, 4.50%, 6/20/45	110,135	21,492
Ser. 15-167, Class BI, IO, 4.50%, 4/16/45	74,308	16,728
Ser. 13-20, Class QI, IO, 4.50%, 12/16/42	88,238	15,075
Ser. 10-35, Class QI, IO, 4.50%, 3/20/40	21,509	4,307
Ser. 16-135, Class PI, IO, 4.00%, 5/20/46	223,361	46,478
Ser. 15-99, Class LI, IO, 4.00%, 7/20/45	66,061	11,446
Ser. 17-57, Class AI, IO, 4.00%, 6/20/45	104,814	19,947
Ser. 15-79, Class CI, IO, 4.00%, 5/20/45	83,939	14,982
Ser. 15-53, Class MI, IO, 4.00%, 4/16/45	83,063	17,895
Ser. 15-187, Class JI, IO, 4.00%, 3/20/45	127,668	20,995
Ser. 13-24, Class PI, IO, 4.00%, 11/20/42	52,963	8,493
Ser. 12-38, Class MI, IO, 4.00%, 3/20/42	134,682	26,614
Ser. 15-162, Class BI, IO, 4.00%, 11/20/40	118,875	18,794
Ser. 14-133, Class AI, IO, 4.00%, 10/20/36	135,503	13,764
Ser. 16-111, Class IP, IO, 3.50%, 8/20/46	101,771	12,887
Ser. 15-111, Class IJ, IO, 3.50%, 8/20/45	93,058	13,000
Ser. 15-64, Class PI, IO, 3.50%, 5/20/45	101,005	15,213
Ser. 15-124, Class LI, IO, 3.50%, 3/20/45	359,136	39,954
Ser. 16-136, Class YI, IO, 3.50%, 3/20/45	97,672	13,308
Ser. 15-20, Class PI, IO, 3.50%, 2/20/45	154,698	27,308
Ser. 15-24, Class IA, IO, 3.50%, 2/20/45	86,141	13,397
Ser. 13-102, Class IP, IO, 3.50%, 6/20/43	47,387	5,204
Ser. 13-100, Class MI, IO, 3.50%, 2/20/43	44,439	6,206
Ser. 12-136, Class BI, IO, 3.50%, 11/20/42	114,375	21,743
Ser. 12-141, Class WI, IO, 3.50%, 11/20/41	41,863	4,924
Ser. 12-71, Class JI, IO, 3.50%, 4/16/41	36,251	2,618
Ser. 13-157, Class IA, IO, 3.50%, 4/20/40	109,997	12,866
Ser. 13-90, Class HI, IO, 3.50%, 4/20/40	35,727	2,233
Ser. 13-79, Class XI, IO, 3.50%, 11/20/39	76,373	9,979
Ser. 13-6, Class AI, IO, 3.50%, 8/20/39	180,619	26,190



**MORTGAGE-BACKED SECURITIES (7.5%)\* cont.**

	Principal amount	Value
<b>Agency collateralized mortgage obligations cont.</b>		
Government National Mortgage Association		
Ser. 15-124, Class NI, IO, 3.50%, 6/20/39	\$218,569	\$22,005
Ser. 15-96, Class NI, IO, 3.50%, 1/20/39	84,191	7,729
Ser. 15-82, Class GI, IO, 3.50%, 12/20/38	166,256	15,236
Ser. 15-124, Class DI, IO, 3.50%, 1/20/38	145,419	17,974
Ser. 13-23, Class IK, IO, 3.00%, 9/20/37	66,428	6,977
FRB Ser. 16-H16, Class DI, IO, 2.621%, 6/20/66	100,273	12,597
Ser. 15-H22, Class GI, IO, 2.575%, 9/20/65	133,308	17,117
Ser. 17-H02, Class BI, IO, 2.312%, 1/20/67	141,162	18,793
Ser. 17-H06, Class BI, IO, 2.286%, 2/20/67	118,234	14,756
Ser. 15-H09, Class AI, IO, 2.191%, 4/20/65	227,250	21,475
Ser. 16-H03, Class AI, IO, 2.165%, 1/20/66	165,382	17,262
Ser. 17-H11, Class NI, IO, 2.136%, 5/20/67	231,382	31,075
FRB Ser. 15-H16, Class XI, IO, 2.128%, 7/20/65	104,474	11,168
Ser. 16-H02, Class BI, IO, 2.036%, 11/20/65	343,855	32,912
Ser. 15-H24, Class HI, IO, 2.034%, 9/20/65	477,920	37,947
Ser. 15-H25, Class BI, IO, 1.993%, 10/20/65	290,160	29,422
Ser. 15-H20, Class CI, IO, 1.985%, 8/20/65	174,490	18,827
Ser. 15-H15, Class JI, IO, 1.945%, 6/20/65	265,053	26,744
Ser. 16-H04, Class KI, IO, 1.929%, 2/20/66	116,893	9,863
Ser. 15-H19, Class NI, IO, 1.909%, 7/20/65	201,160	19,714
Ser. 15-H18, Class IA, IO, 1.827%, 6/20/65	100,166	7,603
Ser. 15-H10, Class CI, IO, 1.81%, 4/20/65	159,529	15,195
Ser. 15-H26, Class GI, IO, 1.793%, 10/20/65	218,322	20,238
Ser. 14-H21, Class AI, IO, 1.754%, 10/20/64	202,195	18,642
Ser. 15-H09, Class BI, IO, 1.69%, 3/20/65	228,547	19,861
Ser. 15-H10, Class EI, IO, 1.636%, 4/20/65	141,238	8,686
Ser. 15-H25, Class AI, IO, 1.614%, 9/20/65	302,560	23,932
Ser. 15-H24, Class BI, IO, 1.613%, 8/20/65	434,178	26,615
Ser. 11-H15, Class AI, IO, 1.579%, 6/20/61	113,506	7,236
Ser. 16-H08, Class GI, IO, 1.434%, 4/20/66	247,739	16,053

**Commercial mortgage-backed securities (0.8%)** **1,715,301**

Bear Stearns Commercial Mortgage Securities Trust		
144A FRB Ser. 06-PW11, Class C, 5.328%, 3/11/39 (In default) †	25,000	12,779
Credit Suisse First Boston Mortgage Securities Corp. Ser. 05-C3, Class B, 4.882%, 7/15/37		
	5,773	5,759
GE Capital Commercial Mortgage Corp. FRB		
Ser. 05-C1, Class D, 4.56%, 6/10/48	20,359	20,641
GMAC Commercial Mortgage Securities, Inc. Trust		
144A FRB Ser. 04-C3, Class X1, IO, 1.11%, 12/10/41	46,534	750
GS Mortgage Securities Trust 144A FRB		
Ser. 13-GC16, Class D, 5.497%, 11/10/46	18,000	17,144
JPMBB Commercial Mortgage Securities Trust 144A		
FRB Ser. 13-C14, Class E, 4.721%, 8/15/46	16,000	13,232
JPMorgan Chase Commercial Mortgage Securities Trust FRB Ser. 06-LDP7, Class B, 6.139%, 4/17/45		
	20,000	3,370
JPMorgan Chase Commercial Mortgage Securities Trust 144A Ser. 13-C13, Class E, 3.986%, 1/15/46		
	12,000	9,013
LB-UBS Commercial Mortgage Trust		
Ser. 06-C6, Class D, 5.502%, 9/15/39 (In default) †	23,000	1,294
FRB Ser. 06-C6, Class C, 5.482%, 9/15/39 (In default) †	20,000	1,710
Merrill Lynch Mortgage Trust Ser. 04-KEY2, Class D, 5.046%, 8/12/39		
	16,311	16,147
ML-CFC Commercial Mortgage Trust 144A FRB		
Ser. 06-4, Class XC, IO, 0.857%, 12/12/49	47,572	262
UBS-Barclays Commercial Mortgage Trust 144A		
Ser. 12-C2, Class F, 5.00%, 5/10/63	17,000	11,161
Ser. 13-C6, Class E, 3.50%, 4/10/46	38,000	26,820

**MORTGAGE-BACKED SECURITIES (7.5%)\* cont.**

	Principal amount	Value
<b>Commercial mortgage-backed securities cont.</b>		
Wachovia Bank Commercial Mortgage Trust FRB		
Ser. 06-C23, Class F, 5.78%, 1/15/45	\$8,572	\$8,549
WF-RBS Commercial Mortgage Trust 144A		
Ser. 11-C3, Class E, 5.00%, 3/15/44	30,000	26,103
Ser. 12-C7, Class F, 4.50%, 6/15/45	100,000	73,270
Ser. 13-C12, Class E, 3.50%, 3/15/48	15,000	11,039

**Residential mortgage-backed securities (non-agency) (1.6%)** **259,043**

Bear Stearns Alt-A Trust FRB Ser. 04-3, Class B, 4.141%, 4/25/34		
	23,097	23,005
Countrywide Alternative Loan Trust		
FRB Ser. 05-27, Class 1A6, 2.036%, 8/25/35	20,466	17,498
FRB Ser. 06-OA7, Class 1A2, 1.672%, 6/25/46	11,913	11,199
FRB Ser. 05-59, Class 1A1, 1.542%, 11/20/35	16,154	15,059
Countrywide Home Loans Mortgage Pass-Through Trust FRB Ser. 05-3, Class 1A1, 1.836%, 4/25/35		
	12,681	10,560
Federal National Mortgage Association		
Connecticut Avenue Securities FRB Ser. 16-C02, Class 1B, 13.466%, 9/25/28	59,979	82,498
Connecticut Avenue Securities FRB Ser. 16-C03, Class 1B, 12.966%, 10/25/28	85,000	115,090
Connecticut Avenue Securities FRB Ser. 15-C04, Class 1M2, 6.916%, 4/25/28	34,500	39,279
Connecticut Avenue Securities FRB Ser. 15-C04, Class 2M2, 6.766%, 4/25/28	45,500	51,149
Connecticut Avenue Securities FRB Ser. 15-C03, Class 1M2, 6.216%, 7/25/25	55,841	62,022
Connecticut Avenue Securities FRB Ser. 17-C03, Class 1B1, 6.066%, 10/25/29	10,000	10,634
Connecticut Avenue Securities FRB Ser. 15-C02, Class 2M2, 5.216%, 5/25/25	5,595	5,964
WaMu Mortgage Pass-Through Certificates Trust FRB		
Ser. 04-AR12, Class A2B, 1.676%, 10/25/44	29,698	28,162
Wells Fargo Mortgage Backed Securities Trust		
FRB Ser. 05-AR4, Class 1A3, 3.239%, 4/25/35	43,989	44,394
FRB Ser. 06-AR6, Class 7A2, 3.034%, 3/25/36	12,171	12,287

**Total mortgage-backed securities (cost \$2,493,227)** **\$2,503,144**

**INVESTMENT COMPANIES (7.4%)\***

	Shares	Value
Altaba, Inc.	372	\$20,267
Health Care Select Sector SPDR Fund	4,624	366,406
Industrial Select Sector SPDR Fund	5,354	364,661
iShares MSCI India ETF (India)	8,969	287,905
Materials Select Sector SPDR Fund	6,692	360,097
Technology Select Sector SPDR Fund	6,449	352,889
Utility Select Sector SPDR Fund <sup>s</sup>	13,668	710,189

**Total investment companies (cost \$2,400,611)** **\$2,462,414**

**COMMODITY LINKED NOTES (4.5%)\* †††**

	Principal amount	Value
Bank of America Corp. 144A sr. unsec. unsub. notes 1-month LIBOR less 0.15%, 2017 (Indexed to the BofA Merrill Lynch Commodity MLCXP2KS Excess Return Strategy multiplied by 3)		
	\$100,000	\$90,520
Bank of America Corp. 144A sr. unsec. unsub. notes 1-month LIBOR less 0.14%, 2018 (Indexed to the BofA Merrill Lynch Commodity MLBX4SX6 Excess Return Strategy multiplied by 3)		
	300,000	319,385
UBS AG/London 144A sr. notes 1-month LIBOR less 0.10%, 2018 (Indexed to the UBSIF3AT Index multiplied by 3) (United Kingdom)		
	339,000	350,538

<b>COMMODITY LINKED NOTES (4.5%)* ††† cont.</b>	<b>Principal amount</b>	<b>Value</b>
Citigroup Global Markets Holdings Inc. sr. notes Ser. N, 1-month USD LIBOR less 0.12%, 2018 (Indexed to the Citi Commodities F3 vs F0 – 4x Leveraged CVIC4X30 Index multiplied by 3)	\$240,000	#233,828
Citigroup Global Markets Holdings Inc. sr. notes Ser. N, 1-month USD LIBOR less 0.14%, 2018 (Indexed to the S&P GSCI Total Return Index <sup>SM</sup> multiplied by 3)	213,000	275,859
UBS AG/London 144A sr. notes 1-month LIBOR less 0.10%, 2017 (Indexed to the UBSIF3AT Index multiplied by 3) (United Kingdom)	228,360	234,445
<b>Total commodity linked notes (cost \$1,420,360)</b>		<b>\$1,504,575</b>

<b>FOREIGN GOVERNMENT AND AGENCY BONDS AND NOTES (1.1%)*</b>	<b>Principal amount</b>	<b>Value</b>
Brazil (Federal Republic of) unsec. notes Ser. NTFN, 10.00%, 1/1/23 (Brazil) (Units) BRL	80	\$23,898
Buenos Aires (Province of) unsec. FRN 24.08%, 5/31/22 (Argentina) ARS	195,000	11,995
Buenos Aires (Province of) 144A sr. unsec. unsub. notes 10.875%, 1/26/21 (Argentina)	\$100,000	114,000
Russia (Federation of) 144A sr. unsec. unsub. bonds 5.625%, 4/4/42 (Russia)	200,000	216,500
Turkey (Republic of) unsec. notes 11.00%, 3/2/22 (Turkey) TRY	32,000	9,263
<b>Total foreign government and agency bonds and notes (cost \$361,860)</b>		<b>\$375,656</b>

