

A world of investing.®



Putnam Mortgage Securities Fund

Semiannual report

3 | 31 | 23



Income funds invest in bonds and other securities with the goal of providing a steady stream of income over time.

FUND SYMBOL
CLASS A
PGSIX

Putnam Mortgage Securities Fund

Semiannual report

3 | 31 | 23

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Message from the Trustees

May 9, 2023

Dear Fellow Shareholder:

Stocks and bonds have experienced shifting conditions since the start of the year. Inflation has gradually declined from the higher levels of 2022. Additionally, the U.S. Federal Reserve has reduced the size of its interest-rate increases. Markets have shown optimism that the Fed may soon end its rate-hiking cycle altogether. Still, the effects of high interest rates may weigh on economic growth and corporate profit margins in the months ahead.

The investment professionals at Putnam continue to actively research stock and bond markets for attractive opportunities while monitoring potential risks.

The following semiannual report provides an overview of your fund's portfolio and expenses. For additional information, please visit [putnam.com](https://www.putnam.com).

Thank you for investing with Putnam.

Respectfully yours,



A handwritten signature in black ink that reads "Robert L. Reynolds".

Robert L. Reynolds
President and Chief Executive Officer
Putnam Investments



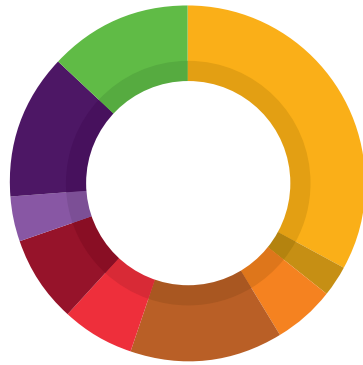
A handwritten signature in black ink that reads "Kenneth R. Leibler".

Kenneth R. Leibler
Chair, Board of Trustees

Your fund at a glance

Credit quality overview

● AAA	32.9%
● AA	2.8
● A	5.6
● BBB	13.9
● BB	6.6
● B	7.9
● CCC and below	4.1
● Not rated	13.2
● Cash and net other assets	13.0



Credit qualities are shown as a percentage of the fund's net assets as of 3/31/23. A bond rated BBB or higher (A-3 or higher, for short-term debt) is considered investment grade. This chart reflects the highest security rating provided by one or more of Standard & Poor's, Moody's, and Fitch. Ratings and portfolio credit quality will vary over time. Due to rounding, percentages may not equal 100%.

Cash and net other assets, if any, represent the market value weights of cash, derivatives, and short-term securities in the portfolio. The fund itself has not been rated by an independent rating agency.

Of special interest

Due to a higher level of income generated by the fund's portfolio, the monthly dividend rate for class A shares increased from \$0.041 to \$0.045 per share in October 2022. Similar increases were made to other share classes.

Your fund's expenses

As a mutual fund investor, 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, including sales charges (loads) and redemption fees, which are not shown in this section and would have resulted in higher total expenses. For more information, see your fund's prospectus or talk to your financial representative.

Expense ratios

	Class A	Class B	Class C	Class R	Class R6	Class Y
Total annual operating expenses for the fiscal year ended 9/30/22	0.92%	1.67%	1.67%	1.17%	0.53%	0.67%
Annualized expense ratio for the six-month period ended 3/31/23	0.96%	1.71%	1.71%	1.21%	0.55%	0.71%

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

Expenses are shown as a percentage of average net assets.

Expenses per \$1,000

The following table shows the expenses you would have paid on a \$1,000 investment in each class of the fund from 10/1/22 to 3/31/23. It also shows how much a \$1,000 investment would be worth at the close of the period, assuming *actual returns* and expenses.

	Class A	Class B	Class C	Class R	Class R6	Class Y
Expenses paid per \$1,000*†	\$4.84	\$8.60	\$8.60	\$6.09	\$2.77	\$3.58
Ending value (after expenses)	\$1,020.60	\$1,016.50	\$1,016.90	\$1,019.50	\$1,022.80	\$1,022.10

* 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 3/31/23. The expense ratio may differ for each share class.

† Expenses 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 (182); and then dividing that result by the number of days in the year (365).

Estimate the expenses you paid

To estimate the ongoing expenses you paid for the six months ended 3/31/23, use the following calculation method. To find the value of your investment on 10/1/22, call Putnam at 1-800-225-1581.

How to calculate the expenses you paid

Value of your investment on 10/1/22 ÷ **\$1,000** X **Expenses paid per \$1,000** = **Total expenses paid**

Example Based on a \$10,000 investment in class A shares of your fund.

\$10,000 ÷ **\$1,000** X **\$4.84** (see preceding table) = **\$48.40**

Compare expenses using the SEC's method

The Securities and Exchange Commission (SEC) has established guidelines to help investors assess fund expenses. Per these guidelines, the following table shows 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 mutual fund shareholder reports 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.

	Class A	Class B	Class C	Class R	Class R6	Class Y
Expenses paid per \$1,000**†	\$4.84	\$8.60	\$8.60	\$6.09	\$2.77	\$3.58
Ending value (after expenses)	\$1,020.14	\$1,016.40	\$1,016.40	\$1,018.90	\$1,022.19	\$1,021.39

* 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 3/31/23. The expense ratio may differ for each share class.

† Expenses 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 (182); and then dividing that result by the number of days in the year (365).

Other information for shareholders

Important notice regarding delivery of shareholder documents

In accordance with Securities and Exchange Commission (SEC) regulations, Putnam sends a single notice of internet availability, or a single printed copy, of annual and semiannual shareholder reports, prospectuses, and proxy statements to Putnam shareholders who share the same address, unless a shareholder requests otherwise. If you prefer to receive your own copy of these documents, please call Putnam at 1-800-225-1581 or, for exchange-traded funds only, 1-833-228-5577. We will begin sending individual copies within 30 days.

Proxy voting

Putnam is committed to managing our funds in the best interests of our shareholders. The Putnam funds' proxy voting guidelines and procedures, as well as information regarding how your fund voted proxies relating to portfolio securities during the 12-month period ended June 30, 2022, are available in the Individual Investors section of putnam.com and on the SEC's 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 or, for exchange-traded funds only, 1-833-228-5577.

Fund portfolio holdings

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

Trustee and employee fund ownership

Putnam employees and members of the Board of Trustees place their faith, confidence, and, most importantly, investment dollars in Putnam funds. As of March 31, 2023, Putnam employees had approximately \$463,000,000 and the Trustees had approximately \$65,000,000 invested in Putnam funds. These amounts include investments by the Trustees' and employees' immediate family members as well as investments through retirement and deferred compensation plans.

Financial statements

These sections of the report, as well as the accompanying Notes, constitute the fund's financial statements.

The fund's portfolio lists all the fund's investments and their values as of the last day of the reporting period. Holdings are organized by asset type and industry sector, country, or state to show areas of concentration and diversification.

Statement of assets and liabilities shows how the fund's net assets and share price are determined. All investment and non-investment assets are added together. Any unpaid expenses and other liabilities are subtracted from this total. The result is divided by the number of shares to determine the net asset value per share, which is calculated separately for each class of shares. (For funds with preferred shares, the amount subtracted from total assets includes the liquidation preference of preferred shares.)

Statement of operations shows the fund's net investment gain or loss. This is done by first adding up all the fund's earnings — from dividends and interest income — and subtracting its operating expenses to determine net investment income (or loss). Then, any net gain or loss the fund realized on the sales of its holdings — as well as any unrealized gains or losses over the period — is added to or subtracted from the net investment result to determine the fund's net gain or loss for the fiscal period.

Statement of changes in net assets shows how the fund's net assets were affected by the fund's net investment gain or loss, by distributions to shareholders, and by changes in the number of the fund's shares. It lists distributions and their sources (net investment income or realized capital gains) over the current reporting period and the most recent fiscal year-end. The distributions listed here may not match the sources listed in the Statement of operations because the distributions are determined on a tax basis and may be paid in a different period from the one in which they were earned. 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 period.

Financial highlights provide an overview of the fund's investment results, per-share distributions, expense ratios, net investment income ratios, and portfolio turnover (not required for money market funds) in one summary table, reflecting the five most recent reporting periods. In a semiannual report, the highlights table also includes the current reporting period.

The fund's portfolio 3/31/23 (Unaudited)

U.S. GOVERNMENT AND AGENCY MORTGAGE OBLIGATIONS (423.6%)*	Principal amount	Value
U.S. Government Guaranteed Mortgage Obligations (23.1%)		
Government National Mortgage Association Adjustable Rate Mortgages (US Treasury Yield Curve Rate + 1.50%), 2.625%, 7/20/26	\$2,627	\$2,567
Government National Mortgage Association Pass-Through Certificates		
6.00%, 1/15/29	1	1
5.50%, 8/15/35	103	107
4.50%, TBA, 4/1/53	12,000,000	11,819,508
4.00%, TBA, 4/1/53	17,000,000	16,365,376
3.50%, TBA, 4/1/53	29,000,000	27,189,115
3.00%, TBA, 4/1/53	44,000,000	40,025,308
2.00%, TBA, 4/1/53	11,000,000	9,339,853
		104,741,835
U.S. Government Agency Mortgage Obligations (400.5%)		
Uniform Mortgage-Backed Securities		
6.00%, TBA, 5/1/53	34,400,000	35,085,320
6.00%, TBA, 4/1/53	34,400,000	35,105,475
5.50%, TBA, 5/1/53	71,000,000	71,696,112
5.50%, TBA, 4/1/53	71,000,000	71,721,076
5.00%, TBA, 5/1/53	282,000,000	281,173,712
5.00%, TBA, 4/1/53	318,000,000	317,093,064
4.50%, TBA, 5/1/53	191,000,000	187,127,685
4.50%, TBA, 4/1/53	191,000,000	187,090,383
4.00%, TBA, 5/1/53	36,000,000	34,441,880
4.00%, TBA, 4/1/53	36,000,000	34,427,815
3.50%, TBA, 5/1/53	37,000,000	34,385,410
3.50%, TBA, 4/1/53	37,000,000	34,363,732
3.00%, TBA, 5/1/53	34,000,000	30,513,688
3.00%, TBA, 4/1/53	34,000,000	30,488,453
2.50%, TBA, 5/1/53	127,000,000	109,567,243
2.50%, TBA, 4/1/53	127,000,000	109,463,065
2.00%, TBA, 5/1/53	128,000,000	105,883,942
2.00%, TBA, 4/1/53	128,000,000	105,763,942
		1,815,391,997
Total U.S. government and agency mortgage obligations (cost \$1,897,442,704)		\$1,920,133,832

U.S. TREASURY OBLIGATIONS (0.4%)*	Principal amount	Value
U.S. Treasury Notes 1.625%, 5/15/31 ⁱ	\$1,926,000	\$1,685,635
Total U.S. treasury obligations (cost \$1,685,635)		\$1,685,635

MORTGAGE-BACKED SECURITIES (86.0%)*	Principal amount	Value
Agency collateralized mortgage obligations (32.7%)		
Federal Home Loan Mortgage Corporation		
REMICs IFB Ser. 3408, Class EK, ((-4.024 x ICE LIBOR USD 1 Month) + 25.79%), 6.943%, 4/15/37	\$148,366	\$183,113
REMICs IFB Ser. 3065, Class DC, ((-3 x ICE LIBOR USD 1 Month) + 19.86%), 5.807%, 3/15/35	1,325,315	1,396,749
REMICs Ser. 5043, IO, 5.00%, 11/25/50	7,798,290	1,730,302