<b>CORPORATE BONDS AND NOTES (0.7%)*</b>	<b>Principal amount</b>	<b>Value</b>
Enbridge, Inc. sr. unsec. unsub. bonds 4.25%, 12/1/26 (Canada)	\$20,000	\$20,843
Petrobras Global Finance BV company guaranty sr. unsec. unsub. bonds 7.25%, 3/17/44 (Brazil)	\$60,000	58,995
Petrobras Global Finance BV company guaranty sr. unsec. unsub. notes 8.75%, 5/23/26 (Brazil)	20,000	23,000
Petrobras Global Finance BV company guaranty sr. unsec. unsub. notes 8.375%, 5/23/21 (Brazil)	21,000	23,507
Petrobras Global Finance BV company guaranty sr. unsec. unsub. notes 6.25%, 3/17/24 (Brazil)	13,000	13,211
Petrobras Global Finance BV company guaranty sr. unsec. unsub. notes 6.125%, 1/17/22 (Brazil)	5,000	5,156
Petroleos de Venezuela SA company guaranty sr. unsec. unsub. notes 5.375%, 4/12/27 (Venezuela)	97,000	34,799
Petroleos Mexicanos company guaranty sr. unsec. unsub. notes 6.375%, 1/23/45 (Mexico)	20,000	19,500
Petroleos Mexicanos company guaranty sr. unsec. unsub. notes 4.50%, 1/23/26 (Mexico)	39,000	37,909
<b>Total corporate bonds and notes (cost \$233,676)</b>		<b>\$236,920</b>

<b>WARRANTS (0.4%)* †</b>	<b>Expiration date</b>	<b>Strike price</b>	<b>Warrants</b>	<b>Value</b>
China State Construction Engineering Corp., Ltd. 144A (China) †	1/22/18	\$0.00	32,104	\$45,887
Shanghai Automotive Co. 144A (China) †	2/2/18	0.00	13,600	62,187
Zhengzhou Yutong Bus Co., Ltd. 144A (China) †	7/24/17	0.00	3,100	10,051
<b>Total warrants (cost \$103,253)</b>				<b>\$118,125</b>

<b>ASSET-BACKED SECURITIES (0.0%)*</b>	<b>Principal amount</b>	<b>Value</b>
Station Place Securitization Trust 144A FRB Ser. 17-1, Class A, 2.116%, 2/25/49	\$15,667	\$15,667
<b>Total asset-backed securities (cost \$15,667)</b>		<b>\$15,667</b>

<b>PURCHASED SWAP OPTIONS OUTSTANDING (0.0%)*</b>				
<b>Counterparty</b>	<b>Fixed right % to receive or (pay)/ Floating rate index/Maturity date</b>	<b>Expiration date/strike</b>	<b>Contract amount</b>	<b>Value</b>
<b>Bank of America N.A.</b>				
(2.214)/3 month USD-LIBOR-BBA/ Aug-19		Aug-17/2.214	\$71,750	\$65
1.495/3 month USD-LIBOR-BBA/ Jul-18		Jul-17/1.495	86,100	34
(1.495)/3 month USD-LIBOR-BBA/ Jul-18		Jul-17/1.495	86,100	1
<b>Citibank, N.A.</b>				
(2.124)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.124	43,050	605
(2.518)/3 month USD-LIBOR-BBA/ May-49		May-19/2.518	6,300	576
2.25/3 month USD-LIBOR-BBA/ Sep-27		Sep-17/2.25	57,400	478
(2.506)/3 month USD-LIBOR-BBA/ Jul-47		Jul-17/2.506	23,000	351
(2.57)/3 month USD-LIBOR-BBA/ Nov-22		Nov-17/2.57	28,800	288
(1.975)/3 month USD-LIBOR-BBA/ Nov-22		Nov-17/1.975	28,800	265
(1.896)/3 month USD-LIBOR-BBA/ Dec-22		Dec-17/1.896	18,000	217
(2.488)/3 month USD-LIBOR-BBA/ Jul-47		Jul-17/2.488	11,500	203
2.57/3 month USD-LIBOR-BBA/ Nov-22		Nov-17/2.57	28,800	192
1.975/3 month USD-LIBOR-BBA/ Nov-22		Nov-17/1.975	28,800	184
1.6125/3 month USD-LIBOR-BBA/ Aug-18		Aug-17/1.6125	114,800	145
1.896/3 month USD-LIBOR-BBA/ Dec-22		Dec-17/1.896	18,000	92
2.34/3 month USD-LIBOR-BBA/ Jul-47		Jul-17/2.34	23,000	30
2.326/3 month USD-LIBOR-BBA/ Jul-47		Jul-17/2.326	11,500	12
1.9275/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/1.9275	43,050	7
2.08475/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.08475	28,700	2
(2.491)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.491	28,700	1
<b>Credit Suisse International</b>				
2.06375/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.06375	380,400	198
2.3724/3 month USD-LIBOR-BBA/ Aug-27		Aug-17/2.3724	14,500	181
(2.325)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.325	43,050	161
2.8472/3 month USD-LIBOR-BBA/ Aug-27		Aug-17/2.8472	14,500	127
1.446/3 month USD-LIBOR-BBA/ Jul-18		Jul-17/1.446	86,100	12
(2.7225)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.7225	86,100	3
<b>Goldman Sachs International</b>				
2.525/3 month USD-LIBOR-BBA/ Aug-37		Aug-17/2.525	14,400	223
(1.83)/3 month USD-LIBOR-BBA/ Sep-22		Sep-17/1.83	17,000	162

**PURCHASED SWAP OPTIONS OUTSTANDING (0.0%)\* cont.**

Counterparty Fixed right % to receive or (pay)/ Floating rate index/Maturity date	Expiration date/strike	Contract amount	Value
<b>Goldman Sachs International cont.</b>			
1.884/3 month USD-LIBOR-BBA/ Jul-18	Jul-17/1.884	\$86,100	\$94
(2.234)/3 month USD-LIBOR-BBA/ Aug-19	Aug-17/2.234	71,750	57
1.83/3 month USD-LIBOR-BBA/ Sep-22	Sep-17/1.83	17,000	35
1.44/3 month USD-LIBOR-BBA/ Jul-18	Jul-17/1.44	86,100	10
<b>JPMorgan Chase Bank N.A.</b>			
(2.81025)/3 month USD-LIBOR-BBA/ Oct-27	Oct-17/2.81025	57,400	87
1.999/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/1.999	28,700	3
<b>Total purchased swap options outstanding (cost \$6,990)</b>			<b>\$5,101</b>

PURCHASED OPTIONS OUTSTANDING (0.2%)*	Expiration date/strike price	Contract amount	Value
SPDR S&P 500 ETF Trust (Put)	Jun-18/\$210.00	\$3,531	\$18,485
SPDR S&P 500 ETF Trust (Put)	May-18/210.00	3,715	17,228
SPDR S&P 500 ETF Trust (Put)	Apr-18/205.00	3,583	12,547
SPDR S&P 500 ETF Trust (Put)	Mar-18/205.00	3,702	10,791
SPDR S&P 500 ETF Trust (Put)	Feb-18/200.00	3,682	7,431
SPDR S&P 500 ETF Trust (Put)	Jan-18/195.00	3,791	5,013
USD/CNH (Put)	Oct-17/CNH 6.70	671,200	1,283
USD/CNH (Put)	Oct-17/CNH 6.70	671,200	1,216
USD/JPY (Put)	Nov-17/JPY 107.00	405,900	2,867
<b>Total purchased options outstanding (cost \$133,117)</b>			<b>\$76,861</b>

SHORT-TERM INVESTMENTS (53.8%)*	Principal amount/ shares	Value
Federal Home Loan Banks unsec. discount notes 1.032%, 9/1/17	\$421,000	\$420,277
Federal Home Loan Banks unsec. discount notes 1.011%, 8/9/17	600,000	599,371
Interest in \$237,209,000 joint tri-party repurchase agreement dated 6/30/17 with Merrill Lynch, Pierce, Fenner and Smith, Inc. due 7/3/17 — maturity value of \$8,080,734 for an effective yield of 1.090% (collateralized by various mortgage backed securities with coupon rates ranging from 2.500% to 3.500% and due dates ranging from 2/1/30 to 5/20/47, valued at \$241,953,181)	8,080,000	8,080,000
Putnam Cash Collateral Pool, LLC 1.24% <sup>d</sup>	Shares 698,100	698,100
Putnam Short Term Investment Fund 1.07% <sup>L</sup>	Shares 6,583,161	6,583,161
U.S. Treasury Bills 0.940%, 8/24/17 \$	\$129,000	128,829
U.S. Treasury Bills 0.887%, 8/3/17 # Δ	3,000	2,998
U.S. Treasury Bills 0.786%, 7/20/17 # \$	41,000	40,985
U.S. Treasury Bills 0.820%, 7/13/17 # Δ \$	414,000	413,911
U.S. Treasury Bills 0.809%, 7/6/17 # Δ \$	936,000	935,941
<b>Total short-term investments (cost \$17,903,445)</b>		<b>\$17,903,573</b>
<b>Total investments (cost \$37,936,899)</b>		<b>\$39,356,123</b>

**Key to holding's currency abbreviations**

ARS	Argentine Peso
BRL	Brazilian Real
CHF	Swiss Franc
CNH	Chinese Yuan (Offshore)
EUR	Euro
GBP	British Pound
NOK	Norwegian Krone
NZD	New Zealand Dollar
SEK	Swedish Krona
TRY	Turkish Lira

**Key to holding's abbreviations**

ADR	American Depository Receipts: represents ownership of foreign securities on deposit with a custodian bank
ETF	Exchange Traded Fund
FRB	Floating Rate Bonds: the rate shown is the current interest rate 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
IFB	Inverse Floating Rate Bonds, which are securities that pay interest rates that vary inversely to changes in the market interest rates. As interest rates rise, inverse floaters produce less current income. The rate shown is the current interest rate at the close of the reporting period.
IO	Interest Only
PJSC	Public Joint Stock Company
SPDR	S&P Depository Receipts
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, 2017 through June 30, 2017 (the reporting period). Within the following notes to the portfolio, references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures*, 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.

- \* Percentages indicated are based on net assets of \$33,284,313.
- ††† The value of the commodity linked notes, which are marked to market daily, may be based on a multiple of the performance of the index. The multiple (or leverage) will increase the volatility of the note's value relative to the change in the underlying index.
- † 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.
- Δ This security, in part or in entirety, was pledged and segregated with the custodian for collateral on certain derivative contracts at the close of the reporting period.
- \$ This security, in part or in entirety, was pledged and segregated with the custodian for collateral on the initial margin on certain centrally cleared derivative contracts at the close of the reporting period.
- <sup>d</sup> 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.
- <sup>F</sup> This security is valued by Putnam Management at fair value following procedures approved by the Trustees. Securities may be classified as Level 2 or Level 3 for ASC 820 based on the securities' valuation inputs (Note 1).
- <sup>L</sup> 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.
- <sup>R</sup> Real Estate Investment Trust.
- <sup>S</sup> Security on loan, in part or in entirety, at the close of the reporting period (Note 1).

At the close of the reporting period, the fund maintained liquid assets totaling \$14,180,349 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 6/30/17 (aggregate face value \$8,417,012) (Unaudited)**

Counterparty	Currency	Contract type	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
<b>Bank of America N.A.</b>						
	Australian Dollar	Buy	7/19/17	\$105,433	\$103,722	\$1,711
	Brazilian Real	Buy	7/3/17	126,656	131,934	(5,278)
	Brazilian Real	Sell	7/3/17	126,656	127,544	888
	British Pound	Sell	9/20/17	78,723	77,802	(921)
	Chilean Peso	Buy	7/19/17	131,888	131,740	148
	Chilean Peso	Sell	7/19/17	131,888	133,702	1,814
	Euro	Buy	9/20/17	69,378	68,099	1,279
	Indian Rupee	Buy	8/16/17	66,890	67,009	(119)
	Japanese Yen	Sell	8/16/17	178,663	179,422	759
	Mexican Peso	Buy	7/19/17	68,464	65,000	3,464
	Mexican Peso	Sell	7/19/17	68,464	64,246	(4,218)
	New Zealand Dollar	Buy	7/19/17	17,070	20,094	(3,024)
	Norwegian Krone	Sell	9/20/17	129,663	127,870	(1,793)
	Singapore Dollar	Buy	8/16/17	67,449	67,193	256
	Singapore Dollar	Sell	8/16/17	67,739	66,844	(895)
	Swedish Krona	Buy	9/20/17	134,616	130,677	3,939
<b>Barclays Bank PLC</b>						
	Australian Dollar	Buy	7/19/17	110,120	109,040	1,080
	Canadian Dollar	Buy	7/19/17	139,535	135,092	4,443
	Canadian Dollar	Sell	7/19/17	139,535	136,197	(3,338)
	Euro	Buy	9/20/17	174,765	172,756	2,009
	Japanese Yen	Sell	8/16/17	66,984	67,279	295
	New Zealand Dollar	Buy	7/19/17	55,313	51,335	3,978
	Swedish Krona	Buy	9/20/17	9,406	9,115	291
	Swiss Franc	Buy	9/20/17	1,362	729	633
<b>Citibank, N.A.</b>						
	Australian Dollar	Buy	7/19/17	60,094	60,418	(324)
	Brazilian Real	Buy	7/3/17	88,985	91,803	(2,818)
	Brazilian Real	Sell	7/3/17	88,985	88,027	(958)
	Brazilian Real	Sell	10/3/17	23,896	23,737	(159)
	Canadian Dollar	Buy	7/19/17	55,151	53,638	1,513
	Euro	Buy	9/20/17	1,376	1,551	(175)
	Japanese Yen	Sell	8/16/17	49,816	49,987	171
	Mexican Peso	Buy	7/19/17	67,232	67,888	(656)
	Mexican Peso	Sell	7/19/17	67,232	66,844	(388)
	New Taiwan Dollar	Buy	8/16/17	965	1,069	(104)
	New Zealand Dollar	Sell	7/19/17	136,634	132,370	(4,264)
	Norwegian Krone	Buy	9/20/17	67,716	67,378	338
	South African Rand	Buy	7/19/17	67,936	68,720	(784)
	South African Rand	Sell	7/19/17	67,936	65,819	(2,117)
	Swedish Krona	Sell	9/20/17	34,131	33,130	(1,001)
<b>Credit Suisse International</b>						
	Australian Dollar	Buy	7/19/17	64,782	64,429	353
	Canadian Dollar	Buy	7/19/17	69,189	66,577	2,612
	Canadian Dollar	Sell	7/19/17	67,492	66,997	(495)
	Euro	Buy	9/20/17	83,139	81,749	1,390
	Japanese Yen	Sell	8/16/17	67,538	67,511	(27)

## FORWARD CURRENCY CONTRACTS at 6/30/17 (aggregate face value \$8,417,012) (Unaudited) cont.

Counterparty	Currency	Contract type	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
<b>Credit Suisse International cont.</b>						
	New Zealand Dollar	Sell	7/19/17	\$29,378	\$29,002	\$(376)
	Swedish Krona	Sell	9/20/17	138,670	134,639	(4,031)
<b>Goldman Sachs International</b>						
	Australian Dollar	Sell	7/19/17	66,472	65,530	(942)
	British Pound	Sell	9/20/17	38,904	38,441	(463)
	Canadian Dollar	Buy	7/19/17	70,809	67,546	3,263
	Canadian Dollar	Sell	7/19/17	70,809	67,506	(3,303)
	Euro	Buy	9/20/17	37,155	38,248	(1,093)
	Indian Rupee	Buy	8/16/17	67,063	67,447	(384)
	Japanese Yen	Sell	8/16/17	64,700	64,996	296
	New Zealand Dollar	Sell	7/19/17	60,075	56,880	(3,195)
	Norwegian Krone	Sell	9/20/17	138,408	136,393	(2,015)
	South African Rand	Buy	7/19/17	132,105	131,944	161
	South African Rand	Sell	7/19/17	132,105	131,718	(387)
	Swedish Krona	Buy	9/20/17	104,289	101,166	3,123
	Swiss Franc	Sell	9/20/17	28,819	29,153	334
<b>HSBC Bank USA, National Association</b>						
	Australian Dollar	Buy	7/19/17	1,691	1,669	22
	British Pound	Sell	9/20/17	41,907	41,404	(503)
	Canadian Dollar	Buy	7/19/17	125,420	121,782	3,638
	Euro	Buy	9/20/17	117,081	114,235	2,846
	New Zealand Dollar	Buy	7/19/17	136,121	132,977	3,144
	Singapore Dollar	Sell	8/16/17	67,594	66,970	(624)
<b>JPMorgan Chase Bank N.A.</b>						
	Australian Dollar	Sell	7/19/17	26,281	25,972	(309)
	Brazilian Real	Buy	7/3/17	91	90	1
	Brazilian Real	Sell	7/3/17	91	95	4
	British Pound	Sell	9/20/17	135,121	134,508	(613)
	Canadian Dollar	Buy	7/19/17	1,235	346	889
	Czech Koruna	Buy	7/19/17	72,474	66,688	5,786
	Czech Koruna	Sell	7/19/17	72,474	65,722	(6,752)
	Euro	Buy	7/19/17	70,064	65,547	4,517
	Euro	Sell	7/19/17	70,064	66,159	(3,905)
	Euro	Buy	9/20/17	103,322	103,184	138
	Japanese Yen	Buy	8/16/17	112,350	113,707	(1,357)
	Mexican Peso	Buy	7/19/17	67,238	67,854	(616)
	Mexican Peso	Sell	7/19/17	67,238	67,297	59
	New Zealand Dollar	Sell	7/19/17	60,368	58,056	(2,312)
	Norwegian Krone	Sell	9/20/17	69,072	67,549	(1,523)
	Swedish Krona	Sell	9/20/17	12,410	14,030	1,620
<b>Royal Bank of Scotland PLC (The)</b>						
	Australian Dollar	Buy	7/19/17	135,864	133,879	1,985
	Czech Koruna	Buy	7/19/17	72,479	66,665	5,814
	Czech Koruna	Sell	7/19/17	72,479	65,792	(6,687)
	Euro	Buy	7/19/17	70,064	65,545	4,519
	Euro	Sell	7/19/17	70,064	66,020	(4,044)
	Euro	Buy	9/20/17	154,123	151,798	2,325
	Japanese Yen	Sell	8/16/17	65,915	66,209	294
	New Zealand Dollar	Buy	7/19/17	66,155	66,355	(200)
	Norwegian Krone	Sell	9/20/17	136,956	134,991	(1,965)
	Swedish Krona	Buy	9/20/17	70,086	67,192	2,894

**FORWARD CURRENCY CONTRACTS at 6/30/17 (aggregate face value \$8,417,012) (Unaudited) cont.**

Counterparty	Currency	Contract type	Delivery date	Value	Aggregate face value	Unrealized appreciation/ (depreciation)
<b>Royal Bank of Scotland PLC (The) cont.</b>						
	Swedish Krona	Sell	9/20/17	\$69,192	\$67,514	\$(1,678)
	Turkish Lira	Sell	9/20/17	7,868	7,748	(120)
<b>State Street Bank and Trust Co.</b>						
	Australian Dollar	Sell	7/19/17	13,218	12,714	(504)
	British Pound	Sell	9/20/17	69,323	67,187	(2,136)
	Canadian Dollar	Buy	7/19/17	2,622	2,027	595
	Euro	Buy	9/20/17	230	437	(207)
	Japanese Yen	Buy	8/16/17	41,412	41,594	(182)
	New Zealand Dollar	Sell	7/19/17	57,877	51,908	(5,969)
	Norwegian Krone	Sell	9/20/17	67,177	66,321	(856)
	Singapore Dollar	Buy	8/16/17	67,812	67,976	(164)
	Singapore Dollar	Sell	8/16/17	67,812	66,928	(884)
	Swedish Krona	Buy	9/20/17	205,704	198,940	6,764
<b>UBS AG</b>						
	Australian Dollar	Sell	7/19/17	87,681	83,675	(4,006)
	Canadian Dollar	Buy	7/19/17	69,960	68,093	1,867
	Euro	Buy	9/20/17	119,377	117,615	1,762
	Japanese Yen	Sell	8/16/17	66,789	68,482	1,693
	New Zealand Dollar	Buy	7/19/17	8,059	7,410	649
	Norwegian Krone	Sell	9/20/17	137,460	135,505	(1,955)
	Swedish Krona	Buy	9/20/17	70,527	67,767	2,760
	Turkish Lira	Buy	9/20/17	1,223	1,206	17
<b>WestPac Banking Corp.</b>						
	Australian Dollar	Sell	7/19/17	24,360	23,267	(1,093)
	Canadian Dollar	Buy	7/19/17	70,809	67,519	3,290
	Canadian Dollar	Sell	7/19/17	68,726	68,382	(344)
	Euro	Buy	9/20/17	89,102	87,599	1,503
	New Zealand Dollar	Sell	7/19/17	67,401	64,219	(3,182)
<b>Total</b>						<b>\$(2,799)</b>

**FUTURES CONTRACTS**

OUTSTANDING at 6/30/17 (Unaudited)	Number of contracts	Value	Expiration date	Unrealized appreciation/ (depreciation)
Euro-CAC 40 Index (Short)	3	\$175,314	Jul-17	\$4,514
FTSE 100 Index (Short)	1	94,330	Sep-17	2,642
S&P 500 Index E-Mini (Short)	7	847,315	Sep-17	5,819
S&P Mid Cap 400 Index E-Mini (Long)	11	1,920,710	Sep-17	11,252
Tokyo Price Index (Long)	4	\$573,105	Sep-17	802
U.S. Treasury Note 10yr (Short)	20	2,510,625	Sep-17	7,999
<b>Total</b>				<b>\$33,028</b>

**WRITTEN SWAP OPTIONS OUTSTANDING at 6/30/17 (premiums \$47,463)**

(Unaudited) Counterparty	Fixed Obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Contract amount	Value
<b>Bank of America N.A.</b>				
2.082/3 month USD-LIBOR-BBA/ Jul-20		Jul-17/2.082	\$28,700	\$—
(1.728)/3 month USD-LIBOR-BBA/ Jul-20		Jul-17/1.728	28,700	10

**WRITTEN SWAP OPTIONS OUTSTANDING at 6/30/17 (premiums \$47,463)**

(Unaudited) Counterparty	Fixed Obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Contract amount	Value
<b>Bank of America N.A. cont.</b>				
2.404/3 month USD-LIBOR-BBA/ Aug-19		Aug-17/2.404	\$143,500	\$30
2.18/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.18	28,700	260
<b>Citibank, N.A.</b>				
(1.891)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/1.891	28,700	—
(2.132)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.132	14,350	18
(2.152)/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.152	28,700	45
2.291/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.291	28,700	68
2.4175/3 month USD-LIBOR-BBA/ Jul-27		Jul-17/2.4175	43,050	74
(1.642)/3 month USD-LIBOR-BBA/ Dec-19		Dec-17/1.642	57,400	90
(2.0625)/3 month USD-LIBOR-BBA/Aug-18		Aug-17/2.0625	114,800	125

**WRITTEN SWAP OPTIONS OUTSTANDING at 6/30/17 (premiums \$47,463)**

(Unaudited) cont.

**Counterparty****Fixed Obligation % to receive or (pay)/Floating rate index/ Maturity date****Expiration date/strike****Contract amount****Value****Citibank, N.A. cont.**

1.642/3 month USD-LIBOR-BBA/ Dec-19	Dec-17/1.642	\$57,400	\$200
2.132/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/2.132	14,350	204
(2.257)/3 month USD-LIBOR-BBA/ Nov-27	Nov-17/2.257	28,800	363
2.152/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/2.152	28,700	365
2.257/3 month USD-LIBOR-BBA/ Nov-27	Nov-17/2.257	28,800	539
2.208/3 month USD-LIBOR-BBA/ May-24	May-19/2.208	28,700	595
2.204/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/2.204	86,100	704

**Credit Suisse International**

(1.8225)/3 month USD-LIBOR-BBA/Jul-18	Jul-17/1.8225	86,100	7
2.465/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/2.465	129,150	111
(2.5816)/3 month USD-LIBOR-BBA/Aug-37	Aug-17/2.5816	14,500	301
(2.15375)/3 month USD-LIBOR-BBA/Jul-27	Jul-17/2.15375	190,200	304

**Goldman Sachs International**

(1.674)/3 month USD-LIBOR-BBA/ Jul-18	Jul-17/1.674	86,100	1
(1.9245)/3 month USD-LIBOR-BBA/Jul-18	Jul-17/1.9245	86,100	4
(1.779)/3 month USD-LIBOR-BBA/ Jul-18	Jul-17/1.779	86,100	23
2.419/3 month USD-LIBOR-BBA/ Aug-19	Aug-17/2.419	143,500	27
(1.563)/3 month USD-LIBOR-BBA/ Sep-19	Sep-17/1.563	57,400	35
(2.805)/3 month USD-LIBOR-BBA/ Aug-27	Aug-17/2.805	14,400	102
(2.31)/3 month USD-LIBOR-BBA/ Aug-27	Aug-17/2.31	14,400	132
1.563/3 month USD-LIBOR-BBA/ Sep-19	Sep-17/1.563	57,400	148

**JPMorgan Chase Bank N.A.**

(1.799)/3 month USD-LIBOR-BBA/ Jul-27	Jul-17/1.799	57,400	—
2.534/3 month USD-LIBOR-BBA/ Oct-27	Oct-17/2.534	28,700	156
(6.00 Floor)/3 month USD-LIBOR-BBA/Mar-18	Mar-18/6.00	229,000	8,052

**Total** **\$13,093****WRITTEN OPTIONS  
OUTSTANDING at 6/30/17  
(premiums \$4,997) (Unaudited)****Expiration date/strike price****Contract amount****Value**

SPDR S&P 500 ETF Trust (Call)	Jul-17/\$248.50	\$4,411	\$867
USD/CNH (Put)	Oct-17/CNH 6.60	671,200	397
USD/CNH (Put)	Oct-17/CNH 6.60	671,200	359
USD/JPY (Put)	Nov-17/JPY 103.00	405,900	1,158

**Total** **\$2,781****FORWARD PREMIUM SWAP OPTION CONTRACTS****OUTSTANDING at 6/30/16 (Unaudited)****Counterparty****Fixed right or obligation % to receive or (pay)/****Floating rate index/ Maturity date****Expiration date/strike****Contract amount****Premium receivable/ appreciation/ (payable) (depreciation)****Bank of America N.A.**

2.785/3 month USD-LIBOR-BBA/ Jan-47 (Purchased)	Jan-27/2.785	\$8,600	\$(923)	\$27
(2.203)/3 month USD-LIBOR-BBA/ Jun-24 (Purchased)	Jun-19/2.203	14,400	(288)	25
(2.647)/3 month USD-LIBOR-BBA/ Jun-29 (Purchased)	Jun-24/2.647	14,400	(563)	22
2.5925/3 month USD-LIBOR-BBA/ Jan-27 (Purchased)	Jan-19/2.5925	8,600	(303)	(2)
2.647/3 month USD-LIBOR-BBA/ Jun-29 (Purchased)	Jun-24/2.647	14,400	(563)	(27)
2.203/3 month USD-LIBOR-BBA/ Jun-24 (Purchased)	Jun-19/2.203	14,400	(288)	(39)
(2.785)/3 month USD-LIBOR-BBA/ Jan-47 (Purchased)	Jan-27/2.785	8,600	(923)	(47)
(2.5925)/3 month USD-LIBOR-BBA/ Jan-27 (Purchased)	Jan-19/2.5925	8,600	(303)	(124)
2.7175/3 month USD-LIBOR-BBA/ Jan-47 (Written)	Jan-19/2.7175	8,600	777	248
(2.413)/3 month USD-LIBOR-BBA/ Jun-29 (Written)	Jun-19/2.413	14,400	554	68
(2.7175)/3 month USD-LIBOR-BBA/ Jan-47 (Written)	Jan-19/2.7175	8,600	777	50
2.413/3 month USD-LIBOR-BBA/ Jun-29 (Written)	Jun-19/2.413	14,400	554	(45)