MORTGAGE-BACKED SECURITIES (86.0%)* <i>cont.</i>	Principal amount	Value
Agency collateralized mortgage obligations <i>cont.</i>		
Federal Home Loan Mortgage Corporation		
REMICs Ser. 4980, Class KI, IO, 4.50%, 6/25/50	\$7,903,485	\$1,643,061
REMICs Ser. 4024, Class PI, IO, 4.50%, 12/15/41	728,509	94,189
REMICs Ser. 4018, Class DI, IO, 4.50%, 7/15/41	604,884	38,073
REMICs Ser. 5119, Class IC, IO, 4.00%, 6/25/51	8,973,394	1,761,029
REMICs Ser. 5121, Class KI, IO, 4.00%, 6/25/51	7,795,633	1,627,452
REMICs Ser. 4953, Class AI, IO, 4.00%, 2/25/50	5,021,956	973,004
REMICs Ser. 4425, IO, 4.00%, 1/15/45	2,101,706	317,463
REMICs Ser. 4425, Class EI, IO, 4.00%, 1/15/45	3,051,486	459,523
REMICs Ser. 4452, Class QI, IO, 4.00%, 11/15/44	2,919,212	559,146
REMICs Ser. 4019, Class JI, IO, 4.00%, 5/15/41	1,317,100	84,429
Structured Pass-Through Certificates FRB Ser. 57, Class 2A1, 3.69%, 7/25/43 ^W	10,955	10,200
Structured Pass-Through Certificates FRB Ser. 59, Class 2A1, 3.576%, 10/25/43 ^W	5,911	4,870
REMICs Ser. 5077, Class NI, IO, 3.50%, 2/25/51	12,853,521	2,305,710
REMICs Ser. 5065, Class DI, IO, 3.50%, 1/25/51	12,396,472	2,178,014
REMICs Ser. 5050, Class IM, IO, 3.50%, 10/25/50	11,448,425	2,056,471
REMICs Ser. 5080, Class IQ, IO, 3.50%, 4/25/50	23,850,702	4,684,276
REMICs Ser. 4165, Class AI, IO, 3.50%, 2/15/43	1,463,156	220,767
REMICs Ser. 4136, Class IQ, IO, 3.50%, 11/15/42	3,315,935	451,758
Strips Ser. 304, Class C37, IO, 3.50%, 12/15/27	345,550	12,657
REMICs Ser. 5071, Class IV, IO, 3.00%, 12/25/50	19,462,005	3,323,813
REMICs Ser. 4141, Class PI, IO, 3.00%, 12/15/42	3,252,481	390,794
REMICs Ser. 4165, Class TI, IO, 3.00%, 12/15/42	5,316,425	398,051
REMICs Ser. 4171, Class NI, IO, 3.00%, 6/15/42	2,703,790	263,279
REMICs Ser. 4201, Class JI, IO, 3.00%, 12/15/41	1,771,541	75,323
REMICs IFB Ser. 4436, Class SC, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.15%), 1.466%, 2/15/45	3,112,177	411,255
REMICs IFB Ser. 4326, Class GS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.366%, 4/15/44	9,530,885	991,857
REMICs IFB Ser. 5003, Class DS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.255%, 8/25/50	7,960,562	1,058,206
REMICs IFB Ser. 4915, Class SD, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.205%, 9/25/49	9,996,186	1,104,685
REMICs IFB Ser. 4933, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.00%), 1.155%, 12/25/49	6,681,734	880,037
REMICs Ser. 3369, Class BO, PO, zero %, 9/15/37	2,006	1,620
REMICs Ser. 3391, PO, zero %, 4/15/37	27,336	22,778
REMICs Ser. 3210, PO, zero %, 5/15/36	1,093	1,062
REMICs FRB Ser. 3117, Class AF, (ICE LIBOR USD 1 Month + 0.00%), zero %, 2/15/36	13,071	11,131
Federal National Mortgage Association		
REMICs Ser. 15-58, Class KI, IO, 6.00%, 3/25/37	4,935,522	878,414
REMICs IFB Ser. 08-24, Class SP, ((-3.667 x ICE LIBOR USD 1 Month) + 23.28%), 5.517%, 2/25/38	541,486	534,870
REMICs Ser. 15-86, Class MI, IO, 5.50%, 11/25/45	4,266,928	706,219
REMICs Ser. 18-51, Class BI, IO, 5.50%, 7/25/38	4,787,117	450,144
REMICs Trust FRB Ser. 04-W7, Class A2, 5.472%, 3/25/34 ^W	2,493	2,593
REMICs Ser. 17-19, Class IH, IO, 5.00%, 3/25/47	4,732,338	690,827

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Federal National Mortgage Association		
REMICs Ser. 12-151, Class IM, IO, 5.00%, 4/25/42	\$2,941,568	\$445,897
REMICs FRB Ser. 03-W11, Class A1, 4.72%, 6/25/33 ^W	243	246
REMICs Ser. 20-31, IO, 4.50%, 5/25/50	11,156,595	2,084,681
REMICs FRB Ser. 03-W14, Class 2A, 4.116%, 1/25/43 ^W	7,439	7,026
REMICs Ser. 20-60, Class NI, IO, 4.00%, 9/25/50	7,102,987	1,354,483
REMICs Ser. 15-83, IO, 4.00%, 10/25/43	1,198,846	177,629
REMICs Ser. 12-104, Class HI, IO, 4.00%, 9/25/27	1,612,583	72,357
Trust FRB Ser. 03-W3, Class 1A4, 3.953%, 8/25/42 ^W	16,022	14,961
Trust FRB Ser. 04-W2, Class 4A, 3.556%, 2/25/44 ^W	3,859	3,730
REMICs Ser. 21-25, Class IJ, IO, 3.50%, 5/25/51	23,346,688	4,114,854
REMICs Ser. 20-20, Class IK, IO, 3.50%, 3/25/50	9,403,957	1,143,279
REMICs Ser. 20-62, Class MI, IO, 3.50%, 5/25/49	31,824,143	5,613,855
REMICs Ser. 16-70, Class QI, IO, 3.50%, 10/25/46	3,934,689	550,856
REMICs Ser. 13-22, Class PI, IO, 3.50%, 10/25/42	2,122,732	373,328
REMICs Ser. 12-114, Class NI, IO, 3.50%, 10/25/41	2,492,320	156,756
REMICs Ser. 20-96, IO, 3.00%, 1/25/51	8,804,661	1,335,491
REMICs Ser. 13-55, Class IK, IO, 3.00%, 4/25/43	2,001,743	246,701
REMICs Ser. 13-6, Class JI, IO, 3.00%, 2/25/43	4,615,473	574,165
REMICs Ser. 12-151, Class PI, IO, 3.00%, 1/25/43	2,491,459	312,210
REMICs Ser. 12-145, Class TI, IO, 3.00%, 11/25/42	742,472	25,083
REMICs Ser. 13-55, Class PI, IO, 3.00%, 5/25/42	1,402,140	52,383
REMICs Ser. 13-30, Class IP, IO, 3.00%, 10/25/41	150,402	246
REMICs Ser. 13-23, Class LI, IO, 3.00%, 6/25/41	356,818	1,285
REMICs Ser. 21-3, Class IB, IO, 2.50%, 2/25/51	6,507,088	1,034,171
REMICs Ser. 21-3, Class NI, IO, 2.50%, 2/25/51	14,935,144	2,074,215
REMICs IFB Ser. 11-123, Class KS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.60%), 1.755%, 10/25/41	305,309	27,022
REMICs IFB Ser. 18-20, Class SB, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.25%), 1.405%, 3/25/48	5,102,421	472,484
REMICs IFB Ser. 17-104, Class SL, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.15%), 1.305%, 1/25/48	6,290,123	727,981
REMICs IFB Ser. 20-41, Class SE, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.255%, 6/25/50	5,733,080	753,272
REMICs IFB Ser. 16-83, Class BS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.255%, 11/25/46	14,236,623	1,273,178
REMICs IFB Ser. 16-85, Class SL, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.255%, 11/25/46	19,012,691	1,619,049
REMICs IFB Ser. 16-50, Class SM, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.255%, 8/25/46	9,129,488	727,920
REMICs IFB Ser. 19-51, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.205%, 9/25/49	8,361,065	899,665
REMICs IFB Ser. 19-45, Class SD, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.205%, 8/25/49	5,004,463	512,968
REMICs IFB Ser. 16-8, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.205%, 3/25/46	8,583,238	952,272
REMICs IFB Ser. 19-71, Class CS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.00%), 1.155%, 11/25/49	2,730,716	431,961
REMICs IFB Ser. 19-83, Class QS, IO, ((-1 x ICE LIBOR USD 1 Month) + 5.95%), 1.105%, 1/25/50	15,663,633	2,138,907

MORTGAGE-BACKED SECURITIES (86.0%)* <i>cont.</i>	Principal amount	Value
Agency collateralized mortgage obligations <i>cont.</i>		
Federal National Mortgage Association		
REMICs Ser. 01-79, Class BI, IO, 0.248%, 3/25/45 ^W	\$799,453	\$4,477
REMICs Ser. 03-34, PO, zero %, 4/25/43	37,541	34,163
REMICs Ser. 08-53, Class DO, PO, zero %, 7/25/38	91,035	74,982
REMICs Ser. 07-14, Class KO, PO, zero %, 3/25/37	3,090	2,599
REMICs Ser. 06-84, Class OT, PO, zero %, 9/25/36	894	725
Government National Mortgage Association		
Ser. 16-75, Class LI, IO, 6.00%, 1/20/40	3,253,046	557,220
Ser. 14-137, Class ID, IO, 5.50%, 9/16/44	3,037,641	509,972
Ser. 20-167, Class IT, IO, 5.00%, 9/20/47	5,646,948	1,146,815
Ser. 15-89, Class LI, IO, 5.00%, 12/20/44	3,899,732	741,105
Ser. 14-76, IO, 5.00%, 5/20/44	2,211,911	439,664
Ser. 13-51, Class QI, IO, 5.00%, 2/20/43	2,824,587	372,765
Ser. 13-6, Class OI, IO, 5.00%, 1/20/43	6,345,538	1,187,060
Ser. 10-35, Class UI, IO, 5.00%, 3/20/40	1,066,143	219,333
Ser. 10-9, Class UI, IO, 5.00%, 1/20/40	5,196,155	1,058,717
Ser. 09-121, Class UI, IO, 5.00%, 12/20/39	3,089,910	623,420
Ser. 18-1, IO, 4.50%, 1/20/48	4,325,780	827,148
Ser. 13-34, Class HI, IO, 4.50%, 3/20/43	3,714,480	672,467
Ser. 13-39, Class IJ, IO, 4.50%, 3/20/43	4,858,656	906,414
Ser. 10-35, Class AI, IO, 4.50%, 3/20/40	3,375,567	557,039
Ser. 10-35, Class DI, IO, 4.50%, 3/20/40	5,251,960	946,561
Ser. 10-35, Class QI, IO, 4.50%, 3/20/40	1,321,172	230,602
Ser. 09-121, Class CI, IO, 4.50%, 12/16/39	3,489,563	646,221
Ser. 15-53, Class MI, IO, 4.00%, 4/16/45	3,439,252	627,664
Ser. 14-2, Class IL, IO, 4.00%, 1/16/44	652,262	107,235
Ser. 14-100, Class NI, IO, 4.00%, 6/20/43	2,401,921	147,121
Ser. 13-165, Class IL, IO, 4.00%, 3/20/43	1,132,766	175,321
Ser. 12-56, Class IB, IO, 4.00%, 4/20/42	3,088,899	526,059
Ser. 12-38, Class MI, IO, 4.00%, 3/20/42	5,917,397	1,011,046
Ser. 14-182, Class BI, IO, 4.00%, 1/20/39	5,217,383	516,240
Ser. 17-H08, Class GI, IO, 3.929%, 2/20/67 ^W	8,627,324	756,122
Ser. 21-177, Class IG, IO, 3.50%, 10/20/51	17,287,225	2,364,634
Ser. 20-175, Class JI, IO, 3.50%, 11/20/50	12,202,392	2,087,934
Ser. 15-168, Class IG, IO, 3.50%, 3/20/43	1,986,392	250,775
Ser. 12-136, IO, 3.50%, 11/20/42	5,769,615	799,281
Ser. 14-102, Class IG, IO, 3.50%, 3/16/41	789,074	35,154
Ser. 15-52, Class KI, IO, 3.50%, 11/20/40	1,493,904	110,549
Ser. 15-24, Class AI, IO, 3.50%, 12/20/37	321,582	1,040
Ser. 18-H04, Class JI, IO, 3.415%, 3/20/68 ^W	12,630,354	551,946
Ser. 17-H08, Class NI, IO, 3.01%, 3/20/67 ^W	9,823,405	347,749
Ser. 21-176, Class GI, IO, 3.00%, 10/20/51	8,448,045	1,151,046
Ser. 21-188, Class IU, IO, 3.00%, 10/20/51	5,322,862	1,086,246
Ser. 21-188, Class IW, IO, 3.00%, 10/20/51	8,775,528	1,439,661
Ser. 21-76, Class NI, IO, 3.00%, 8/20/50	12,058,487	1,787,068
Ser. 14-174, Class AI, IO, 3.00%, 11/16/29	1,791,266	97,087
Ser. 16-H13, Class IK, IO, 2.654%, 6/20/66 ^W	11,870,703	990,782
Ser. 21-7, Class MI, IO, 2.50%, 1/20/51	13,112,663	1,821,544
Ser. 21-8, Class IP, IO, 2.50%, 1/20/51	28,311,154	3,915,226