**Barclays Bank PLC**

(2.205)/3 month USD-LIBOR-BBA/ Jun-24 (Purchased)	Jun-19/2.205	14,400	(288)	25
2.43/3 month USD-LIBOR-BBA/ Feb-22 (Purchased)	Feb-19/2.43	8,600	(120)	13
2.205/3 month USD-LIBOR-BBA/ Jun-24 (Purchased)	Jun-19/2.205	14,400	(288)	(38)
(2.43)/3 month USD-LIBOR-BBA/ Feb-22 (Purchased)	Feb-19/2.43	8,600	(120)	(64)

**Citibank, N.A.**

(2.654)/3 month USD-LIBOR-BBA/ Jun-29 (Purchased)	Jun-24/2.654	14,400	(563)	20
2.654/3 month USD-LIBOR-BBA/ Jun-29 (Purchased)	Jun-24/2.654	14,400	(563)	(25)

**FORWARD PREMIUM SWAP OPTION CONTRACTS**

**OUTSTANDING at 6/30/16 (Unaudited) cont.**

**Counterparty**

**Fixed right or obligation % to**

**receive or (pay)/ Floating rate index/ Maturity date Expiration date/strike Contract amount Premium receivable/ (payable) Unrealized appreciation/ (depreciation)**

**Citibank, N.A. cont.**

(2.42)/3 month USD-LIBOR-BBA/ Jun-29 (Written) Jun-19/2.42 \$14,400 \$554 \$65

2.42/3 month USD-LIBOR-BBA/ Jun-29 (Written) Jun-19/2.42 14,400 552 (42)

**Goldman Sachs**

**International**

2.8175/3 month USD-LIBOR-BBA/ Mar-47 (Purchased) Mar-27/2.8175 1,700 (215) 11

(2.33)/3 month USD-LIBOR-BBA/ Aug-27 (Purchased) Aug-17/2.33 43,050 (327) 3

(2.5975)/3 month USD-LIBOR-BBA/ Aug-27 (Purchased) Aug-17/2.5975 86,100 (138) (6)

(2.8175)/3 month USD-LIBOR-BBA/ Mar-47 (Purchased) Mar-27/2.8175 1,700 (215) (11)

2.46/3 month USD-LIBOR-BBA/ Aug-27 (Written) Aug-17/2.46 129,150 465 (13)

**FORWARD PREMIUM SWAP OPTION CONTRACTS**

**OUTSTANDING at 6/30/16 (Unaudited) cont.**

**Counterparty**

**Fixed right or obligation % to**

**receive or (pay)/ Floating rate index/ Maturity date Expiration date/strike Contract amount Premium receivable/ (payable) Unrealized appreciation/ (depreciation)**

**JPMorgan Chase**

**Bank N.A.**

2.8325/3 month USD-LIBOR-BBA/ Feb-52 (Purchased) Feb-22/2.8325 \$8,600 (1,201) \$62

(2.8325)/3 month USD-LIBOR-BBA/ Feb-52 (Purchased) Feb-22/2.8325 8,600 (1,201) (227)

2.79/3 month USD-LIBOR-BBA/ Feb-49 (Written) Feb-19/2.79 8,600 817 306

(2.79)/3 month USD-LIBOR-BBA/ Feb-49 (Written) Feb-19/2.79 8,600 817 (36)

**Total** **\$ (3,526)** **\$ 199**

**TBA SALE COMMITMENTS**

**OUTSTANDING**

**at 6/30/17 (proceeds receivable \$1,031,328) (Unaudited)**

Federal National Mortgage Association, 3.50%, 7/1/47 \$1,000,000 7/13/17 \$1,026,875

**Total** **\$1,026,875**

**CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 6/30/17 (Unaudited)**

Notional amount	Upfront premium received (paid)	Termination date	Payments made by fund per annum	Payments received by fund per annum	Unrealized appreciation/ (depreciation)
\$1,313,100 <sup>E</sup>	\$2,759	9/20/22	1.90%	3 month USD-LIBOR-BBA	\$9,009
2,619,900 <sup>E</sup>	5,300	9/20/19	1.70%	3 month USD-LIBOR-BBA	4,359
179,600 <sup>E</sup>	932	9/20/27	2.20%	3 month USD-LIBOR-BBA	2,665
117,000	(2)	6/27/27	2.15%	3 month USD-LIBOR-BBA	1,290
14,350 <sup>E</sup>	—	7/13/27	2.18%	3 month USD-LIBOR-BBA	128
309,000	(1)	7/5/19	1.60431%	3 month USD-LIBOR-BBA	35
309,000	(1)	7/5/19	1.6076%	3 month USD-LIBOR-BBA	14
101,200 <sup>E</sup>	(1,072)	9/20/47	3 month USD-LIBOR-BBA	2.45%	(3,221)
698,000 <sup>E</sup>	(4,318)	9/20/22	3 month USD-LIBOR-BBA	1.95%	(5,975)
728,000 <sup>E</sup>	(8,492)	9/20/27	3 month USD-LIBOR-BBA	2.25%	(12,218)
6,564,100 <sup>E</sup>	(34,297)	9/20/27	3 month USD-LIBOR-BBA	2.20%	(97,640)
AUD 1,054,000	4,730	6/28/22	2.60%	6 month AUD-BBR-BBSW	(397)
AUD 4,000	(36)	6/28/27	6 month AUD-BBR-BBSW	3.00%	(1)
CAD 176,000 <sup>E</sup>	(815)	9/20/27	3 month CAD-BA-CDOR	1.95%	(2,927)
CAD 373,000 <sup>E</sup>	(406)	9/20/22	3 month CAD-BA-CDOR	1.60%	(3,031)
CHF 651,000 <sup>E</sup>	(590)	9/20/22	6 month CHF-LIBOR-BBA	0.30%	3,425
CHF 87,000 <sup>E</sup>	(133)	9/20/27	6 month CHF-LIBOR-BBA	0.15%	(1,297)
EUR 1,075,000 <sup>E</sup>	1,432	9/20/22	6 month EUR-EURIBOR-REUTERS	0.20%	(6,524)
EUR 1,256,000 <sup>E</sup>	106	9/20/27	6 month EUR-EURIBOR-REUTERS	0.80%	(20,999)



**CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 6/30/17 (Unaudited) cont.**

Notional amount	Upfront premium received (paid)	Termination date	Payments made by fund per annum	Payments received by fund per annum	Unrealized appreciation/ (depreciation)	
GBP	811,000 <sup>E</sup>	\$2,151	9/20/22	0.75%	6 month GBP-LIBOR-BBA	\$16,631
GBP	1,000 <sup>E</sup>	3	9/20/27	1.15%	6 month GBP-LIBOR-BBA	30
NOK	13,000 <sup>E</sup>	1	9/20/22	1.45%	6 month NOK-NIBOR-NIBR	9
NOK	2,197,000 <sup>E</sup>	(659)	9/20/27	6 month NOK-NIBOR-NIBR	1.90%	(2,798)
NZD	2,000 <sup>E</sup>	2	9/20/22	3 month NZD-BBR-FRA	2.75%	(12)
NZD	320,000 <sup>E</sup>	(534)	9/20/27	3 month NZD-BBR-FRA	3.25%	(3,501)
SEK	4,878,000 <sup>E</sup>	759	9/20/22	0.30%	3 month SEK-STIBOR-SIDE	7,030
SEK	686,000 <sup>E</sup>	1,433	9/20/27	3 month SEK-STIBOR-SIDE	1.10%	(114)
<b>Total</b>		<b>\$(31,748)</b>				<b>\$(116,030)</b>

<sup>E</sup> Extended effective date.

**OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 6/30/17 (Unaudited)**

Swap counterparty/ Notional amount	Upfront premium received (paid)	Termination date	Payments received (paid) by fund per annum	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)	
<b>Bank of America N.A.</b>						
\$9,524	\$—	1/12/41	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	\$47	
9,524	—	1/12/41	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	47	
baskets	43,243	—	3/7/18	(3 month USD-LIBOR-BBA plus 0.10%)	A basket (MLFCF11) of common stocks	(24,923)
units	1,048	—	8/2/17	3 month USD-LIBOR-BBA minus 0.07%	Russell 1000 Total Return Index	(116,137)
<b>Barclays Bank PLC</b>						
\$4,396	—	1/12/41	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	22	
8,977	—	1/12/38	6.50% (1 month USD-LIBOR)	Synthetic TRS Index 6.50% 30 year Fannie Mae pools	1	
22,223	—	1/12/43	(3.50%) 1 month USD-LIBOR	Synthetic TRS Index 3.50% 30 year Fannie Mae pools	(80)	
<b>Citibank, N.A.</b>						
6,105	—	1/12/41	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	30	
baskets	17,972	—	11/10/17	3 month USD-LIBOR-BBA minus 0.75%	A basket (CGPUTS54) of common stocks	(62,031)
baskets	21	—	12/1/17	(3 month USD-LIBOR-BBA plus 0.37%)	A basket (CGPUTQL2) of common stocks	(54,952)
units	716	—	10/17/17	3 month USD-LIBOR-BBA plus 0.28%	MSCI Emerging Markets TR Net USD	(16,531)
units	409	—	11/27/17	3 month USD-LIBOR-BBA plus 0.09%	Russell 1000 Total Return Index	(34,712)
units	1,562	—	3/19/18	3 month USD-LIBOR-BBA plus 0.20%	MSCI Emerging Markets TR Net USD	(331)

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 6/30/17 (Unaudited) cont.

Swap counterparty/ Notional amount	Upfront premium received (paid)	Termination date	Payments received (paid) by fund per annum	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
<b>Credit Suisse International</b>					
\$251,383	\$—	1/12/41	4.50% (1 month USD-LIBOR)	Synthetic MBX Index 4.50% 30 year Ginnie Mae II pools	\$(1,135)
53,538	—	1/12/43	3.50% (1 month USD-LIBOR)	Synthetic TRS Index 3.50% 30 year Fannie Mae pools	193
4,546	—	1/12/43	3.50% (1 month USD-LIBOR)	Synthetic TRS Index 3.50% 30 year Fannie Mae pools	16
67,108	—	1/12/45	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	364
31,138	—	1/12/45	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	169
31,300	—	1/12/45	3.50% (1 month USD-LIBOR)	Synthetic TRS Index 3.50% 30 year Fannie Mae pools	176
37,363	—	1/12/41	(4.00%) 1 month USD-LIBOR	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	(185)
<b>Deutsche Bank AG</b>					
baskets 10,625	—	3/7/18	3 month USD-LIBOR-BBA minus 0.45%	DB Custom PT Short 15 PR Index	48,137
units 10,619	—	3/7/18	(3 month USD-LIBOR-BBA plus 0.31%)	DB Custom PT Long 15 PR Index	34,434
<b>Goldman Sachs International</b>					
\$31,138	—	1/12/45	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	169
35,860	—	1/12/43	(3.50%) 1 month USD-LIBOR	Synthetic TRS Index 3.50% 30 year Fannie Mae pools	(129)
31,444	—	1/12/44	(3.00%) 1 month USD-LIBOR	Synthetic TRS Index 3.00% 30 year Fannie Mae pools	(86)
baskets 35,148	—	12/15/20	(1 month USD-LIBOR-BBA plus 0.44%)	A basket (GSCBPUR1) of common stocks	(16,193)
baskets 43,887	—	12/15/20	1 month USD-LIBOR-BBA minus 0.15%	A basket (GSGLPWDS) of common stocks	15,699
baskets 53,219	—	12/15/20	(1 month USD-LIBOR-BBA plus 0.50%)	A basket (GSGLPWDL) of common stocks	(4,027)
shares 1,012	—	12/15/20	1 month USD-LIBOR-BBA minus 0.65%	iShares MSCI Emerging Markets ETF	(430)
shares 1,209	—	12/15/20	1 month USD-LIBOR-BBA minus 0.65%	iShares MSCI Emerging Markets ETF	(513)
shares 1,674	—	12/15/20	1 month USD-LIBOR-BBA minus 0.65%	iShares MSCI Emerging Markets ETF	(711)
shares 744	—	12/15/20	1 month USD-LIBOR-BBA minus 0.65%	iShares MSCI Emerging Markets ETF	(316)
shares 556	—	12/15/20	1 month USD-LIBOR-BBA minus 0.65%	iShares MSCI Emerging Markets ETF	142
units 2,927	—	12/15/20	(0.45%)	Goldman Sachs Volatility Carry US Scaled 3x Excess Return Strategy	630
units 7,591	—	12/15/20	(0.45%)	Goldman Sachs Volatility Carry US Series 30 Excess Return Strategy	5,252

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 6/30/17 (Unaudited) cont.

Swap counterparty/ Notional amount	Upfront premium received (paid)	Termination date	Payments received (paid) by fund per annum	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
<b>Goldman Sachs International cont.</b>					
units 301	\$—	12/12/17	3 month USD-LIBOR-BBA plus 0.10%	MSCI Emerging Markets TRNet USD	\$(1,315)
units 5,818	—	12/15/20	(0.30%)	Goldman Sachs Volatility Carry US Excess Return Strategy	6,522
units 1,762	—	12/15/20	(0.30%)	Goldman Sachs Volatility Carry US Excess Return Strategy	2,983
<b>JPMorgan Chase Bank N.A.</b>					
\$7,814	—	1/12/41	4.00% (1 month USD-LIBOR)	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	39
baskets 35,602	—	4/20/18	1 month USD-LIBOR-BBA minus 0.50%	A basket (JPCMPTSH) of common stocks	21,747
<b>JPMorgan Securities LLC</b>					
\$38,815	—	1/12/45	(4.00%) 1 month USD-LIBOR	Synthetic TRS Index 4.00% 30 year Fannie Mae pools	(211)
<b>UBSAG</b>					
units 5,363	—	8/21/17	1 month USD-LIBOR-BBA plus 0.35%	MSCI Emerging Markets TRNet USD	(1,090)
units 27	—	2/9/18	1 month USD-LIBOR-BBA plus 0.15%	MSCI Emerging Markets TRNet USD	52
<b>Total</b>	<b>\$—</b>				<b>\$(199,167)</b>

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING at 6/30/17 (Unaudited)

Swap counterparty/ Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Termination date	Payments received (paid) by fund per annum	Unrealized appreciation/ (depreciation)
<b>Bank of America N.A.</b>						
CMBX NA BBB- Index	BBB-/P	\$68	\$1,000	5/11/63	300 bp	\$(48)
CMBX NA BBB- Index	BBB-/P	121	2,000	5/11/63	300 bp	(112)
CMBX NA BBB- Index	BBB-/P	228	4,000	5/11/63	300 bp	(237)
CMBX NA BBB- Index	BBB-/P	247	4,000	5/11/63	300 bp	(218)
<b>Barclays Bank PLC</b>						
CMBX NA BBB- Index	BBB-/P	887	8,000	5/11/63	300 bp	(44)
CMBX NA BBB- Index	BBB-/P	141	25,000	1/17/47	300 bp	(2,079)
<b>Credit Suisse International</b>						
CMBX NAA Index	A/P	474	9,000	5/11/63	200 bp	188
CMBX NAB Index	—	(1,889)	107,000	5/11/63	(500 bp)	17,710
CMBX NAB Index	—	(2,961)	18,000	1/17/47	(500 bp)	(85)
CMBX NA BBB- Index	BBB-/P	760	6,000	5/11/63	300 bp	62
CMBX NA BBB- Index	BBB-/P	802	7,000	5/11/63	300 bp	(12)
CMBX NA BBB- Index	BBB-/P	2,065	18,000	5/11/63	300 bp	(28)
CMBX NA BBB- Index	BBB-/P	24,378	228,000	5/11/63	300 bp	(2,138)
CMBX NA BBB- Index	BBB-/P	3,952	50,000	1/17/47	300 bp	(488)
CMBX NA BBB- Index	BBB-/P	63,123	854,000	1/17/47	300 bp	(12,712)
<b>Goldman Sachs International</b>						
CMBX NA BB Index	—	(5,422)	53,000	5/11/63	(500 bp)	4,286
CMBX NA BB Index	—	(757)	5,000	1/17/47	(500 bp)	42
CMBX NAA Index	A/P	419	8,000	5/11/63	200 bp	165
CMBX NAA Index	A/P	1,527	30,000	5/11/63	200 bp	574
CMBX NAA Index	A/P	353	7,000	1/17/47	200 bp	205
CMBX NA BB Index	—	(2,776)	19,000	5/11/63	(500 bp)	704
CMBX NA BB Index	—	(10,482)	62,000	1/17/47	(500 bp)	(577)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING at 6/30/17 (Unaudited) cont.

Swap counterparty/ Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Termination date	Payments received (paid) by fund per annum	Unrealized appreciation/ (depreciation)
<b>Goldman Sachs International cont.</b>						
CMBX NA BB Index	—	\$(1,638)	\$10,000	1/17/47	(500 bp)	\$(41)
CMBX NA BBB- Index	BBB-/P	260	3,000	5/11/63	300 bp	(89)
CMBX NA BBB- Index	BBB-/P	259	3,000	5/11/63	300 bp	(90)
CMBX NA BBB- Index	BBB-/P	422	5,000	5/11/63	300 bp	(160)
CMBX NA BBB- Index	BBB-/P	591	7,000	5/11/63	300 bp	(223)
CMBX NA BBB- Index	BBB-/P	365	7,000	5/11/63	300 bp	(449)
CMBX NA BBB- Index	BBB-/P	633	8,000	5/11/63	300 bp	(297)
CMBX NA BBB- Index	BBB-/P	990	9,000	5/11/63	300 bp	(56)
CMBX NA BBB- Index	BBB-/P	435	9,000	5/11/63	300 bp	(611)
CMBX NA BBB- Index	BBB-/P	1,218	10,000	5/11/63	300 bp	55
CMBX NA BBB- Index	BBB-/P	1,160	14,000	5/11/63	300 bp	(468)
CMBX NA BBB- Index	BBB-/P	1,671	15,000	5/11/63	300 bp	(73)
CMBX NA BBB- Index	BBB-/P	2,221	16,000	5/11/63	300 bp	361
CMBX NA BBB- Index	BBB-/P	1,090	16,000	5/11/63	300 bp	(771)
CMBX NA BBB- Index	BBB-/P	878	18,000	5/11/63	300 bp	(1,216)
CMBX NA BBB- Index	BBB-/P	3,376	36,000	5/11/63	300 bp	(810)
CMBX NA BBB- Index	BBB-/P	4,360	58,000	5/11/63	300 bp	(2,385)
CMBX NA BBB- Index	BBB-/P	695	8,000	1/17/47	300 bp	(15)
CMBX NA BBB- Index	BBB-/P	1,448	17,000	1/17/47	300 bp	(61)
CMBX NA BBB- Index	BBB-/P	8,352	113,000	1/17/47	300 bp	(1,682)
CMBX NA BBB- Index	BBB-/P	9,619	138,000	1/17/47	300 bp	(2,636)
<b>JPMorgan Securities LLC</b>						
CMBX NAA Index	A/P	871	18,000	5/11/63	200 bp	299
CMBX NA BB Index	—	(2,531)	18,000	5/11/63	(500 bp)	766
CMBX NA BB Index	—	(1,160)	8,000	5/11/63	(500 bp)	305
CMBX NA BB Index	—	(1,299)	8,000	1/17/47	(500 bp)	(21)
CMBX NA BBB- Index	BBB-/P	375	3,000	5/11/63	300 bp	26
CMBX NA BBB- Index	BBB-/P	576	4,000	5/11/63	300 bp	111
CMBX NA BBB- Index	BBB-/P	728	5,000	5/11/63	300 bp	146
CMBX NA BBB- Index	BBB-/P	512	6,000	5/11/63	300 bp	(186)
CMBX NA BBB- Index	BBB-/P	265	6,000	5/11/63	300 bp	(433)
CMBX NA BBB- Index	BBB-/P	876	7,000	5/11/63	300 bp	62
CMBX NA BBB- Index	BBB-/P	938	8,000	5/11/63	300 bp	7
CMBX NA BBB- Index	BBB-/P	552	8,000	5/11/63	300 bp	(378)
CMBX NA BBB- Index	BBB-/P	1,051	9,000	5/11/63	300 bp	4
CMBX NA BBB- Index	BBB-/P	1,043	9,000	5/11/63	300 bp	(4)
CMBX NA BBB- Index	BBB-/P	1,222	10,000	5/11/63	300 bp	59
CMBX NA BBB- Index	BBB-/P	981	10,000	5/11/63	300 bp	(182)
CMBX NA BBB- Index	BBB-/P	1,628	11,000	5/11/63	300 bp	349
CMBX NA BBB- Index	BBB-/P	1,628	11,000	5/11/63	300 bp	349
CMBX NA BBB- Index	BBB-/P	679	11,000	5/11/63	300 bp	(601)
CMBX NA BBB- Index	BBB-/P	1,752	12,000	5/11/63	300 bp	356
CMBX NA BBB- Index	BBB-/P	1,192	14,000	5/11/63	300 bp	(436)
CMBX NA BBB- Index	BBB-/P	1,883	23,000	5/11/63	300 bp	(792)
CMBX NA BBB- Index	BBB-/P	1,472	23,000	5/11/63	300 bp	(1,203)
CMBX NA BBB- Index	BBB-/P	1,226	23,000	5/11/63	300 bp	(1,449)
CMBX NA BBB- Index	BBB-/P	1,171	23,000	5/11/63	300 bp	(1,504)
CMBX NA BBB- Index	BBB-/P	2,839	25,000	5/11/63	300 bp	(70)
CMBX NA BBB- Index	BBB-/P	3,178	26,000	5/11/63	300 bp	154
CMBX NA BBB- Index	BBB-/P	3,178	26,000	5/11/63	300 bp	154
CMBX NA BBB- Index	BBB-/P	1,538	29,000	5/11/63	300 bp	(1,834)
CMBX NA BBB- Index	BBB-/P	6,641	55,000	5/11/63	300 bp	245

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING at 6/30/17 (Unaudited) cont.

Swap counterparty/ Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Termination date	Payments received (paid) by fund per annum	Unrealized appreciation/ (depreciation)
<b>JPMorgan Securities LLC cont.</b>						
CMBX NA BBB- Index	BBB-/P	\$6,641	\$55,000	5/11/63	300 bp	\$245
CMBX NA BBB- Index	—	(592)	11,000	1/17/47	(300 bp)	385
<b>Total</b>		<b>\$154,717</b>				<b>\$(11,630)</b>

\*Payments related to the referenced debt are made upon a credit default event.

\*\*Upfront premium is based on the difference between the original spread on issue and the market spread on day of execution.

\*\*\*Ratings are presented for credit default contracts in which the fund has sold protection on the underlying referenced debt. Ratings for an underlying index represent the average of the ratings of all the securities included in that index. The Moody's, Standard & Poor's or Fitch ratings are believed to be the most recent ratings available at June 30, 2017. Securities rated by Fitch are indicated by "/F." Securities rated by Putnam are indicated by "/P." The Putnam rating categories are comparable to the Standard & Poor's classifications.

CENTRALLY CLEARED CREDIT DEFAULT CONTRACTS OUTSTANDING at 6/30/17 (Unaudited)

Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Termination Date	Payments received (paid) by fund per annum	Unrealized appreciation/ (depreciation)
NAHY Series 28 Index	B+/P	\$(355,603)	\$5,251,000	6/20/22	500 bp	\$14,444
<b>Total</b>		<b>\$(355,603)</b>				<b>\$14,444</b>

\*Payments related to the referenced debt are made upon a credit default event.

\*\*Upfront premium is based on the difference between the original spread on issue and the market spread on day of execution.

\*\*\*Ratings are presented for credit default contracts in which the fund has sold protection on the underlying referenced debt. Ratings for an underlying index represent the average of the ratings of all the securities included in that index. The Moody's, Standard & Poor's or Fitch ratings are believed to be the most recent ratings available at June 30, 2017. Securities rated by Fitch are indicated by "/F." Securities rated by Putnam are indicated by "/P." The Putnam rating categories are comparable to the Standard & Poor's classifications.

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	\$445,365	\$—	\$—
Capital goods	564,296	—	—
Communication services	721,823	—	—
Conglomerates	92,069	—	—
Consumer cyclicals	1,110,543	—	—
Consumer staples	680,636	—	—
Energy	343,706	—	—
Financials	2,070,232	—	—
Health care	742,951	—	—
Technology	1,742,939	—	—
Transportation	152,952	—	—
Utilities and power	410,286	—	—
<b>Total common stocks</b>	<b>9,077,798</b>	<b>—</b>	<b>—</b>
Asset-backed securities	—	15,667	—
Commodity linked notes	—	1,504,575	—
Corporate bonds and notes	—	236,920	—
Foreign government and agency bonds and notes	—	375,656	—
Investment companies	2,462,414	—	—
Mortgage-backed securities	—	2,484,351	18,793
Purchased options outstanding	—	76,861	—
Purchased swap options outstanding	—	5,101	—
U.S. government and agency mortgage obligations	—	5,076,289	—
Warrants	—	118,125	—
Short-term investments	6,583,161	11,320,412	—
<b>Totals by level</b>	<b>\$18,123,373</b>	<b>\$21,213,957</b>	<b>\$18,793</b>

Other financial instruments:	Valuation inputs		
	Level 1	Level 2	Level 3
Forward currency contracts	\$—	\$(2,799)	\$—
Futures contracts	33,028	—	—
Written options outstanding	—	(2,781)	—
Written swap options outstanding	—	(13,093)	—
Forward premium swap option contracts	—	199	—
TBA sale commitments	—	(1,026,875)	—
Interest rate swap contracts	—	(84,282)	—
Total return swap contracts	—	(199,167)	—
Credit default contracts	—	203,700	—
<b>Totals by level</b>	<b>\$33,028</b>	<b>\$(1,125,098)</b>	<b>\$—</b>

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

During the reporting period, transfers within the fair value hierarchy, if any, did not represent, in the aggregate, more than 1% of the fund's net assets measured as of the end of the period. Transfers are accounted for using the end of period pricing valuation method.

At the start and close of the reporting period, Level 3 investments in securities represented less than 1% of the fund's net assets and were not considered a significant portion of the fund's portfolio.