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Government National Mortgage Association		
Ser. 20-162, Class UI, IO, 2.50%, 10/20/50	\$8,532,980	\$1,115,913
Ser. 20-138, Class IB, IO, 2.50%, 9/20/50	19,128,630	2,507,193
IFB Ser. 23-20, Class SP, IO, ((-1 x US 30 Day Average SOFR) + 7.00%), 2.441%, 2/20/53	23,931,062	1,581,994
Ser. 16-H04, Class HI, IO, 2.368%, 7/20/65 ^W	8,779,968	266,911
Ser. 16-H07, Class PI, IO, 2.28%, 3/20/66 ^W	20,347,529	1,393,847
Ser. 16-H24, IO, 2.144%, 9/20/66 ^W	12,815,974	982,637
Ser. 17-H10, Class MI, IO, 1.989%, 4/20/67 ^W	11,336,017	348,016
Ser. 15-H23, Class TI, IO, 1.94%, 9/20/65 ^W	13,094,538	628,538
IFB Ser. 13-182, Class SP, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.70%), 1.939%, 12/20/43	2,964,000	337,392
Ser. 15-H23, Class DI, IO, 1.91%, 9/20/65 ^W	4,267,839	225,342
Ser. 17-H14, Class JI, IO, 1.887%, 6/20/67 ^W	5,506,045	450,418
Ser. 17-H23, Class BI, IO, 1.881%, 11/20/67 ^W	8,152,339	431,259
Ser. 17-H09, IO, 1.846%, 4/20/67 ^W	9,833,978	264,219
IFB Ser. 11-156, Class SK, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.60%), 1.839%, 4/20/38	4,344,434	527,199
Ser. 17-H14, Class LI, IO, 1.831%, 6/20/67 ^W	6,730,053	350,197
Ser. 14-H25, Class BI, IO, 1.673%, 12/20/64 ^W	12,049,858	387,367
IFB Ser. 21-98, Class SK, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.30%), 1.539%, 6/20/51	10,251,131	1,300,663
IFB Ser. 21-77, Class SM, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.30%), 1.539%, 5/20/51	11,285,279	1,499,956
IFB Ser. 20-133, Class CS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.30%), 1.539%, 9/20/50	10,009,675	1,283,240
IFB Ser. 20-112, Class MS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.30%), 1.539%, 8/20/50	5,530,338	741,397
IFB Ser. 17-156, Class SL, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.20%), 1.439%, 10/20/47	4,791,311	479,910
IFB Ser. 13-87, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.20%), 1.439%, 6/20/43	7,307,432	783,059
IFB Ser. 19-158, Class AS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.15%), 1.422%, 9/16/43	5,920,893	649,312
IFB Ser. 19-56, Class SK, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.15%), 1.389%, 5/20/49	4,770,387	463,066
IFB Ser. 10-20, Class SC, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.15%), 1.389%, 2/20/40	465,037	47,666
IFB Ser. 19-100, Class JS, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.339%, 8/20/49	3,961,945	355,014
IFB Ser. 16-80, Class SD, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.10%), 1.339%, 6/20/46	6,954,094	816,374
IFB Ser. 19-125, Class SG, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.289%, 10/20/49	8,291,296	1,215,312
IFB Ser. 19-110, Class SQ, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.05%), 1.289%, 9/20/49	6,299,174	707,078
FRB Ser. 11-H07, Class FI, IO, 1.249%, 2/20/61 ^W	10,029,941	267,799
IFB Ser. 19-121, Class SD, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.00%), 1.239%, 10/20/49	8,254,199	1,256,124
IFB Ser. 20-47, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 6.00%), 1.239%, 5/20/44	11,686,033	1,113,796

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Government National Mortgage Association		
IFB Ser. 23-40, Class SP, IO, ((-1 x US 30 Day Average SOFR) + 5.65%), 1.092%, 3/20/53	\$37,007,000	\$1,515,274
IFB Ser. 22-209, Class SG, IO, ((-1 x US 30 Day Average SOFR) + 5.60%), 1.041%, 12/20/52	35,198,795	2,265,169
IFB Ser. 14-119, Class SA, IO, ((-1 x ICE LIBOR USD 1 Month) + 5.60%), 0.839%, 8/20/44	3,288,597	291,851
Ser. 17-H20, Class AI, IO, 0.24%, 10/20/67 ^W	20,184,094	1,072,280
Ser. 17-H03, Class KI, IO, 0.178%, 1/20/67 ^W	16,144,458	1,322,231
Ser. 18-H01, Class XI, IO, 0.107%, 1/20/68 ^W	11,808,252	847,709
Ser. 16-H27, Class GI, IO, 0.102%, 12/20/66 ^W	17,222,547	975,089
FRB Ser. 15-H16, Class XI, IO, 0.101%, 7/20/65 ^W	8,462,595	447,671
Ser. 17-H25, Class CI, IO, 0.097%, 12/20/67 ^W	13,775,736	900,288
Ser. 15-H20, Class CI, IO, 0.087%, 8/20/65 ^W	18,933,312	1,069,732
Ser. 16-H24, Class JI, IO, 0.08%, 11/20/66 ^W	3,761,582	202,867
Ser. 15-H22, Class AI, IO, 0.08%, 9/20/65 ^W	19,084,262	973,297
Ser. 16-H18, Class QI, IO, 0.078%, 6/20/66 ^W	13,411,088	689,692
Ser. 16-H24, Class KI, IO, 0.076%, 11/20/66 ^W	6,876,167	357,462
FRB Ser. 16-H19, Class AI, IO, 0.076%, 9/20/66 ^W	22,561,269	984,077
Ser. 17-H06, Class MI, IO, 0.064%, 2/20/67 ^W	16,311,303	617,415
Ser. 15-H13, Class AI, IO, 0.06%, 6/20/65 ^W	12,918,087	551,212
Ser. 18-H02, Class IM, IO, 0.059%, 2/20/68 ^W	8,845,534	537,840
Ser. 15-H14, Class AI, IO, 0.059%, 6/20/65 ^W	22,140,189	931,282
Ser. 15-H10, Class HI, IO, 0.054%, 4/20/65 ^W	15,999,404	654,376
Ser. 14-H21, Class AI, IO, 0.047%, 10/20/64 ^W	14,792,218	507,521
Ser. 17-H04, Class BI, IO, 0.037%, 2/20/67 ^W	10,464,927	464,959
Ser. 16-H03, Class AI, IO, 0.034%, 1/20/66 ^W	10,719,489	395,823
Ser. 17-H25, IO, 0.026%, 11/20/67 ^W	9,305,489	405,661
Ser. 16-H23, Class NI, IO, 0.026%, 10/20/66 ^W	22,245,328	994,366
Ser. 15-H04, Class AI, IO, 0.023%, 12/20/64 ^W	13,296,517	428,967
Ser. 16-H06, Class DI, IO, 0.008%, 7/20/65 ^W	13,521,523	325,233
Ser. 18-H19, Class JI, IO, 0.006%, 10/20/68 ^W	13,932,656	543,971
Ser. 16-H10, Class AI, IO, zero %, 4/20/66 ^W	18,542,636	387,356
		148,198,659
Commercial mortgage-backed securities (34.1%)		
BANK 144A Ser. 18-BN11, Class D, 3.00%, 3/15/61	839,000	493,937
Barclays Commercial Mortgage Trust 144A Ser. 19-C4, Class E, 3.25%, 8/15/52	2,034,000	1,222,387
Bear Stearns Commercial Mortgage Securities Trust FRB Ser. 07-T26, Class AJ, 5.566%, 1/12/45 ^W	12,598	12,157
Benchmark Mortgage Trust 144A		
FRB Ser. 18-B3, Class D, 3.029%, 4/10/51 ^W	3,362,000	2,154,805
Ser. 19-B11, Class D, 3.00%, 5/15/52	2,608,000	1,656,956
Ser. 18-B1, Class E, 3.00%, 1/15/51 ^W	1,840,000	938,363
Ser. 19-B13, Class D, 2.50%, 8/15/57	1,788,000	1,110,992
BWAY Mortgage Trust 144A FRB Ser. 22-26BW, Class F, 4.866%, 2/10/44 ^W	2,305,000	1,434,431
CD Commercial Mortgage Trust		
FRB Ser. 17-CD3, Class C, 4.546%, 2/10/50 ^W	1,638,000	1,058,135
Ser. 17-CD3, Class B, 3.984%, 2/10/50 ^W	826,000	689,860