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

# Statement of assets and liabilities

6/30/17 (Unaudited)

<b>Assets</b>	
Investment in securities, at value, including \$681,378 of securities on loan (Note 1):	
Unaffiliated issuers (identified cost \$22,575,638)	\$23,994,862
Affiliated issuers (identified cost \$7,281,261) (Notes 1 and 5)	7,281,261
Repurchase agreements (identified cost \$8,080,000)	8,080,000
Cash	79,988
Foreign currency (cost \$72) (Note 1)	72
Dividends, interest and other receivables	90,615
Receivable for shares of the fund sold	28,482
Receivable for investments sold	13,878
Receivable for sales of delayed delivery securities (Note 1)	1,032,495
Receivable from Manager (Note 2)	13,063
Receivable for variation margin on futures contracts (Note 1)	7,412
Receivable for variation margin on centrally cleared swap contracts (Note 1)	43,489
Unrealized appreciation on forward currency contracts (Note 1)	101,936
Unrealized appreciation on forward premium swap option contracts (Note 1)	945
Unrealized appreciation on OTC swap contracts (Note 1)	165,245
Premium paid on OTC swap contracts (Note 1)	31,507
Prepaid assets	287
<b>Total assets</b>	<b>40,965,537</b>
<b>Liabilities</b>	
Payable for investments purchased	8,957
Payable for purchases of delayed delivery securities (Note 1)	5,100,089
Payable for shares of the fund repurchased	8,865
Payable for custodian fees (Note 2)	32,605
Payable for investor servicing fees (Note 2)	3,778
Payable for Trustee compensation and expenses (Note 2)	3,095
Payable for administrative services (Note 2)	131
Payable for distribution fees (Note 2)	6,858
Payable for variation margin on futures contracts (Note 1)	4,921
Payable for variation margin on centrally cleared swap contracts (Note 1)	56,547
Unrealized depreciation on OTC swap contracts (Note 1)	376,042
Premium received on OTC swap contracts (Note 1)	186,224
Unrealized depreciation on forward currency contracts (Note 1)	104,735
Unrealized depreciation on forward premium swap option contracts (Note 1)	746
Written options outstanding, at value (premiums \$52,460) (Notes 1 and 3)	15,874
TBA sale commitments, at value (proceeds receivable \$1,031,328) (Note 1)	1,026,875
Collateral on securities loaned, at value (Note 1)	698,100
Other accrued expenses	46,782
<b>Total liabilities</b>	<b>7,681,224</b>
<b>Net assets</b>	<b>\$33,284,313</b>
<b>Represented by</b>	
Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$32,591,217
Undistributed net investment income (Note 1)	211,088
Accumulated net realized loss on investments and foreign currency transactions (Note 1)	(696,260)
Net unrealized appreciation of investments and assets and liabilities in foreign currencies	1,178,268
<b>Total — Representing net assets applicable to capital shares outstanding</b>	<b>\$33,284,313</b>
<b>Computation of net asset value Class IA</b>	
Net assets	\$11,316
Number of shares outstanding	1,084
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$10.44
<b>Computation of net asset value Class IB</b>	
Net assets	\$33,272,997
Number of shares outstanding	3,227,085
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$10.31

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

## Statement of operations

Six months ended 6/30/17 (Unaudited)

### Investment income

Interest (including interest income of \$53,559 from investments in affiliated issuers) (Note 5)	\$170,543
Dividends (net of foreign tax of \$4,509)	142,074
Securities lending (net of expenses) (Note 1)	561
<b>Total investment income</b>	<b>313,178</b>

### Expenses

Compensation of Manager (Note 2)	118,671
Investor servicing fees (Note 2)	11,552
Custodian fees (Note 2)	22,635
Trustee compensation and expenses (Note 2)	1,134
Distribution fees (Note 2)	40,899
Administrative services (Note 2)	389
Auditing and tax fees	44,146
Other	9,271
Fees waived and reimbursed by Manager (Note 2)	(60,313)
<b>Total expenses</b>	<b>188,384</b>
Expense reduction (Note 2)	(302)

### Net expenses

<b>Net expenses</b>	<b>188,082</b>
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### Net investment income

<b>Net investment income</b>	<b>125,096</b>
Net realized gain on securities from unaffiliated issuers (Notes 1 and 3)	427,218
Net realized gain on forward currency contracts (Note 1)	40,451
Net realized gain on foreign currency transactions (Note 1)	741
Net realized loss on swap contracts (Note 1)	(86,044)
Net realized loss on futures contracts (Note 1)	(9,226)
Net realized loss on written options (Notes 1 and 3)	(6,031)
Net unrealized appreciation of securities in unaffiliated issuers and TBA sale commitments during the period	546,094
Net unrealized depreciation of forward currency contracts during the period	(13,744)
Net unrealized appreciation of assets and liabilities in foreign currencies during the period	394
Net unrealized depreciation of swap contracts during the period	(223,753)
Net unrealized appreciation of futures contracts during the period	76,286
Net unrealized appreciation of written options during the period	9,745
<b>Net gain on investments</b>	<b>762,131</b>
<b>Net increase in net assets resulting from operations</b>	<b>\$887,227</b>

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



## Statement of changes in net assets

	Six months ended 6/30/17*	Year ended 12/31/16
<b>Increase (decrease) in net assets</b>		
<b>Operations:</b>		
Net investment income	\$125,096	\$195,763
Net realized gain (loss) on investments and foreign currency transactions	367,109	(924,623)
Net unrealized appreciation of investments and assets and liabilities in foreign currencies	395,022	911,643
<b>Net increase in net assets resulting from operations</b>	<b>887,227</b>	<b>182,783</b>
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	—	(739)
Class IB	—	(1,158,654)
From return of capital		
Class IA	—	(42)
Class IB	—	(66,319)
Increase (decrease) from capital share transactions (Note 4)	1,352,145	(1,750,376)
<b>Total increase (decrease) in net assets</b>	<b>2,239,372</b>	<b>(2,793,347)</b>
<b>Net assets:</b>		
Beginning of period	31,044,941	33,838,288
<b>End of period</b> (including undistributed net investment income of \$211,088 and \$85,992, respectively)	<b>\$33,284,313</b>	<b>\$31,044,941</b>

\* Unaudited.

## 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) <sup>a</sup>	Net realized and unrealized gain (loss) on investments	Total from investment operations	From Net investment income	From net realized gain on investments	From return of capital	Total distributions	Net asset value, end of period	Total return at net asset value (%) <sup>b,c</sup>	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) <sup>b,d,e</sup>	Ratio of net investment income (loss) to average net assets (%) <sup>e</sup>	Portfolio turnover (%)
<b>Class IA</b>														
6/30/17†	\$10.15	.05	.24	.29	—	—	—	—	\$10.44	2.86*	\$11	.45*	.51*	254*
12/31/16	10.46	.09	—	.09	(.38)	—	(.02)	(.40)	10.15	.93	11	.90	.86	503 <sup>f</sup>
12/31/15	10.78	.06	(.08)	(.02)	(.04)	(.26)	—	(.30)	10.46	(.22)	21	.90	.58	520 <sup>f</sup>
12/31/14	10.49	.05	.38	.43	(.14)	—	—	(.14)	10.78	4.12	11	.90	.46	317 <sup>f</sup>
12/31/13	10.07	.01	.44	.45	(.03)	—	—	(.03)	10.49	4.46	10	.90	.12	208 <sup>g</sup>
12/31/12	9.63	— <sup>h</sup>	.44	.44	—	—	—	—	10.07	4.57	9,971	.90	.02	262 <sup>g</sup>
<b>Class IB</b>														
6/30/17†	\$10.03	.04	.24	.28	—	—	—	—	\$10.31	2.79*	\$33,273	.57*	.38*	254*
12/31/16	10.35	.06	(.01)	.05	(.35)	—	(.02)	(.37)	10.03	.60	31,034	1.15	.61	503 <sup>f</sup>
12/31/15	10.67	.03	(.07)	(.04)	(.02)	(.26)	—	(.28)	10.35	(.44)	33,818	1.15	.33	520 <sup>f</sup>
12/31/14	10.41	.02	.38	.40	(.14)	—	—	(.14)	10.67	3.86	25,220	1.15	.22	317 <sup>f</sup>
12/31/13	10.03	— <sup>h</sup>	.41	.41	(.03)	—	—	(.03)	10.41	4.08	21,681	1.15	(.04)	208 <sup>g</sup>
12/31/12	9.61	(.02)	.44	.42	—	—	—	-	10.03	4.37	7,886	1.15	(.23)	262 <sup>g</sup>

\* Not annualized.

† Unaudited.

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

<sup>b</sup> The charges and expenses at the insurance company separate account level are not reflected.

<sup>c</sup> Total return assumes dividend reinvestment.

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

<sup>e</sup> Reflects an involuntary contractual expense limitation in effect during the period. As a result of such limitation and/or waivers, the expenses of each class reflect a reduction of the following amounts (Note 2):

	Percentage of average net assets
6/30/17	0.18%
12/31/16	0.51
12/31/15	0.44
12/31/14	0.50
12/31/13	0.45
12/31/12	1.24

<sup>f</sup> Portfolio turnover includes TBA purchase and sale commitments.

<sup>g</sup> Portfolio turnover excludes TBA purchase and sale commitments. Including TBA purchase and sale commitments to conform with current year presentation, the portfolio turnover would have been the following:

	Portfolio turnover%
December 31, 2013	280%
December 31, 2012	475

<sup>h</sup> Amount represents less than \$0.01 per share.

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

## Notes to financial statements 6/30/17 (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, 2017 through June 30, 2017.

Putnam VT Absolute Return 500 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 earn a positive total return that exceeds the return on U.S. Treasury bills by 500 basis points (or 5.00%) on an annualized basis over a reasonable period of time (generally at least three years or more) regardless of market conditions. The fund is designed to pursue a consistent absolute return by combining two independent investment strategies — a beta strategy, which provides broad exposure to investment markets, and an alpha strategy, which seeks returns from active trading. The beta strategy seeks to balance risk and to provide positive total return by investing, without limit, in many different asset classes, including U.S., international, and emerging markets equity securities (growth or value stocks or both) and fixed-income securities; mortgage- and asset-backed securities; below-investment-grade securities (sometimes referred to as “junk bonds”); inflation-protected securities; commodities; and real estate investment trusts (REITs). The alpha strategy involves the potential use of active trading strategies designed to provide additional total return through active security selection, tactical asset allocation, currency transactions and options transactions. In pursuing a consistent absolute return, the fund’s strategies are also generally intended to produce lower volatility over a reasonable period of time than has been historically associated with traditional asset classes that have earned similar levels of return over long historical periods. These traditional asset classes might include, for example, balanced portfolios with significant exposure to both stocks and bonds. 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 when deciding whether to buy or sell fixed-income investments. Putnam Management may also take into account general market conditions when making investment decisions. The fund typically uses derivatives, such as futures, options, certain foreign currency transactions, warrants and swap contracts, to a significant extent for hedging purposes and to increase the fund’s exposure to the asset classes and strategies mentioned above, which may create investment leverage.

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 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, 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. All premiums/discounts are amortized/accreted on a yield-to-maturity basis.

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

**Stripped securities** The fund may invest in stripped securities which represent a participation in securities that may be structured in classes with rights to receive different portions of the interest and principal. Interest-only securities receive all of the interest and principal-only securities receive all of the principal. If the interest-only securities experience greater than anticipated prepayments of principal, the fund may fail to recoup fully its initial investment in these securities. Conversely, principal-only securities increase in value if prepayments are greater than anticipated and decline if prepayments are slower than anticipated. The fair value of these securities is highly sensitive to changes in interest rates.

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

**Options contracts** The fund uses options contracts to hedge duration and convexity, to isolate prepayment risk and to manage downside risks.

The potential risk to the fund is that the change in value of options contracts may not correspond to the change in value of the hedged instruments. In addition, losses may arise from changes in the value of the underlying instruments if there is an illiquid secondary market for the contracts, if interest or exchange rates move unexpectedly or if the counterparty to the contract is unable to perform. Realized gains and losses on purchased options are included in realized gains and losses

on investment securities. If a written call option is exercised, the premium originally received is recorded as an addition to sales proceeds. If a written put option is exercised, the premium originally received is recorded as a reduction to the cost of investments.

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

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

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

**Futures contracts** The fund uses futures contracts for hedging treasury term structure risk and for yield curve positioning.

The potential risk to the fund is that the change in value of futures contracts may not correspond to the change in value of the hedged instruments. In addition, losses may arise from changes in the value of the underlying instruments, if there is an illiquid secondary market for the contracts, if interest or exchange rates move unexpectedly or if the counterparty to the contract is unable to perform. With futures, there is minimal counterparty credit risk to the fund since futures are exchange traded and the exchange's clearinghouse, as counterparty to all exchange traded futures, guarantees the futures against default. Risks may exceed amounts recognized on the Statement of assets and liabilities. When the contract is closed, the fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

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

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

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

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.

**Interest rate swap contracts** The fund entered into OTC and/or centrally cleared interest rate swap contracts, which are arrangements between two parties to exchange cash flows based on a notional principal amount, for hedging term structure risk, for yield curve positioning and for gaining exposure to rates in various countries.

An OTC and centrally cleared interest rate swap can be purchased or sold with an upfront premium. For OTC interest rate swap contracts, an upfront payment received by the fund is recorded as a liability on the fund's books. An upfront payment made by the fund is recorded as an asset on the fund's books. OTC and centrally cleared interest rate swap contracts are marked to market daily based upon quotations from an independent pricing service or market makers. Any change is recorded as an unrealized gain or loss on OTC interest rate swaps. Daily fluctuations in the value of centrally cleared interest rate swaps are settled through a central clearing agent and are recorded in variation margin on the Statement of

assets and liabilities and recorded as unrealized gain or loss. Payments, including upfront premiums, received or made are recorded as realized gains or losses at the reset date or the closing of the contract. Certain OTC and centrally cleared interest rate swap contracts may include extended effective dates. Payments related to these swap contracts are accrued based on the terms of the contract.

The fund could be exposed to credit or market risk due to unfavorable changes in the fluctuation of interest rates or if the counterparty defaults, in the case of OTC interest rate contracts, or the central clearing agency or a clearing member defaults, in the case of centrally cleared interest rate swap contracts, on its respective obligation to perform under the contract. The fund's maximum risk of loss from counterparty risk or central clearing risk is the fair value of the contract. This risk may be mitigated for OTC interest rate swap contracts by having a master netting arrangement between the fund and the counterparty and for centrally cleared interest rate swap contracts through the daily exchange of variation margin. There is minimal counterparty risk with respect to centrally cleared interest rate swap contracts due to the clearinghouse guarantee fund and other resources that are available in the event of a clearing member default. Risk of loss may exceed amounts recognized on the Statement of assets and liabilities.

OTC and centrally cleared interest rate swap contracts outstanding, including their respective notional amounts at period end, if any, are listed after the fund's portfolio.

**Total return swap contracts** The fund entered into OTC total return swap contracts, which are arrangements to exchange a market-linked return for a periodic payment, both based on a notional principal amount, to hedge sector exposure, for gaining exposure to specific sectors, for hedging inflation and for gaining exposure to inflation.

To the extent that the total return of the security, index or other financial measure underlying the transaction exceeds or falls short of the offsetting interest rate obligation, the fund will receive a payment from or make a payment to the counterparty. OTC total return swap contracts are marked to market daily based upon quotations from an independent pricing service or market makers and the change, if any, is recorded as an unrealized gain or loss. Payments received or made are recorded as realized gains or losses. Certain OTC total return swap contracts may include extended effective dates. Payments related to these swap contracts are accrued based on the terms of the contract. The fund could be exposed to credit or market risk due to unfavorable changes in the fluctuation of interest rates or in the price of the underlying security or index, the possibility that there is no liquid market for these agreements or that the counterparty may default on its obligation to perform. The fund's maximum risk of loss from counterparty risk is the fair value of the contract. This risk may be mitigated by having a master netting arrangement between the fund and the counterparty. Risk of loss may exceed amounts recognized on the Statement of assets and liabilities.

OTC total return swap contracts outstanding, including their respective notional amounts at period end, if any, are listed after the fund's portfolio.

**Credit default contracts** The fund entered into OTC and/or centrally cleared credit default contracts to hedge credit risk, for gaining liquid exposure to individual names, to hedge market risk and for gaining exposure to specific sectors.

In OTC and centrally cleared credit default contracts, the protection buyer typically makes a periodic stream of payments to a counterparty, the protection seller, in exchange for the right to receive a contingent payment upon the occurrence of a credit event on the reference obligation or all other equally ranked obligations of the reference entity. Credit events are contract specific but may include bankruptcy, failure to pay, restructuring and obligation acceleration. For OTC credit default contracts, an upfront payment received by the fund is recorded as a liability on the fund's books. An upfront payment made by the fund is recorded as an asset on the fund's books. Centrally cleared credit default contracts provide the same rights to the protection buyer and seller except the payments between parties, including upfront premiums, are settled through a central clearing agent through variation margin payments. Upfront and periodic payments received or paid by the fund for OTC and centrally cleared credit default contracts are recorded as realized gains or losses at the reset date or close of the contract. The OTC and centrally cleared credit default contracts are marked to market daily based upon quotations from an independent pricing service or market makers. Any change in value of OTC credit default contracts is recorded as an unrealized gain or loss. Daily fluctuations in the value of centrally cleared credit default contracts are recorded in variation margin on the Statement of assets and liabilities and recorded as unrealized gain or loss. Upon the occurrence of a credit event, the difference between the par value and fair value of the reference obligation, net of any proportional amount of the upfront payment, is recorded as a realized gain or loss.

In addition to bearing the risk that the credit event will occur, the fund could be exposed to market risk due to unfavorable changes in interest rates or in the price of the underlying security or index or the possibility that the fund may be unable to close out its position at the same time or at the same price as if it had purchased the underlying reference obligations. In certain circumstances, the fund may enter into offsetting OTC and centrally cleared credit default contracts which would mitigate its risk of loss. Risks of loss may exceed amounts recognized on the Statement of assets and liabilities. The fund's maximum risk of loss from counterparty risk, either as the protection seller or as the protection buyer, is the fair value of the contract. This risk may be mitigated for OTC credit default contracts by having a master netting arrangement between the fund and the counterparty and for centrally cleared credit default contracts through the daily exchange of variation margin. Counterparty risk is further mitigated with respect to centrally cleared credit default swap contracts due to the clearinghouse guarantee fund and other resources that are available in the event of a clearing member default. Where the fund is a seller of protection, the maximum potential amount of future payments the fund may be required to make is equal to the notional amount.

OTC and centrally cleared credit default contracts outstanding, including their respective notional amounts 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 posted to the fund is held in a segregated account by the fund's custodian and, with respect to those amounts which can be sold or repledged, are presented in the fund's portfolio. Collateral posted to the fund which cannot be sold or repledged totaled \$14,167 at the close of the reporting period.

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 \$446,731 on open derivative contracts subject to the Master Agreements. Collateral posted by the fund at period end for these agreements totaled \$320,954 and may include amounts related to unsettled 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 \$698,100 and the value of securities loaned amounted to \$681,378.

**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 the higher of (1) the Federal Funds rate and (2) the overnight LIBOR plus 1.25% for the committed line of credit and the Federal Funds rate plus 1.30% for the uncommitted line of credit. A closing fee equal to 0.04% of the committed line of credit plus a \$25,000 flat fee 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.

At December 31, 2016, the fund had a capital loss carryover of \$1,010,951 available to the extent allowed by the Code to offset future net capital gain, if any. For any carryover, the amount of the carryover and that carryover's expiration date is:

Loss carryover			
Short-term	Long-term	Total	Expiration
\$1,010,951	\$—	\$1,010,951	*

\*Under the Regulated Investment Company Modernization Act of 2010, the fund will be permitted to carry forward capital losses incurred in taxable years beginning after December 22, 2010 for an unlimited period. However, any losses incurred will be required to be utilized prior to the losses incurred in pre-enactment tax years. As a result of this ordering rule, pre-enactment capital loss carryforwards may be more likely to expire unused. Additionally, post-enactment capital losses that are carried forward will retain their character as either short-term or long-term capital losses rather than being considered all short-term as under previous law.

The aggregate identified cost on a tax basis is \$38,027,109, resulting in gross unrealized appreciation and depreciation of \$1,684,902 and \$355,888, respectively, or net unrealized appreciation of \$1,329,014.

**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 66.6% 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:

0.880%	of the first \$5 billion,
0.830%	of the next \$5 billion,
0.780%	of the next \$10 billion,
0.730%	of the next \$10 billion,
0.680%	of the next \$50 billion,
0.660%	of the next \$50 billion,
0.650%	of the next \$100 billion and
0.645%	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 0.359% of the fund's average net assets.

Putnam Management has contractually agreed to waive fees (and, to the extent necessary, bear other expenses) of the fund through April 30, 2019, to the extent that total expenses of the fund (excluding brokerage, interest, taxes, investment-related expenses, payments under distribution plans, extraordinary expenses and acquired fund fees and expenses) would exceed an annual rate of 0.90% of the

fund's average net assets. During the reporting period, the fund's expenses were reduced by \$15,632 as a result of this limit.

Putnam Management has also contractually agreed, through April 30, 2019, to waive fees 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 plans, 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 reduced by \$44,681 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 0.35% of the average net assets of the portion of the fund managed by PIL.

The Putnam Advisory Company, LLC (PAC), an affiliate of Putnam Management, is authorized by the Trustees to manage a separate portion of the assets of the fund, as designated from time to time by Putnam Management or PIL. PAC did not manage any portion of the assets of the fund during the reporting period. If Putnam Management or PIL were to engage the services of PAC, Putnam Management or PIL, as applicable, would pay a quarterly sub-advisory fee to PAC for its services at the annual rate of 0.35% of the average net assets of the portion of the fund's assets for which PAC is engaged as sub-adviser.

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	\$4
Class IB	11,548
Total	\$11,552

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. The fund also reduced expenses through brokerage/service arrangements. For the reporting period, the fund's expenses were reduced by \$177 under the expense offset arrangements and by \$125 under the brokerage/service arrangements.

Written option transactions during the reporting period are summarized as follows:

		Written swap option contract amounts	Written swap option premiums	Written option contract amounts	Written option premiums
Written options outstanding at the beginning of the reporting period	USD	\$788,800	\$42,020	\$190,961	\$3,234
	EUR	—	—	—	—
Options opened	USD	6,411,500	22,715	3,866,554	17,168
	EUR	—	—	247,900	2,220
Options exercised	USD	(449,300)	(2,555)	—	—
	EUR	—	—	—	—
Options expired	USD	(2,136,500)	(5,512)	(19,941)	(5,411)
	EUR	—	—	—	—
Options closed	USD	(2,294,750)	(9,205)	(2,284,863)	(9,994)
	EUR	—	—	(247,900)	(2,220)
Written options outstanding at the end of the reporting period	USD	\$2,319,750	\$47,463	\$1,752,711	\$4,997
	EUR	—	—	—	—

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$25, as a quarterly retainer, has been allocated to the fund, and an additional fee for each Trustees meeting attended. Trustees also are reimbursed for expenses they incur relating to their services as Trustees.

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

The fund has adopted an unfunded noncontributory defined benefit pension plan (the Pension Plan) covering all Trustees of the fund who have served as a Trustee for at least five years and were first elected prior to 2004. Benefits under the Pension Plan are equal to 50% of the Trustee's average annual attendance and retainer fees for the three years ended December 31, 2005. The retirement benefit is payable during a Trustee's lifetime, beginning the year following retirement, for the number of years of service through December 31, 2006. Pension expense for the fund is included in Trustee compensation and expenses in the Statement of operations. Accrued pension liability is included in Payable for Trustee compensation and expenses in the Statement of assets and liabilities. The Trustees have terminated the Pension Plan with respect to any Trustee first elected after 2003.

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

### Note 3 — Purchases and sales of securities

During the reporting period, the cost of purchases and the proceeds from sales, excluding short-term investments, were as follows:

	Cost of purchases	Proceeds from sales
Investments in securities, including TBA commitments (Long-term)	\$50,428,283	\$48,709,529
U.S. government securities (Long-term)	—	—
<b>Total</b>	<b>\$50,428,283</b>	<b>\$48,709,529</b>

The fund may purchase or sell investments from or to other Putnam funds in the ordinary course of business, which can reduce the fund's transaction costs, at prices determined in accordance with SEC requirements and policies approved by the Trustees. During the reporting period, purchases or sales of long-term securities from or to other Putnam funds, if any, did not represent more than 5% of the fund's total cost of purchases and/or total proceeds from sales.

#### Note 4 — Capital shares

At the close of the reporting period, there were an unlimited number of shares of beneficial interest authorized. Transactions in capital shares were as follows

	Class IA shares				Class IB shares			
	Six months ended 6/30/17		Year ended 12/31/16		Six months ended 6/30/17		Year ended 12/31/16	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	—	\$—	2,529	\$26,026	646,873	\$6,596,674	828,710	\$8,326,302
Shares issued in connection with reinvestment of distributions	—	—	79	781	—	—	124,489	1,224,973
	—	—	2,608	26,807	646,873	6,596,674	953,199	9,551,275
Shares repurchased	—	—	(3,488)	(35,574)	(513,052)	(5,244,529)	(1,128,927)	(11,292,884)
<b>Net increase (decrease)</b>	<b>—</b>	<b>\$—</b>	<b>(880)</b>	<b>\$(8,767)</b>	<b>133,821</b>	<b>\$1,352,145</b>	<b>(175,728)</b>	<b>\$(1,741,609)</b>

At the close of the reporting period, Putnam Investments, LLC owned the following shares of the fund:

	Shares owned	Percentage of ownership	Value
Class IA	1,084	100.00%	\$11,316

#### Note 5 — Affiliated transactions

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

Affiliate	Fair value as of 12/31/16	Purchase cost	Sale proceeds	Investment income	Shares outstanding and Fair value as of 6/30/17
<b>Short-term investments</b>					
Putnam Cash Collateral Pool, LLC *	\$—	\$5,060,450	\$4,362,350	\$2,156	\$698,100
Putnam Short Term Investment Fund **	6,256,480	1,325,900	999,219	53,559	6,583,161
<b>Totals</b>	<b>\$6,256,480</b>	<b>\$6,386,350</b>	<b>\$5,361,569</b>	<b>\$55,715</b>	<b>\$7,281,261</b>

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

\*\* Management fees charged to Putnam Short Term Investment Fund have been waived by Putnam Management. There were no realized or unrealized gains or losses during the period.

#### Note 6 — Market, credit and other risks

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

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

#### 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:

Purchased equity option contracts (contract amount)	\$120,000
Purchased currency options (contract amount)	\$1,000,000
Purchased swap option contracts (contract amount)	\$1,600,000
Written equity option contracts (contract amount) (Note 3)	\$4,000
Written currency options (contract amount) (Note 3)	\$1,000,000
Written swap option contracts (contract amount) (Note 3)	\$1,800,000
Futures contracts (number of contracts)	50
Forward currency contracts (contract amount)	\$13,100,000
Centrally cleared interest rate swap contracts (notional)	\$20,500,000
OTC total return swap contracts (notional)	\$51,300,000
OTC credit default contracts (notional)	\$2,500,000
Centrally cleared credit default contracts (notional)	\$4,800,000
Warrants (number of warrants)	54,000



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
Credit contracts	Receivables, Net assets — Unrealized appreciation	\$425,028*	Payables, Net assets — Unrealized depreciation	\$221,328
Foreign exchange contracts	Investments, Receivables	107,302	Payables	106,649
Equity contracts	Investments, Receivables, Net assets — Unrealized appreciation	350,247*	Payables, Net assets — Unrealized depreciation	335,079
Interest rate contracts	Investments, Receivables, Net assets — Unrealized appreciation	49,608*	Payables, Net assets — Unrealized depreciation	134,237*
<b>Total</b>		<b>\$932,185</b>		<b>\$797,293</b>

\* Includes cumulative appreciation/depreciation of futures contracts and/or centrally cleared swaps 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	Warrants	Options	Futures	Forward currency contracts	Swaps	Total
Credit contracts	\$—	\$—	\$—	\$—	\$146,911	\$146,911
Foreign exchange contracts	—	11,981	—	40,451	—	52,432
Equity contracts	101,391	(203,210)	10,192	—	(474,968)	(566,595)
Interest rate contracts	—	(6,323)	(19,418)	—	242,013	216,272
<b>Total</b>	<b>\$101,391</b>	<b>\$(197,552)</b>	<b>\$(9,226)</b>	<b>\$40,451</b>	<b>\$(86,044)</b>	<b>\$(150,980)</b>