MORTGAGE-BACKED SECURITIES (86.0%)* <i>cont.</i>	Principal amount	Value
Commercial mortgage-backed securities <i>cont.</i>		
CD Commercial Mortgage Trust 144A		
Ser. 17-CD3, Class D, 3.25%, 2/10/50	\$2,112,000	\$1,279,654
Ser. 19-CD8, Class D, 3.00%, 8/15/57	1,450,000	962,945
Citigroup Commercial Mortgage Trust		
FRB Ser. 13-GC15, Class C, 5.154%, 9/10/46 ^W	1,567,000	1,521,222
FRB Ser. 15-GC27, Class C, 4.425%, 2/10/48 ^W	1,731,000	1,584,020
Citigroup Commercial Mortgage Trust 144A		
FRB Ser. 12-GC8, Class C, 4.909%, 9/10/45 ^W	1,403,047	1,304,834
FRB Ser. 15-GC27, Class D, 4.425%, 2/10/48 ^W	1,018,000	885,980
Ser. 15-P1, Class D, 3.225%, 9/15/48	3,226,000	2,391,218
Ser. 15-GC27, Class E, 3.00%, 2/10/48	2,187,000	1,595,985
COMM Mortgage Trust		
FRB Ser. 14-CR16, Class C, 4.899%, 4/10/47 ^W	2,441,904	2,197,484
FRB Ser. 13-CR13, Class C, 4.876%, 11/10/46 ^W	1,355,000	1,280,794
FRB Ser. 14-UBS3, Class C, 4.735%, 6/10/47 ^W	956,000	881,076
FRB Ser. 14-UBS4, Class C, 4.65%, 8/10/47 ^W	1,158,060	1,043,476
Ser. 13-CR12, Class AM, 4.30%, 10/10/46	1,570,000	1,414,060
Ser. 15-DC1, Class B, 4.035%, 2/10/48 ^W	1,285,000	1,150,585
FRB Ser. 15-CR26, Class D, 3.467%, 10/10/48 ^W	1,696,375	1,154,783
COMM Mortgage Trust 144A		
FRB Ser. 13-LC13, Class D, 5.255%, 8/10/46 ^W	2,546,000	2,433,368
FRB Ser. 13-CR13, Class D, 4.876%, 11/10/46 ^W	1,906,000	1,554,832
FRB Ser. 14-CR17, Class D, 4.845%, 5/10/47 ^W	3,623,000	3,192,052
FRB Ser. 14-UBS4, Class D, 4.712%, 8/10/47 ^W	757,000	534,358
FRB Ser. 14-CR19, Class D, 4.698%, 8/10/47 ^W	1,317,000	1,135,691
FRB Ser. 13-CR7, Class D, 4.382%, 3/10/46 ^W	1,442,000	1,276,170
FRB Ser. 15-LC19, Class E, 4.215%, 2/10/48 ^W	1,786,000	1,367,212
Ser. 12-CR4, Class B, 3.703%, 10/15/45	2,419,000	1,487,144
Ser. 13-LC6, Class E, 3.50%, 1/10/46	1,077,000	879,371
Ser. 17-COR2, Class D, 3.00%, 9/10/50	2,451,000	1,788,397
Ser. 15-LC19, Class D, 2.867%, 2/10/48	1,240,000	1,050,482
FRB Ser. 18-COR3, Class D, 2.81%, 5/10/51 ^W	869,000	492,697
CSAIL Commercial Mortgage Trust		
FRB Ser. 15-C3, Class C, 4.358%, 8/15/48 ^W	922,000	726,988
FRB Ser. 15-C2, Class C, 4.177%, 6/15/57 ^W	1,876,000	1,524,252
FRB Ser. 15-C2, Class D, 4.177%, 6/15/57 ^W	3,030,000	1,848,058
CSAIL Commercial Mortgage Trust 144A		
FRB Ser. 18-C14, Class D, 4.916%, 11/15/51 ^W	1,300,000	873,626
Ser. 19-C17, Class D, 2.50%, 9/15/52	1,828,000	1,029,864
DBUBS Mortgage Trust 144A FRB Ser. 11-LC3A, Class D, 5.361%, 8/10/44 ^W		
	3,156,972	2,951,904
Federal Home Loan Mortgage Corporation 144A		
Multifamily Structured Credit Risk FRB Ser. 21-MN3, Class M2, 8.56%, 11/25/51	2,289,000	1,973,071
Multifamily Structured Agency Credit Risk FRB Ser. 21-MN1, Class M2, 8.234%, 1/25/51	1,423,000	1,215,784
GS Mortgage Securities Corp., II 144A FRB Ser. 13-GC10, Class D, 4.606%, 2/10/46 ^W		
	2,209,000	1,806,109

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Commercial mortgage-backed securities cont.		
GS Mortgage Securities Trust		
FRB Ser. 14-GC18, Class C, 5.056%, 1/10/47 ^W	\$4,153,000	\$2,740,980
FRB Ser. 14-GC22, Class C, 4.687%, 6/10/47 ^W	1,431,000	1,268,985
GS Mortgage Securities Trust 144A		
FRB Ser. 10-C1, Class D, 6.357%, 8/10/43 ^W	742,000	586,476
FRB Ser. 14-GC24, Class D, 4.526%, 9/10/47 ^W	4,747,000	2,507,063
Ser. 17-GS5, Class D, 3.509%, 3/10/50 ^W	1,021,000	654,938
JPMBB Commercial Mortgage Securities Trust FRB Ser. 14-C22, Class C, 4.548%, 9/15/47 ^W	2,294,000	2,091,772
JPMBB Commercial Mortgage Securities Trust 144A		
FRB Ser. 14-C19, Class C19, 4.635%, 4/15/47 ^W	732,000	674,418
FRB Ser. C14, Class D, 4.549%, 8/15/46 ^W	4,088,000	2,110,213
FRB Ser. 13-C12, Class E, 4.128%, 7/15/45 ^W	1,235,000	1,110,504
JPMCC Commercial Mortgage Securities Trust 144A FRB Ser. 17-JP7, Class D, 4.383%, 9/15/50 ^W	1,453,000	978,253
JPMDB Commercial Mortgage Securities Trust Ser. 17-C5, Class C, 4.512%, 3/15/50 ^W	1,858,000	1,345,682
JPMDB Commercial Mortgage Securities Trust 144A FRB Ser. 16-C2, Class D, 3.334%, 6/15/49 ^W	2,330,000	1,368,150
JPMorgan Chase Commercial Mortgage Securities Trust		
Ser. 06-LDP9, Class AMS, 5.337%, 5/15/47	1,815,625	1,732,875
FRB Ser. 13-C10, Class C, 4.346%, 12/15/47 ^W	1,929,000	1,854,113
FRB Ser. 13-LC11, Class D, 4.296%, 4/15/46 ^W	2,891,000	1,789,141
Ser. 13-LC11, Class B, 3.499%, 4/15/46	725,000	655,153
JPMorgan Chase Commercial Mortgage Securities Trust 144A		
FRB Ser. 11-C3, Class D, 5.526%, 2/15/46 ^W	2,164,000	1,491,374
FRB Ser. 11-C3, Class E, 5.526%, 2/15/46 ^W	1,629,000	647,002
FRB Ser. 13-C16, Class D, 5.009%, 12/15/46 ^W	1,295,000	1,214,182
Morgan Stanley Bank of America Merrill Lynch Trust		
FRB Ser. 15-C25, Class C, 4.524%, 10/15/48 ^W	1,824,000	1,640,211
FRB Ser. 14-C16, Class B, 4.301%, 6/15/47 ^W	1,695,000	1,571,180
FRB Ser. 15-C22, Class C, 4.202%, 4/15/48 ^W	523,000	465,474
FRB Ser. 17-C34, Class C, 4.175%, 11/15/52 ^W	751,000	619,239
FRB Ser. 13-C9, Class C, 3.996%, 5/15/46 ^W	946,000	775,851
Morgan Stanley Bank of America Merrill Lynch Trust 144A		
FRB Ser. 13-C12, Class D, 4.938%, 10/15/46 ^W	479,000	375,312
FRB Ser. 13-C12, Class E, 4.938%, 10/15/46 ^W	2,040,618	1,432,717
FRB Ser. 12-C6, Class G, 4.50%, 11/15/45 ^W	1,288,000	891,940
FRB Ser. 12-C6, Class E, 4.488%, 11/15/45 ^W	1,677,000	1,317,421
FRB Ser. 15-C24, Class E, 4.328%, 5/15/48 ^W	1,780,000	1,369,229
FRB Ser. 15-C23, Class D, 4.14%, 7/15/50 ^W	3,439,000	2,628,747
FRB Ser. 13-C9, Class D, 4.084%, 5/15/46 ^W	1,234,000	1,038,123
FRB Ser. 13-C10, Class F, 4.067%, 7/15/46 ^W	2,316,000	316,517
Ser. 14-C19, Class D, 3.25%, 12/15/47	2,815,000	2,166,295
Morgan Stanley Capital I Trust 144A		
FRB Ser. 12-C4, Class E, 5.165%, 3/15/45 ^W	2,436,000	1,760,010
FRB Ser. 11-C3, Class E, 5.083%, 7/15/49 ^W	7,724,130	6,610,358
Multifamily Connecticut Avenue Securities Trust 144A FRB Ser. 19-01, Class M10, 8.095%, 10/25/49	5,885,659	5,397,208

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Commercial mortgage-backed securities cont.		
PFP, Ltd. 144A FRB Ser. 21-8, Class A, 5.728%, 8/9/37 (Cayman Islands)	\$1,174,446	\$1,152,030
Ready Capital Mortgage Financing, LLC 144A FRB Ser. 22-FL9, Class A, 7.259%, 6/25/37	1,283,188	1,279,243
UBS Commercial Mortgage Trust		
FRB Ser. 18-C11, Class C, 4.881%, 6/15/51 ^W	1,439,000	1,176,248
FRB Ser. 17-C3, Class C, 4.391%, 8/15/50 ^W	3,138,000	2,542,693
UBS Commercial Mortgage Trust 144A		
FRB Ser. 12-C1, Class E, 5.00%, 5/10/45 ^W	1,811,321	905,660
FRB Ser. 18-C11, Class D, 3.00%, 6/15/51 ^W	2,564,000	1,488,617
UBS-Citigroup Commercial Mortgage Trust 144A FRB Ser. 11-C1, Class D, 6.03%, 1/10/45 ^W	2,444,104	2,219,108
Wells Fargo Commercial Mortgage Trust		
FRB Ser. 18-C46, Class C, 5.003%, 8/15/51 ^W	823,000	684,675
FRB Ser. 16-NXS5, Class D, 4.987%, 1/15/59 ^W	2,473,000	2,038,724
FRB Ser. 15-C31, Class C, 4.596%, 11/15/48 ^W	1,373,000	1,203,503
FRB Ser. 15-SG1, Class B, 4.454%, 9/15/48 ^W	2,091,000	1,822,937
FRB Ser. 15-C29, Class D, 4.219%, 6/15/48 ^W	1,407,000	1,189,949
FRB Ser. 20-C57, Class C, 4.023%, 8/15/53 ^W	788,000	622,841
Ser. 15-C31, Class D, 3.852%, 11/15/48	1,248,000	942,133
Ser. 16-BNK1, Class C, 3.071%, 8/15/49 ^W	790,000	579,992
Wells Fargo Commercial Mortgage Trust 144A		
FRB Ser. 15-C31, Class E, 4.596%, 11/15/48 ^W	1,550,000	929,796
FRB Ser. 15-C30, Class D, 4.499%, 9/15/58 ^W	1,050,500	839,989
Ser. 17-RB1, Class D, 3.401%, 3/15/50	1,983,000	1,181,541
Ser. 16-C33, Class D, 3.123%, 3/15/59	2,673,000	2,076,459
Ser. 20-C55, Class D, 2.50%, 2/15/53	1,091,000	595,661
Ser. 19-C54, Class D, 2.50%, 12/15/52	1,025,000	592,441
WF-RBS Commercial Mortgage Trust		
Ser. 14-C21, Class C, 4.234%, 8/15/47 ^W	2,558,000	2,252,158
Ser. 12-C10, Class AS, 3.241%, 12/15/45	801,858	759,604
WF-RBS Commercial Mortgage Trust 144A		
Ser. 11-C4, Class E, 4.845%, 6/15/44 ^W	1,659,568	1,255,193
FRB Ser. 12-C9, Class D, 4.424%, 11/15/45 ^W	1,608,775	1,495,970
FRB Ser. 12-C9, Class E, 4.424%, 11/15/45 ^W	1,461,000	1,337,838
FRB Ser. 13-C11, Class D, 4.147%, 3/15/45 ^W	2,116,000	1,576,412
		154,500,090
Residential mortgage-backed securities (non-agency) (19.2%)		
American Home Mortgage Investment Trust FRB Ser. 07-1, Class GA1C, (ICE LIBOR USD 1 Month + 0.19%), 5.035%, 5/25/47	5,302,280	2,815,538
Arroyo Mortgage Trust 144A Ser. 19-3, Class M1, 4.204%, 10/25/48 ^W	750,000	644,713
Bayview Financial Mortgage Pass-Through Trust Ser. 06-C, Class 1A3, 6.528%, 11/28/36	4,124,413	3,875,271
Bear Stearns Alt-A Trust		
FRB Ser. 05-10, Class 11A1, (ICE LIBOR USD 1 Month + 0.50%), 5.345%, 1/25/36	234,236	293,984
FRB Ser. 05-8, Class 21A1, 4.077%, 10/25/35 ^W	389,253	320,661
Carrington Mortgage Loan Trust FRB Ser. 06-NC2, Class A4, (ICE LIBOR USD 1 Month + 0.24%), 5.325%, 6/25/36	3,226,711	3,017,104

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Countrywide Alternative Loan Trust FRB Ser. 06-OA19, Class A1, (ICE LIBOR USD 1 Month + 0.18%), 4.941%, 2/20/47	\$1,943,602	\$1,444,665
Countrywide Asset-Backed Certificates FRB Ser. 07-10, Class 1A1, (ICE LIBOR USD 1 Month + 0.18%), 5.025%, 6/25/47	4,068,713	3,755,247
Eagle Re, Ltd. 144A FRB Ser. 20-1, Class B1, (ICE LIBOR USD 1 Month + 2.85%), 7.695%, 1/25/30	765,000	734,432
Federal Home Loan Mortgage Corporation		
Structured Agency Credit Risk Debt FRN Ser. 15-DNA3, Class B, (ICE LIBOR USD 1 Month + 9.35%), 14.195%, 4/25/28	329,559	345,342
Structured Agency Credit Risk Debt FRN Ser. 15-HQA1, Class B, (ICE LIBOR USD 1 Month + 8.80%), 13.645%, 3/25/28	2,713,097	2,764,725
Structured Agency Credit Risk Debt FRN Ser. 16-DNA3, Class M3, (ICE LIBOR USD 1 Month + 5.00%), 9.845%, 12/25/28	2,639,393	2,812,932
Federal Home Loan Mortgage Corporation 144A		
Structured Agency Credit Risk Trust FRB Ser. 19-HQA2, Class B2, (ICE LIBOR USD 1 Month + 11.25%), 16.095%, 4/25/49	637,000	714,893
Structured Agency Credit Risk Trust FRB Ser. 18-HQA2, Class B2, (ICE LIBOR USD 1 Month + 11.00%), 15.845%, 10/25/48	2,108,000	2,392,731
Structured Agency Credit Risk Trust FRB Ser. 19-DNA1, Class B2, (ICE LIBOR USD 1 Month + 10.75%), 15.595%, 1/25/49	4,520,000	5,138,435
Structured Agency Credit Risk Trust FRB Ser. 19-DNA2, Class B2, (ICE LIBOR USD 1 Month + 10.50%), 15.345%, 3/25/49	282,000	312,046
Structured Agency Credit Risk Trust REMICs FRB Ser. 20-DNA4, Class B2, (ICE LIBOR USD 1 Month + 10.00%), 14.845%, 8/25/50	2,647,000	2,948,078
Structured Agency Credit Risk Trust REMICs FRB Ser. 20-HQA3, Class B2, (ICE LIBOR USD 1 Month + 10.00%), 14.845%, 7/25/50	916,000	1,025,606
Structured Agency Credit Risk Trust FRB Ser. 19-DNA4, Class B2, (ICE LIBOR USD 1 Month + 6.25%), 11.095%, 10/25/49	1,070,000	1,053,762
Structured Agency Credit Risk Trust REMICs FRB Ser. 20-HQA3, Class B1, (ICE LIBOR USD 1 Month + 5.75%), 10.595%, 7/25/50	1,987,503	2,105,798
Structured Agency Credit Risk Trust FRB Ser. 19-FTR3, Class FTR3, (ICE LIBOR USD 1 Month + 4.80%), 9.417%, 9/25/47	371,000	309,083
Structured Agency Credit Risk Trust FRB Ser. 18-HQA2, Class B1, (ICE LIBOR USD 1 Month + 4.25%), 9.095%, 10/25/48	1,347,000	1,414,785
Structured Agency Credit Risk Trust FRB Ser. 18-DNA2, Class B1, (ICE LIBOR USD 1 Month + 3.70%), 8.545%, 12/25/30	2,018,000	2,061,427
Seasoned Credit Risk Transfer Trust Ser. 19-2, Class M, 4.75%, 8/25/58 ^W	1,129,000	979,502
Seasoned Credit Risk Transfer Trust FRB Ser. 18-3, Class 3, 4.75%, 8/25/57 ^W	876,000	756,680
Seasoned Credit Risk Transfer Trust Ser. 19-4, Class M, 4.50%, 2/25/59 ^W	485,000	408,895
Federal National Mortgage Association		
Connecticut Avenue Securities FRB Ser. 16-C03, Class 2B, (ICE LIBOR USD 1 Month + 12.75%), 17.595%, 10/25/28	467,281	529,660
Connecticut Avenue Securities FRB Ser. 16-C03, Class 1B, (ICE LIBOR USD 1 Month + 11.75%), 16.595%, 10/25/28	2,821,839	3,143,345
Connecticut Avenue Securities FRB Ser. 16-C04, Class 1B, (ICE LIBOR USD 1 Month + 10.25%), 15.095%, 1/25/29	780,776	843,911
Connecticut Avenue Securities FRB Ser. 16-C06, Class 1B, (ICE LIBOR USD 1 Month + 9.25%), 14.095%, 4/25/29	505,383	533,521

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Federal National Mortgage Association		
Connecticut Avenue Securities FRB Ser. 17-C02, Class 2B1, (ICE LIBOR USD 1 Month + 5.50%), 10.345%, 9/25/29	\$1,518,000	\$1,645,988
Connecticut Avenue Securities FRB Ser. 16-C03, Class 1M2, (ICE LIBOR USD 1 Month + 5.30%), 10.145%, 10/25/28	423,354	448,700
Connecticut Avenue Securities FRB Ser. 17-C07, Class 2B1, (ICE LIBOR USD 1 Month + 4.45%), 9.295%, 5/25/30	2,739,000	2,875,799
Connecticut Avenue Securities FRB Ser. 17-C06, Class 2B1, (ICE LIBOR USD 1 Month + 4.45%), 9.295%, 2/25/30	3,203,000	3,411,195
Connecticut Avenue Securities FRB Ser. 17-C06, Class 1B1, (ICE LIBOR USD 1 Month + 4.15%), 8.995%, 2/25/30	3,742,000	3,900,423
Connecticut Avenue Securities FRB Ser. 18-C06, Class 2B1, (ICE LIBOR USD 1 Month + 4.10%), 8.945%, 3/25/31	1,273,000	1,327,098
Connecticut Avenue Securities FRB Ser. 17-C07, Class 1B1, (ICE LIBOR USD 1 Month + 4.00%), 8.845%, 5/25/30	3,800,000	3,955,372
Connecticut Avenue Securities FRB Ser. 18-C06, Class 1B1, (ICE LIBOR USD 1 Month + 3.75%), 8.595%, 3/25/31	1,687,000	1,749,231
Connecticut Avenue Securities FRB Ser. 18-C03, Class 1B1, (ICE LIBOR USD 1 Month + 3.75%), 8.595%, 10/25/30	1,154,000	1,194,390
Connecticut Avenue Securities FRB Ser. 17-C05, Class 1B1, (ICE LIBOR USD 1 Month + 3.60%), 8.445%, 1/25/30	2,577,000	2,632,111
Federal National Mortgage Association 144A		
Connecticut Avenue Securities Trust FRB Ser. 20-SBT1, Class 1B1, (ICE LIBOR USD 1 Month + 6.75%), 11.595%, 2/25/40	2,355,000	2,190,280
Connecticut Avenue Securities Trust FRB Ser. 19-R01, Class 2B1, (ICE LIBOR USD 1 Month + 4.35%), 9.195%, 7/25/31	653,000	672,590
Connecticut Avenue Securities Trust FRB Ser. 20-SBT1, Class 1M2, (ICE LIBOR USD 1 Month + 3.65%), 8.495%, 2/25/40	1,887,000	1,902,209
Connecticut Avenue Securities Trust FRB Ser. 20-R01, Class 1B1, (ICE LIBOR USD 1 Month + 3.25%), 8.095%, 1/25/40	347,000	333,547
Connecticut Avenue Securities Trust FRB Ser. 20-R02, Class 2B1, (ICE LIBOR USD 1 Month + 3.00%), 7.845%, 1/25/40	311,000	291,219
Connecticut Avenue Securities Trust FRB Ser. 22-R02, Class 2M2, (US 30 Day Average SOFR + 3.00%), 7.56%, 1/25/42	2,198,000	2,126,565
Connecticut Avenue Securities Trust FRB Ser. 19-R01, Class 2M2, (ICE LIBOR USD 1 Month + 2.45%), 7.295%, 7/25/31	11,656	11,671
HarborView Mortgage Loan Trust FRB Ser. 05-2, Class 1A, (ICE LIBOR USD 1 Month + 0.52%), 5.281%, 5/19/35	967,596	314,893
Home Re, Ltd. 144A FRB Ser. 21-2, Class B1, (US 30 Day Average SOFR + 4.15%), 8.71%, 1/25/34 (Bermuda)	1,000,000	922,281
JPMorgan Alternative Loan Trust FRB Ser. 06-A6, Class 1A1, (ICE LIBOR USD 1 Month + 0.32%), 5.165%, 11/25/36	1,259,816	1,026,466
LHOME Mortgage Trust 144A Ser. 21-RTL1, Class A1, 2.09%, 2/25/26 ^w	511,000	490,560
Morgan Stanley ABS Capital I, Inc. Trust FRB Ser. 04-HE9, Class M2, (ICE LIBOR USD 1 Month + 0.93%), 5.775%, 11/25/34	257,991	245,042
Oaktown Re III, Ltd. 144A		
FRB Ser. 19-1A, Class B1B, (ICE LIBOR USD 1 Month + 4.35%), 9.195%, 7/25/29 (Bermuda)	695,000	699,242
FRB Ser. 19-1A, Class B1A, (ICE LIBOR USD 1 Month + 3.50%), 8.345%, 7/25/29 (Bermuda)	574,000	565,565

MORTGAGE-BACKED SECURITIES (86.0%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Radnor Re, Ltd. 144A Mortgage Insurance-Linked FRN Ser. 20-1, Class B1, (ICE LIBOR USD 1 Month + 3.00%), 7.845%, 1/25/30	\$430,000	\$397,941
Structured Asset Mortgage Investments II Trust FRB Ser. 06-AR7, Class A1BG, (ICE LIBOR USD 1 Month + 0.12%), 4.965%, 8/25/36	226,445	187,277
Towd Point Mortgage Trust 144A Ser. 19-2, Class A2, 3.75%, 12/25/58 ^W	862,000	755,694
WaMu Mortgage Pass-Through Certificates Trust FRB Ser. 05-AR8, Class 2AC2, (ICE LIBOR USD 1 Month + 0.92%), 5.765%, 7/25/45	577,189	519,470
Wells Fargo Home Equity Asset-Backed Securities Trust FRB Ser. 07-2, Class A3, (ICE LIBOR USD 1 Month + 0.23%), 5.305%, 4/25/37	666,720	641,821
		86,931,412
Total mortgage-backed securities (cost \$431,510,427)		\$389,630,161

ASSET-BACKED SECURITIES (0.5%)*	Principal amount	Value
1Sharpe Mortgage Trust 144A FRB Ser. 20-1, Class NOTE, (ICE LIBOR USD 3 Month + 2.90%), 3.025%, 7/25/24	\$788,389	\$778,534
Mello Warehouse Securitization Trust 144A FRB Ser. 21-3, Class D, (ICE LIBOR USD 1 Month + 2.00%), 6.845%, 10/22/24	1,410,000	1,380,919
Total asset-backed securities (cost \$2,135,714)		\$2,159,453