**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	Warrants	Options	Futures	Forward currency contracts	Swaps	Total
Credit contracts	\$—	\$—	\$—	\$—	\$(79,628)	\$(79,628)
Foreign exchange contracts	—	(2,165)	—	(13,744)	—	(15,909)
Equity contracts	(48,220)	(1,339)	69,869	—	8,546	28,856
Interest rate contracts	—	5,561	6,417	—	(152,671)	(140,693)
<b>Total</b>	<b>\$(48,220)</b>	<b>\$2,057</b>	<b>\$76,286</b>	<b>\$(13,744)</b>	<b>\$(223,753)</b>	<b>\$(207,374)</b>

**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	Barclays Capital, Inc. (clearing broker)	Citibank, N.A.	Credit Suisse International	Deutsche Bank AG	Goldman Sachs International	HSBC Bank USA, National Association	JPMorgan Chase Bank N.A.	JPMorgan Securities LLC	Merrill Lynch, Pierce, Fenner & Smith, Inc.	Royal Bank of Scotland PLC (The)	State Street Bank and Trust Co.	UBS AG	WestPac Banking Corp.	Total
<b>Assets:</b>																
Centrally cleared interest rate swap contracts <sup>§</sup>	\$—	\$—	\$30,960	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$30,960
OTC Total return swap contracts*#	94	23	—	30	918	82,571	31,397	—	21,786	—	—	—	—	52	—	136,871
OTC Credit default contracts**	—	—	—	—	22,475	—	25,489	—	—	7,017	—	—	—	—	—	54,981
Centrally cleared credit default contracts <sup>§</sup>	—	—	12,529	—	—	—	—	—	—	—	—	—	—	—	—	12,529
Futures contracts <sup>§</sup>	—	—	—	—	—	—	—	—	—	—	7,412	—	—	—	—	7,412
Forward currency contracts <sup>†</sup>	14,258	12,729	—	2,022	4,355	—	7,177	9,650	13,014	—	—	17,831	7,359	8,748	4,793	101,936
Forward premium swap option contracts <sup>#</sup>	440	38	—	85	—	—	14	—	368	—	—	—	—	—	—	945
Purchased swap options***	100	—	—	3,648	682	—	581	—	90	—	—	—	—	—	—	5,101
Purchased options***	4,150	—	—	38,463	—	—	1,216	—	33,032	—	—	—	—	—	—	76,861
Repurchase agreements**	—	—	—	—	—	—	—	—	—	—	8,080,000	—	—	—	—	8,080,000
<b>Total Assets</b>	<b>\$19,042</b>	<b>\$12,790</b>	<b>\$43,489</b>	<b>\$44,248</b>	<b>\$28,430</b>	<b>\$82,571</b>	<b>\$65,874</b>	<b>\$9,650</b>	<b>\$68,290</b>	<b>\$7,017</b>	<b>\$8,087,412</b>	<b>\$17,831</b>	<b>\$7,359</b>	<b>\$8,800</b>	<b>\$4,793</b>	<b>\$8,507,596</b>
<b>Liabilities:</b>																
Centrally cleared interest rate swap contracts <sup>§</sup>	—	—	56,547	—	—	—	—	—	—	—	—	—	—	—	—	56,547
OTC Total return swap contracts*#	141,060	80	—	168,557	1,320	—	23,720	—	—	211	—	—	—	1,090	—	336,038
OTC Credit default contracts**	1,279	3,151	—	—	110,682	—	53,074	—	—	53,142	—	—	—	—	—	221,328
Centrally cleared credit default contracts <sup>§</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Futures contracts <sup>§</sup>	—	—	—	—	—	—	—	—	—	—	4,921	—	—	—	—	4,921
Forward currency contracts <sup>†</sup>	16,248	3,338	—	13,748	4,929	—	11,782	1,127	17,387	—	—	14,694	10,902	5,961	4,619	104,735
Forward premium swap option contracts <sup>#</sup>	284	102	—	67	—	—	30	—	263	—	—	—	—	—	—	746
Written swap options <sup>#</sup>	300	—	—	3,390	723	—	472	—	8,208	—	—	—	—	—	—	13,093
Written options <sup>#</sup>	1,555	—	—	867	—	—	359	—	—	—	—	—	—	—	—	2,781
<b>Total Liabilities</b>	<b>\$160,726</b>	<b>\$6,671</b>	<b>\$56,547</b>	<b>\$186,629</b>	<b>\$117,654</b>	<b>\$—</b>	<b>\$89,437</b>	<b>\$1,127</b>	<b>\$25,858</b>	<b>\$53,353</b>	<b>\$4,921</b>	<b>\$14,694</b>	<b>\$10,902</b>	<b>\$7,051</b>	<b>\$4,619</b>	<b>\$740,189</b>
<b>Total Financial and Derivative Net Assets</b>	<b>\$(141,684)</b>	<b>\$6,119</b>	<b>\$(13,058)</b>	<b>\$(142,381)</b>	<b>\$(89,224)</b>	<b>\$82,571</b>	<b>\$(23,563)</b>	<b>\$8,523</b>	<b>\$42,432</b>	<b>\$(46,336)</b>	<b>\$8,082,491</b>	<b>\$3,137</b>	<b>\$(3,543)</b>	<b>\$1,749</b>	<b>\$174</b>	<b>\$7,767,407</b>
Total collateral received (pledged)†##	\$(141,684)	\$—	\$—	\$(109,989)	\$(59,982)	\$—	\$14,167	\$—	\$—	\$—	\$8,080,000	\$—	\$—	\$—	\$—	
Net amount	\$—	\$6,119	\$(13,058)	\$(32,392)	\$(29,242)	\$82,571	\$(37,730)	\$8,523	\$42,432	\$(46,336)	\$2,491	\$3,137	\$(3,543)	\$1,749	\$174	

\* 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.

**Note 9— New pronouncements**

In October 2016, the SEC adopted amendments to rules under the Investment Company Act of 1940 ("final rules") intended to modernize the reporting and disclosure of information by registered investment companies. The final rules amend Regulation S-X and require funds to provide standardized, enhanced derivative disclosure in fund financial statements in a format designed for

individual investors. The amendments to Regulation S-X also update the disclosures for other investments and investments in and advances to affiliates and amend the rules regarding the general form and content of fund financial statements. The compliance date for the amendments to Regulation S-X is August 1, 2017. Putnam Management has evaluated the amendments and its adoption will have no effect on the fund's net assets or results of operations.

## 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"), the sub-management contract with respect to your fund between Putnam Management and its affiliate, Putnam Investments Limited ("PIL"), and the sub-advisory contract among Putnam Management, PIL, and another affiliate, The Putnam Advisory Company ("PAC"). 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 discussed with representatives of Putnam Management the annual contract review materials furnished to the Contract Committee during the course of the previous year's review, identifying possible changes in these materials that might be necessary or desirable for the coming year. 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 2017, 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 2017, 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 2017 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, sub-management and sub-advisory contracts, effective July 1, 2017. (Because PIL and PAC are affiliates of Putnam Management and Putnam Management remains fully responsible for all services provided by PIL and PAC, the Trustees have not attempted to evaluate PIL or PAC as separate entities, and all subsequent references to Putnam Management below should be deemed to include reference to PIL and PAC 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 continued 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 such 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 some minor exceptions, the funds' current fee arrangements under the 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. 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. (In a few instances, funds have implemented so-called "all-in" management fees covering substantially all routine fund operating costs.)

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 structure for your fund would be appropriate at this time.

Under its management contract, your fund has the benefit of breakpoints in its management fee schedule that provide shareholders with economies of scale in the form of reduced fee rates as assets under management in the Putnam family of funds increase. The Trustees concluded that the fee schedule in effect for your fund represented an appropriate sharing of economies of scale between fund shareholders and Putnam Management.

As in the past, the Trustees also focused on the competitiveness of each fund's total expense ratio. In order to support the effort to have fund expenses meet competitive standards, the Trustees and Putnam Management have implemented 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). This expense limitation attempts to maintain competitive expense levels for the funds. Most funds had sufficiently low expenses that this expense limitation was not operative. However, in the case of your fund, this expense limitation was operative during its fiscal year ending in 2016. Putnam Management has agreed to maintain this expense limitation until at least April 30, 2019 and has agreed to implement a contractual expense limitation applicable to specified retail open-end funds, including your fund, of 25 basis points on investor servicing fees and expenses until at least August 31, 2018. In addition, effective through at least April 30, 2019, Putnam Management will waive fees and/or reimburse expenses of your fund to the extent that expenses of the fund (excluding payments under the fund's distribution plans, brokerage, interest, taxes, investment-related expenses, extraordinary expenses, and acquired fund fees and expenses) would exceed an annual rate of 0.90% of its average net assets. Putnam Management's support for these expense limitation arrangements was an important factor in the Trustees' decision to approve the continuance of your fund's management, sub-management and sub-advisory contracts.

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 fee), which provides a general indication of your fund's relative standing. In the custom peer group, your fund ranked in the first 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 first quintile in total expenses (excluding any applicable 12b-1 fees) as of December 31, 2016. 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, 2016 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 Putnam Management's revenues, expenses and profitability, 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 represented reasonable compensation for the services being provided and represented an appropriate sharing between fund shareholders and Putnam Management of such 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 fees charged by Putnam Management and its affiliates to institutional clients, including defined benefit pension and profit-sharing plans, charities, college endowments, foundations, sub-advised third-party mutual funds, state, local and non-U.S. government entities, and corporations. This information included, in cases where an institutional 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 different types of 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 markets. The Trustees considered the fact that in many cases fee rates across different asset classes are higher on average for mutual funds than for institutional clients, as well as 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 the Putnam funds' investment process and performance by the work of the investment oversight committees of the Trustees, which meet on a regular basis with the funds' portfolio teams and with the Chief Investment Officers and other senior members of Putnam Management's Investment Division throughout the year. In addition, in response to a request from the Independent Trustees, Putnam Management provided the Trustees with in-depth presentations regarding each of the equity and fixed income investment teams, including the operation of the teams and their investment approaches. 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 2016 was a challenging year for the performance of the Putnam funds, with generally disappointing results for the international and global equity funds and taxable fixed income funds, mixed results for small-cap equity, Spectrum, global asset allocation, equity research and tax exempt fixed income funds, but generally strong results for U.S. equity funds. The Trustees noted, however, that they were encouraged by the positive performance trend since mid-year 2016 across most Putnam Funds. In particular, from May 1, 2016 through April 30, 2017, 51% of Putnam Fund assets were in the top quartile and 87% were above the median of the Putnam Funds' competitive industry rankings. They noted that the longer-term performance of the Putnam funds generally continued to be strong, exemplified by the fact that the Putnam funds were ranked by the Barron's/Lipper Fund Families survey as the 5th-best performing mutual fund complex out of 54 complexes for the five-year period ended December 31, 2016. In addition, while the survey ranked the Putnam Funds 52nd out of 61 mutual fund complexes for the one-year period ended 2016, the Putnam Funds have ranked 1st or 2nd in the survey for the one-year period three times since 2009 (most recently in 2013). They also noted, however, the disappointing investment performance of some funds for periods ended December 31, 2016 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, including the effectiveness of any efforts Putnam Management has undertaken to address underperformance and whether additional actions to address areas of underperformance are 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, in most cases, comparisons of those returns with the returns of selected investment benchmarks. In the case of your fund, the Trustees considered information about your fund's total return, its performance relative to its benchmark and its targeted return over the one-year, three-year and five-year periods ended December 31, 2016. The fund seeks to achieve its targeted annual return over a reasonable period of time, generally at least three years or more, and the fund's performance is not necessarily expected to match its targeted annual return over shorter periods. Your fund's class IA share cumulative total return performance at net asset value was positive and exceeded the return of its benchmark over the one-year, three-year and five-year periods ended December 31, 2016. Over the one-year, three-year and five-year periods, your fund's class IA share cumulative total return performance at net asset value trailed the fund's targeted annual return, which is the return of its benchmark plus 500 basis points. (When considering performance information, shareholders should be mindful that past performance is not a guarantee of future results.)

The Trustees also considered Putnam Management's continued efforts to support fund performance through initiatives including structuring compensation for portfolio managers and research analysts 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 continued to strengthen its fundamental research capabilities by adding new investment personnel.

### **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. However, the Trustees noted that a portion of available soft dollars continues to be used to pay fund expenses. The Trustees indicated their continued intent to monitor regulatory and industry developments in this area with the assistance of their Brokerage Committee, including any developments with respect to the European Union's updated Markets in Financial Instruments Directive and its potential impact on PIL's use of client commissions to obtain investment research. The Trustees also 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, sub-management and sub-advisory contracts, the Trustees reviewed your fund's investor servicing agreement with Putnam Investor Services, Inc. ("PSERV") and its distributor's contracts 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 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 believed that the services provided 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, 2017, are available in the Individual Investors section of putnam.com and on the Securities and Exchange Commission's [SEC] website, 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

Each Putnam VT 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-Q. Shareholders may obtain the fund's Form N-Q on the SEC's website at www.sec.gov. In addition, the fund's Form N-Q may be reviewed and copied at the SEC's Public Reference Room in Washington, D.C. You may call the SEC at 1-800-SEC-0330 for information about the SEC's website or the operation of the Public Reference Room.

## Fund information

### Investment Manager

Putnam Investment Management, LLC  
One Post Office Square  
Boston, MA 02109

### Investment Sub-Advisors

Putnam Investments Limited  
57-59 St James's Street  
London, England SW1A 1LD

The Putnam Advisory Company, LLC  
One Post Office Square  
Boston, MA 02109

### Marketing Services

Putnam Retail Management  
One Post Office Square  
Boston, MA 02109

### Investor Servicing Agent

Putnam Investor Services, Inc.  
Mailing address:  
P.O. Box 8383  
Boston, MA 02266-8383  
1-800-225-1581

### Custodian

State Street Bank and Trust Company

### Legal Counsel

Ropes & Gray LLP

### Trustees

Jameson A. Baxter, *Chair*  
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Manoj P. Singh

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.