SHORT-TERM INVESTMENTS (11.5%)*		Principal amount/ shares	Value
Putnam Short Term Investment Fund Class P 4.88% ^L	Shares	12,935,693	\$12,935,693
State Street Institutional U.S. Government Money Market Fund, Premier Class 4.70% ^P	Shares	17,363,000	17,363,000
U.S. Treasury Bills 4.736%, 5/2/23 ^{#Δ\$}		\$8,300,000	8,269,317
U.S. Treasury Bills 4.726%, 4/18/23 ^{#Δ\$}		7,700,000	7,685,386
U.S. Treasury Bills 5.540%, 4/4/23 ^{Δ\$}		5,100,000	5,099,349
U.S. Treasury Bills 4.276%, 5/23/23 ^{Δ\$}		1,000,000	993,627
Total short-term investments (cost \$52,340,732)			\$52,346,372

TOTAL INVESTMENTS	
Total investments (cost \$2,385,115,212)	\$2,365,955,453

Key to holding's abbreviations

bp	Basis Points
FRB	Floating Rate Bonds: The rate shown is the current interest rate at the close of the reporting period. Rates may be subject to a cap or floor. For certain securities, the rate may represent a fixed rate currently in place at the close of the reporting period.
FRN	Floating Rate Notes: The rate shown is the current interest rate or yield at the close of the reporting period. Rates may be subject to a cap or floor. For certain securities, the rate may represent a fixed rate currently in place at the close of the reporting period.
ICE	Intercontinental Exchange
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. Rates may be subject to a cap or floor.
IO	Interest Only

LIBOR	London Interbank Offered Rate
OTC	Over-the-counter
PO	Principal Only
REMICs	Real Estate Mortgage Investment Conduits
SOFR	Secured Overnight Financing Rate
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 October 1, 2022 through March 31, 2023 (the reporting period). Within the following notes to the portfolio, references to "Putnam Management" represent Putnam Investment Management, LLC, the fund's manager, an indirect wholly-owned subsidiary of Putnam Investments, LLC and references to "ASC 820" represent Accounting Standards Codification 820 *Fair Value Measurements and Disclosures*.

- * Percentages indicated are based on net assets of \$453,306,364.
- # This security, in part or in entirety, was pledged and segregated with the broker to cover margin requirements for futures contracts at the close of the reporting period. Collateral at period end totaled \$1,176,183 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 8).
- 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. Collateral at period end totaled \$2,818,200 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 8).
- § 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. Collateral at period end totaled \$17,228,767 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 8).
- i This security was pledged, or purchased with cash that was pledged, to the fund for collateral on certain derivative contracts (Note 1).
- L Affiliated company (Note 5). The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.
- P This security was pledged, or purchased with cash that was pledged, to the fund for collateral on certain derivative contracts and TBA commitments. The rate quoted in the security description is the annualized 7-day yield of the fund at the close of the reporting period.
- W The rate shown represents the weighted average coupon associated with the underlying mortgage pools. Rates may be subject to a cap or floor.

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

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.

FUTURES CONTRACTS OUTSTANDING at 3/31/23 (Unaudited)

	Number of contracts	Notional amount	Value	Expiration date	Unrealized appreciation/(depreciation)
U.S. Treasury Note 2 yr (Short)	781	\$161,239,891	\$161,239,891	Jun-23	\$(1,654,946)
Unrealized appreciation					—
Unrealized (depreciation)					(1,654,946)
Total					\$(1,654,946)

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 3/31/23 (Unaudited)

Counterparty Fixed right or obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Notional/ Contract amount	Premium receivable/ (payable)	Unrealized appreciation/ (depreciation)
Bank of America N.A.				
(1.39)/US SOFR/Dec-26 (Purchased)	Dec-24/1.39	\$176,037,200	\$(2,024,428)	\$3,489,062
1.39/US SOFR/Dec-26 (Purchased)	Dec-24/1.39	176,037,200	(2,024,428)	(1,278,030)
(1.085)/3 month USD-LIBOR-ICE/ Apr-34 (Written)	Apr-24/1.085	115,721,600	1,588,279	1,375,930
3.63/US SOFR/Mar-26 (Written)	Mar-24/3.63	64,065,500	797,615	341,469
(3.63)/US SOFR/Mar-26 (Written)	Mar-24/3.63	64,065,500	797,615	(206,291)
2.17/3 month USD-LIBOR-ICE/ Apr-34 (Purchased)	Apr-24/2.17	57,860,800	(2,794,677)	(2,227,641)
3.073/US SOFR/Jun-37 (Written)	Jun-27/3.073	53,614,900	3,900,484	380,130
(3.073)/US SOFR/Jun-37 (Written)	Jun-27/3.073	53,614,900	3,900,484	310,966
3.32/US SOFR/Oct-39 (Purchased)	Oct-29/3.32	39,112,600	(3,109,452)	137,676
(3.32)/US SOFR/Oct-39 (Purchased)	Oct-29/3.32	39,112,600	(3,109,452)	(418,114)
(3.17)/US SOFR/Dec-35 (Purchased)	Dec-25/3.17	32,653,500	(1,697,982)	(75,103)
2.67/US SOFR/Dec-35 (Purchased)	Dec-25/2.67	32,653,500	(1,665,329)	(262,861)
(3.18)/US SOFR/Dec-35 (Purchased)	Dec-25/3.18	31,673,900	(1,599,532)	(40,226)
2.68/US SOFR/Dec-35 (Purchased)	Dec-25/2.68	31,673,900	(1,599,532)	(229,319)
3.1625/US SOFR/Mar-37 (Written)	Mar-27/3.1625	30,797,700	2,125,041	255,313
(3.1625)/US SOFR/Mar-37 (Written)	Mar-27/3.1625	30,797,700	2,125,041	(14,783)
(1.29)/3 month USD-LIBOR-ICE/ Mar-34 (Written)	Mar-24/1.29	28,930,400	451,314	391,139
(3.101)/US SOFR/Jun-39 (Written)	Jun-29/3.101	21,231,500	1,658,180	98,090
3.101/US SOFR/Jun-39 (Written)	Jun-29/3.101	21,231,500	1,658,180	84,714
2.29/3 month USD-LIBOR-ICE/ Mar-34 (Purchased)	Mar-24/2.29	20,251,300	(996,075)	(792,028)
3.343/US SOFR/Dec-35 (Purchased)	Dec-25/3.343	19,953,000	(1,293,952)	164,213
(3.343)/US SOFR/Dec-35 (Purchased)	Dec-25/3.343	19,953,000	(1,293,952)	(376,114)
3.03/US SOFR/Feb-33 (Written)	Feb-28/3.03	19,485,700	740,457	(24,747)
(3.03)/US SOFR/Feb-33 (Written)	Feb-28/3.03	19,485,700	740,457	(61,380)
3.03/US SOFR/Mar-36 (Purchased)	Mar-26/3.03	13,654,800	(873,224)	(58,443)
(3.03)/US SOFR/Mar-36 (Purchased)	Mar-26/3.03	13,654,800	(873,224)	(85,206)
(1.275)/3 month USD-LIBOR-ICE/ Mar-50 (Purchased)	Mar-30/1.275	12,942,000	(1,685,696)	1,813,562
1.275/3 month USD-LIBOR-ICE/ Mar-50 (Purchased)	Mar-30/1.275	12,942,000	(1,685,696)	(1,102,400)
3.095/US SOFR/Mar-36 (Written)	Mar-26/3.095	12,807,700	847,870	134,353
(3.095)/US SOFR/Mar-36 (Written)	Mar-26/3.095	12,807,700	847,870	44,571
(2.558)/US SOFR/Dec-57 (Purchased)	Dec-27/2.558	12,352,300	(1,825,670)	(52,374)
2.558/US SOFR/Dec-57 (Purchased)	Dec-27/2.558	12,352,300	(1,825,670)	(328,077)
(2.47)/US SOFR/Dec-57 (Purchased)	Dec-27/2.47	9,034,500	(1,341,623)	27,194
2.47/US SOFR/Dec-57 (Purchased)	Dec-27/2.47	9,034,500	(1,341,623)	(311,419)
(1.405)/US SOFR/Dec-58 (Purchased)	Dec-28/1.405	2,526,100	(387,441)	301,212
1.405/US SOFR/Dec-58 (Purchased)	Dec-28/1.405	2,526,100	(387,441)	(224,318)

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Counterparty Fixed right or obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Notional/ Contract amount	Premium receivable/ (payable)	Unrealized appreciation/ (depreciation)
Barclays Bank PLC				
(2.232)/3 month USD-LIBOR-ICE/ Jun-51 (Purchased)	Jun-31/2.232	\$12,539,500	\$(1,519,160)	\$704,093
2.232/3 month USD-LIBOR-ICE/ Jun-51 (Purchased)	Jun-31/2.232	12,539,500	(1,519,160)	(578,071)
(3.09)/US SOFR/Dec-42 (Purchased)	Dec-32/3.09	4,715,100	(383,573)	(5,894)
3.09/US SOFR/Dec-42 (Purchased)	Dec-32/3.09	4,715,100	(383,573)	(6,790)
Citibank, N.A.				
2.703/US SOFR/Jul-33 (Purchased)	Jul-23/2.703	63,016,500	(702,449)	(212,996)
2.643/US SOFR/Jul-33 (Purchased)	Jul-23/2.643	63,016,500	(702,449)	(279,793)
3.578/US SOFR/Sep-33 (Purchased)	Sep-23/3.578	38,775,500	(1,079,898)	926,734
(3.578)/US SOFR/Sep-33 (Purchased)	Sep-23/3.578	38,775,500	(1,079,898)	(649,877)
(1.99)/US SOFR/Feb-42 (Purchased)	Feb-32/1.99	23,191,700	(1,826,346)	955,034
1.99/US SOFR/Feb-42 (Purchased)	Feb-32/1.99	23,191,700	(1,826,346)	(737,032)
2.394/US SOFR/Sep-33 (Purchased)	Sep-23/2.394	22,133,600	(267,817)	(85,657)
(1.887)/US SOFR/Jan-35 (Written)	Jan-25/1.887	22,055,800	379,026	74,769
(2.25)/US SOFR/Jan-34 (Written)	Jan-24/2.25	22,055,800	287,281	69,476
(1.947)/US SOFR/Jan-35 (Written)	Jan-25/1.947	22,055,800	379,026	52,052
(2.311)/US SOFR/Jan-34 (Written)	Jan-24/2.311	22,055,800	287,281	46,979
(1.826)/US SOFR/Jan-42 (Purchased)	Jan-32/1.826	17,079,100	(1,261,292)	896,653
1.826/US SOFR/Jan-42 (Purchased)	Jan-32/1.826	17,079,100	(1,261,292)	(536,284)
(1.625)/3 month USD-LIBOR-ICE/ Jan-61 (Purchased)	Jan-41/1.625	14,080,100	(2,076,815)	545,604
1.625/3 month USD-LIBOR-ICE/ Jan-61 (Purchased)	Jan-41/1.625	14,080,100	(2,076,815)	(477,738)
(2.285)/3 month USD-LIBOR-ICE/ Mar-51 (Purchased)	Mar-41/2.285	8,587,600	(741,539)	107,002
2.285/3 month USD-LIBOR-ICE/ Mar-51 (Purchased)	Mar-41/2.285	8,587,600	(741,539)	(89,655)
(2.427)/3 month USD-LIBOR-ICE/ Jun-41 (Purchased)	Jun-31/2.427	6,879,800	(501,193)	268,243
2.427/3 month USD-LIBOR-ICE/ Jun-41 (Purchased)	Jun-31/2.427	6,879,800	(501,193)	(178,600)
(2.689)/3 month USD-LIBOR-ICE/ Nov-49 (Purchased)	Nov-24/2.689	4,579,000	(589,546)	(9,387)
2.689/3 month USD-LIBOR-ICE/ Nov-49 (Purchased)	Nov-24/2.689	4,579,000	(589,546)	(369,205)
Deutsche Bank AG				
(2.98)/US SOFR/Mar-35 (Written)	Mar-30/2.98	68,872,500	3,188,797	289,265
2.98/US SOFR/Mar-35 (Written)	Mar-30/2.98	68,872,500	3,188,797	(6,199)
3.19/US SOFR/Mar-38 (Written)	Mar-28/3.19	5,530,300	385,185	21,679
(3.19)/US SOFR/Mar-38 (Written)	Mar-28/3.19	5,530,300	385,185	(21,845)

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Counterparty Fixed right or obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Notional/ Contract amount	Premium receivable/ (payable)	Unrealized appreciation/ (depreciation)
Goldman Sachs International				
3.293/US SOFR/May-33 (Purchased)	May-23/3.293	\$45,686,200	\$(813,214)	\$91,829
(3.293)/US SOFR/May-33 (Purchased)	May-23/3.293	45,686,200	(813,214)	(399,754)
(2.8175)/3 month USD-LIBOR-ICE/ Mar-47 (Purchased)	Mar-27/2.8175	4,497,500	(567,809)	11,783
2.8175/3 month USD-LIBOR-ICE/ Mar-47 (Purchased)	Mar-27/2.8175	4,497,500	(567,809)	(227,978)
JPMorgan Chase Bank N.A.				
(1.70)/US SOFR/Jan-29 (Written)	Jan-24/1.70	27,464,600	586,026	466,624
1.70/US SOFR/Jan-29 (Written)	Jan-24/1.70	27,464,600	586,026	(1,163,126)
(3.0175)/US SOFR/Dec-42 (Purchased)	Dec-32/3.0175	24,704,500	(2,081,354)	(32,363)
3.0175/US SOFR/Dec-42 (Purchased)	Dec-32/3.0175	24,704,500	(2,081,354)	(148,968)
3.115/US SOFR/Mar-43 (Written)	Mar-33/3.115	18,773,300	1,584,467	77,721
(3.115)/US SOFR/Mar-43 (Written)	Mar-33/3.115	18,773,300	1,584,467	39,612
3.0925/US SOFR/Mar-43 (Written)	Mar-33/3.0925	13,402,000	1,125,768	43,288
(3.0925)/US SOFR/Mar-43 (Written)	Mar-33/3.0925	13,402,000	1,125,768	34,845
3.187/US SOFR/Jan-36 (Purchased)	Jan-26/3.187	12,385,200	(799,465)	13,624
(3.187)/US SOFR/Jan-36 (Purchased)	Jan-26/3.187	12,385,200	(799,465)	(169,801)
(2.031)/3 month USD-LIBOR-ICE/ Feb-41 (Purchased)	Feb-31/2.031	10,707,100	(732,366)	653,883
2.031/3 month USD-LIBOR-ICE/ Feb-41 (Purchased)	Feb-31/2.031	10,707,100	(732,366)	(331,171)
(1.985)/3 month USD-LIBOR-ICE/ Jan-41 (Purchased)	Jan-31/1.985	7,647,900	(524,646)	482,888
1.985/3 month USD-LIBOR-ICE/ Jan-41 (Purchased)	Jan-31/1.985	7,647,900	(524,646)	(243,739)
3.1525/US SOFR/Mar-40 (Written)	Mar-30/3.1525	5,166,700	409,461	21,545
(3.1525)/US SOFR/Mar-40 (Written)	Mar-30/3.1525	5,166,700	409,461	10,953
(1.81)/US SOFR/Jan-37 (Written)	Jan-27/1.81	4,234,200	250,241	139,348
1.81/US SOFR/Jan-37 (Written)	Jan-27/1.81	4,234,200	250,241	(255,111)
Morgan Stanley & Co. International PLC				
(2.505)/3 month USD-LIBOR-ICE/ Nov-49 (Purchased)	Nov-24/2.505	4,579,000	(701,503)	(15,752)
2.505/3 month USD-LIBOR-ICE/ Nov-49 (Purchased)	Nov-24/2.505	4,579,000	(492,700)	(319,431)
3.27/3 month USD-LIBOR-ICE/ Oct-53 (Purchased)	Oct-23/3.27	219,200	(25,011)	(10,706)
(3.27)/3 month USD-LIBOR-ICE/ Oct-53 (Purchased)	Oct-23/3.27	219,200	(25,011)	(15,480)
Toronto-Dominion Bank				
(2.405)/3 month USD-LIBOR-ICE/ Mar-41 (Purchased)	Mar-31/2.405	2,820,300	(196,716)	119,778
2.405/3 month USD-LIBOR-ICE/ Mar-41 (Purchased)	Mar-31/2.405	2,820,300	(196,716)	(69,238)

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Counterparty Fixed right or obligation % to receive or (pay)/Floating rate index/ Maturity date	Expiration date/strike	Notional/ Contract amount	Premium receivable/ (payable)	Unrealized appreciation/ (depreciation)
UBSAG				
3.22/US SOFR/Aug-33 (Purchased)	Aug-23/3.22	\$48,098,400	\$ (1,200,055)	\$156,801
(3.22)/US SOFR/Aug-33 (Purchased)	Aug-23/3.22	48,098,400	(1,200,055)	(278,971)
Unrealized appreciation				16,671,699
Unrealized (depreciation)				(16,095,486)
Total				\$576,213

TBA SALE COMMITMENTS OUTSTANDING at 3/31/23 (proceeds receivable \$988,123,023) (Unaudited)

Agency	Principal amount	Settlement date	Value
Uniform Mortgage-Backed Securities, 6.00%, 4/1/53	\$34,400,000	4/13/23	\$35,105,475
Uniform Mortgage-Backed Securities, 5.50%, 4/1/53	71,000,000	4/13/23	71,721,076
Uniform Mortgage-Backed Securities, 5.00%, 5/1/53	67,000,000	5/11/23	66,803,683
Uniform Mortgage-Backed Securities, 5.00%, 4/1/53	318,000,000	4/13/23	317,093,064
Uniform Mortgage-Backed Securities, 4.50%, 4/1/53	191,000,000	4/13/23	187,090,383
Uniform Mortgage-Backed Securities, 4.00%, 4/1/53	36,000,000	4/13/23	34,427,815
Uniform Mortgage-Backed Securities, 3.50%, 4/1/53	37,000,000	4/13/23	34,363,732
Uniform Mortgage-Backed Securities, 3.00%, 4/1/53	34,000,000	4/13/23	30,488,453
Uniform Mortgage-Backed Securities, 2.50%, 4/1/53	127,000,000	4/13/23	109,463,066
Uniform Mortgage-Backed Securities, 2.00%, 4/1/53	128,000,000	4/13/23	105,763,942
Total			\$992,320,689

OTC INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited)

Swap counterparty/ Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
Morgan Stanley & Co. International PLC						
\$50,000,000	\$252,000	\$1,162,857	9/21/27	3.30% — Annually	US SOFR — Annually	\$1,561,881
370,000,000	5,298,400	2,201,886	9/21/24	3.40% — Annually	US SOFR — Annually	8,579,132
Upfront premium received		3,364,743		Unrealized appreciation		10,141,013
Upfront premium (paid)		—		Unrealized (depreciation)		—
Total		\$3,364,743		Total		\$10,141,013

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited)

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$17,746,600	\$2,798,284	\$743,348	9/1/32	3 month USD- LIBOR-ICE — Quarterly	1.512% — Semiannually	\$(2,108,410)
30,378,000	911,948	1,468	12/23/23	0.695% — Annually	US SOFR — Annually	1,228,648
28,248,000	2,392,323	2,428	12/23/26	1.085% — Annually	US SOFR — Annually	2,657,585
44,700,000	6,456,915	(11,630)	12/23/31	US SOFR — Annually	1.285% — Annually	(6,859,876)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$16,940,000	\$4,911,414	\$(30,163)	12/23/51	US SOFR — Annually	1.437% — Annually	\$(5,082,798)
77,601,000	2,328,806	(7,896)	12/24/23	0.697% — Annually	US SOFR — Annually	3,086,375
8,211,000	692,516	523	12/24/26	US SOFR — Annually	1.096% — Annually	(764,433)
75,507,000	10,909,251	(33,708)	12/24/31	1.285% — Annually	US SOFR — Annually	11,504,426
10,717,000	3,111,252	(5,792)	12/24/51	1.435% — Annually	US SOFR — Annually	3,190,523
2,051,000	560,395	(334)	12/31/51	1.525% — Annually	US SOFR — Annually	575,536
4,905,000	408,390	(651)	12/31/26	US SOFR — Annually	1.135% — Annually	(450,939)
2,561,900	156,173 ^E	(57)	1/15/47	1.724% — Annually	US SOFR — Annually	156,116
9,386,000	2,291,592	(320)	1/21/52	1.679% — Annually	US SOFR — Annually	2,341,695
9,856,000	2,505,494	(336)	1/19/52	US SOFR — Annually	1.626% — Annually	(2,562,758)
18,503,000	4,604,472	(631)	2/1/52	1.6545% — Annually	US SOFR — Annually	4,691,688
10,668,100	853,768 ^E	(364)	2/13/57	1.68% — Annually	US SOFR — Annually	853,404
24,475,300	5,135,407	(835)	2/24/52	US SOFR — Annually	1.86% — Annually	(5,202,875)
1,881,000	427,833	(64)	2/29/52	1.7674% — Annually	US SOFR — Annually	432,479
5,733,000	637,223	(76)	2/29/32	US SOFR — Annually	1.75% — Annually	(651,742)
13,299,000	877,867	(108)	2/28/27	1.675% — Annually	US SOFR — Annually	912,149
11,772,000	344,566	(45)	2/29/24	US SOFR — Annually	1.47709% — Annually	(377,123)
7,332,800	856,471	(97)	3/7/32	3 month USD-LIBOR-ICE — Quarterly	1.9575% — Semiannually	(872,379)
14,228,000	317,996	(54)	4/7/24	2.45% — Annually	US SOFR — Annually	363,609
12,816,000	481,753	(104)	4/7/27	2.469% — Annually	US SOFR — Annually	499,477
11,968,000	803,771	(159)	4/7/23	2.3305% — Annually	US SOFR — Annually	837,632
2,606,000	426,759	(89)	4/7/52	2.1015% — Annually	US SOFR — Annually	437,895
8,956,000	1,059,405	(305)	4/14/52	US SOFR — Annually	2.3395% — Annually	(1,073,170)
2,050,000	111,459	(27)	4/14/32	US SOFR — Annually	2.4965% — Annually	(111,582)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$9,554,000	\$354,836	\$(77)	4/14/27	2.483% — Annually	US SOFR — Annually	\$366,376
5,859,000	135,343	(22)	4/14/24	2.405% — Annually	US SOFR — Annually	159,188
51,844,600	1,539,266	(489)	5/2/27	US SOFR — Annually	2.685% — Annually	(1,671,209)
96,127,500	2,181,133	(362)	5/25/24	2.5945% — Annually	US SOFR — Annually	2,620,260
10,207,000	890,663	(348)	5/25/52	US SOFR — Annually	2.501% — Annually	(928,525)
25,683,000	888,632	(341)	6/7/32	US SOFR — Annually	2.7565% — Annually	(931,843)
6,150,000	393,723	(210)	6/7/52	US SOFR — Annually	2.622% — Annually	(416,091)
9,706,600	1,725,154	(1,218,311)	6/22/52	2.3075% — Semiannually	3 month USD-LIBOR-ICE — Quarterly	458,946
23,054,000	470,071	(87)	6/10/24	US SOFR — Annually	2.833% — Annually	(515,233)
19,230,000	487,096	(156)	6/10/27	2.8025% — Annually	US SOFR — Annually	529,767
124,460,000	1,823,339	(469)	6/15/24	US SOFR — Annually	3.3385% — Annually	(1,777,621)
64,279,000	676,215	(520)	6/15/27	3.185% — Annually	US SOFR — Annually	731,324
12,203,100	353,524	(173)	2/3/33	3.13% — Semiannually	3 month USD-LIBOR-ICE — Quarterly	385,217
3,707,000	269,091	(126)	7/8/52	US SOFR — Annually	2.5765% — Annually	(289,305)
12,761,000	479,686	(169)	7/15/32	US SOFR — Annually	2.723% — Annually	(536,370)
26,054,000	1,599,195	(345)	8/2/32	US SOFR — Annually	2.4275% — Annually	(1,797,832)
4,084,700	127,606 ^E	(80)	4/1/42	US SOFR — Annually	2.63% — Annually	(127,686)
3,345,600	156,541 ^E	(50)	3/24/35	US SOFR — Annually	2.39% — Annually	(156,591)
5,261,700	386,209	(155)	8/10/42	2.645% — Annually	US SOFR — Annually	421,394
8,918,100	705,957	(19,883)	8/10/42	US SOFR — Annually	2.605% — Annually	(784,528)
3,656,500	296,542	(108)	8/10/42	2.5915% — Annually	US SOFR — Annually	321,525
20,916,000	572,262 ^E	(197)	2/6/29	2.40% — Annually	US SOFR — Annually	572,065
29,796,000	1,391,175	(393)	8/16/32	US SOFR — Annually	2.613% — Annually	(1,593,417)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$3,797,800	\$68,854 ^E	\$(84)	1/15/47	2.49% — Annually	US SOFR — Annually	\$68,770
16,263,000	264,762 ^E	(317)	11/29/38	US SOFR — Annually	2.87% — Annually	(265,079)
3,069,000	46,373 ^E	(46)	2/21/35	2.785% — Annually	US SOFR — Annually	46,327
57,204,000	808,865	(215)	9/6/24	US SOFR — Annually	3.413% — Annually	(946,070)
18,902,800	51,416 ^E	(105)	1/15/27	US SOFR — Annually	2.73% — Annually	(51,521)
29,214,700	357,296	(386)	9/13/32	3.043% — Annually	US SOFR — Annually	489,665
9,830,400	52,003 ^E	(192)	1/15/41	3.0500% — Annually	US SOFR — Annually	51,811
1,933,500	17,169 ^E	(38)	1/15/42	2.9825% — Annually	US SOFR — Annually	17,132
6,879,000	59,916	(234)	9/26/52	2.905% — Annually	US SOFR — Annually	97,177
35,771,000	64,746	(336)	9/26/27	US SOFR — Annually	3.465% — Annually	(26,511)
4,174,000	34,060 ^E	(142)	2/13/57	2.40% — Annually	US SOFR — Annually	33,918
21,097,000	228,059	(278)	9/23/32	3.3275% — Annually	US SOFR — Annually	(157,385)
1,708,706	8,612	(58)	9/28/52	2.976% — Annually	US SOFR — Annually	151
9,910,000	240,615	(131)	9/30/32	3.493% — Annually	US SOFR — Annually	(213,992)
9,785,000	212,041	(129)	10/4/32	US SOFR — Annually	3.4605% — Annually	185,895
5,036,000	114,216	(66)	10/4/23	US SOFR — Annually	3.473% — Annually	101,073
25,412,000	348,144	(205)	10/4/27	3.75% — Annually	US SOFR — Annually	(317,362)
26,632,000	589,100	(352)	10/5/32	US SOFR — Annually	3.466% — Annually	516,102
6,233,000	42,135 ^E	(94)	10/21/36	US SOFR — Annually	3.116% — Annually	42,042
21,863,000	244,210 ^E	(308)	8/23/33	US SOFR — Annually	3.237% — Annually	243,901
21,022,000	222,203 ^E	(296)	9/1/33	US SOFR — Annually	3.225% — Annually	221,906
6,296,000	79,581	(89)	11/14/32	3.347% — Annually	US SOFR — Annually	(58,622)
2,233,000	6,431	(76)	2/3/53	2.9275% — Annually	US SOFR — Annually	10,778
11,294,000	112,036 ^E	(384)	12/2/55	2.81% — Annually	US SOFR — Annually	(112,420)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$54,209,000	\$156,122	\$(203)	10/7/24	US SOFR — Annually	4.1845% — Annually	\$(124,230)
14,969,000	373,327	(198)	10/7/32	3.5005% — Annually	US SOFR — Annually	(340,067)
108,418,000	303,570	24,824	10/7/24	4.19% — Annually	US SOFR — Annually	261,259
42,669,000	551,710	(10,088)	10/7/27	US SOFR — Annually	3.73% — Annually	472,087
145,033,000	3,611,322	(57,019)	10/7/32	3.50% — Annually	US SOFR — Annually	(3,268,904)
29,938,000	769,706	(28,668)	10/7/32	US SOFR — Annually	3.51% — Annually	660,048
52,540,000	1,019,276	35,186	10/7/52	US SOFR — Annually	3.05% — Annually	794,174
17,536,000	91,363 ^E	(121)	4/8/28	3.44% — Annually	US SOFR — Annually	(91,484)
47,813,000	195,555 ^E	(179)	1/31/25	US SOFR — Annually	4.035% — Annually	195,376
2,624,000	91,840 ^E	(89)	1/16/55	2.97% — Annually	US SOFR — Annually	(91,929)
36,069,000	219,660 ^E	(200)	1/16/26	US SOFR — Annually	3.605% — Annually	219,460
654,000	49,148	(22)	10/20/52	US SOFR — Annually	3.3375% — Annually	47,031
3,106,400	204,122 ^E	(106)	1/24/55	3.135% — Annually	US SOFR — Annually	(204,227)
6,852,500	192,898 ^E	(64)	4/13/28	3.965% — Annually	US SOFR — Annually	(192,962)
2,266,200	105,537 ^E	(34)	4/4/35	3.5575% — Annually	US SOFR — Annually	(105,571)
4,532,400	126,227 ^E	(51)	5/8/30	US SOFR — Annually	3.52% — Annually	126,177
6,205,100	47,965 ^E	(54)	4/4/32	3.515% — Annually	US SOFR — Annually	(48,019)
4,243,200	202,952 ^E	(64)	2/19/36	US SOFR — Annually	3.6145% — Annually	202,889
3,145,000	149,859 ^E	(47)	3/3/36	US SOFR — Annually	3.614% — Annually	149,812
13,510,256	1,324,140	(459)	10/24/52	US SOFR — Annually	3.4555% — Annually	1,284,752
65,519,800	594,920 ^E	(246)	6/26/25	US SOFR — Annually	4.31% — Annually	594,674
13,314,700	796,485 ^E	(188)	12/4/33	US SOFR — Annually	3.77% — Annually	796,298
5,329,700	153,335 ^E	(60)	3/24/32	US SOFR — Annually	3.64% — Annually	153,276
27,502,000	191,414	(103)	11/9/24	US SOFR — Annually	4.7655% — Annually	261,247

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$16,700,000	\$355,209	\$(220)	11/21/32	3.4515% — Annually	US SOFR — Annually	\$(302,230)
2,122,800	49,674	(28)	11/25/32	3.477% — Annually	US SOFR — Annually	(44,364)
32,520,000	41,626	(122)	12/5/24	4.3515% — Annually	US SOFR — Annually	(48,921)
7,900,000	34,286	(104)	12/9/32	3.14% — Annually	US SOFR — Annually	61,228
2,409,200	94,079 ^E	(82)	12/10/57	2.47% — Annually	US SOFR — Annually	93,997
3,088,100	73,806 ^E	(105)	12/13/57	2.558% — Annually	US SOFR — Annually	73,701
8,593,000	413,753	(292)	12/29/52	US SOFR — Annually	3.1925% — Annually	384,977
6,576,000	49,649	(53)	1/6/28	3.5615% — Annually	US SOFR — Annually	(35,320)
14,154,000	5,379	(481)	1/18/53	US SOFR — Annually	2.9451% — Annually	(40,044)
9,318,000	12,672	(123)	1/19/33	US SOFR — Annually	3.175% — Annually	(37,723)
37,230,000	75,205	(491)	1/24/33	3.167% — Annually	US SOFR — Annually	168,879
3,461,000	43,263	(118)	1/25/53	3.007% — Annually	US SOFR — Annually	(33,724)
11,128,000	4,006	(147)	1/30/33	3.19529% — Annually	US SOFR — Annually	21,283
5,000,000	69,150	(66)	2/10/33	US SOFR — Annually	3.3555% — Annually	60,580
14,723,000	288,276	(194)	2/15/33	US SOFR — Annually	3.4235% — Annually	266,789
48,600,000	1,045,386	(391)	2/21/28	3.855% — Annually	US SOFR — Annually	(1,007,522)
22,500,000	678,150	(297)	2/21/33	US SOFR — Annually	3.5485% — Annually	652,671
7,521,000	285,046	(99)	2/23/33	US SOFR — Annually	3.6405% — Annually	277,668
11,109,000	271,504	(89)	2/24/28	3.9195% — Annually	US SOFR — Annually	(264,229)
7,397,000	273,245	(98)	2/24/33	US SOFR — Annually	3.629% — Annually	266,095
19,415,000	588,080	(156)	2/28/28	4.0475% — Annually	US SOFR — Annually	(578,976)
7,092,000	303,821	(94)	2/28/33	US SOFR — Annually	3.6985% — Annually	298,145
19,996,000	1,149,370	(680)	3/7/53	3.235% — Annually	US SOFR — Annually	(1,138,849)
37,131,000	273,284 ^E	(256)	6/24/28	3.254% — Annually	US SOFR — Annually	(273,540)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$3,233,000	\$78,594 ^E	\$(49)	2/4/36	3.3105% — Annually	US SOFR — Annually	\$(78,643)
48,466,000	652,352 ^E	(543)	12/16/31	3.245% — Annually	US SOFR — Annually	(652,895)
23,212,000	1,046,397	(306)	3/2/33	3.7245% — Annually	US SOFR — Annually	(1,030,597)
2,147,000	96,508	(28)	3/3/33	US SOFR — Annually	3.723% — Annually	94,987
1,029,000	82,999	(35)	3/6/53	3.354% — Annually	US SOFR — Annually	(82,117)
9,742,000	508,338	(129)	3/6/33	US SOFR — Annually	3.808% — Annually	502,719
11,123,000	383,187	(90)	3/6/28	4.1355% — Annually	US SOFR — Annually	(379,640)
5,349,000	177,854	(43)	3/7/28	US SOFR — Annually	4.108% — Annually	176,024
7,714,000	356,618	(102)	3/7/33	3.7375% — Annually	US SOFR — Annually	(352,158)
1,300,000	77,636	(44)	3/7/53	US SOFR — Annually	3.2465% — Annually	76,380
9,149,000	374,469	(121)	3/8/33	US SOFR — Annually	3.6745% — Annually	368,762
3,861,000	150,618	(51)	3/10/33	3.6515% — Annually	US SOFR — Annually	(148,448)
855,100	33,263 ^E	(12)	8/9/33	3.575% — Annually	US SOFR — Annually	(33,275)
4,113,900	16,785 ^E	(53)	2/9/38	3.31% — Annually	US SOFR — Annually	(16,838)
1,963,500	28,490 ^E	(29)	2/9/38	3.275% — Annually	US SOFR — Annually	(28,520)
20,829,500	836,304 ^E	(294)	5/11/33	3.64% — Annually	US SOFR — Annually	(836,598)
85,925,600	2,669,708 ^E	(808)	5/11/28	US SOFR — Annually	3.997% — Annually	2,668,901
27,710,000	440,035	(223)	3/14/28	US SOFR — Annually	3.7185% — Annually	427,601
143,000	2,932	(2)	3/14/33	US SOFR — Annually	3.432% — Annually	2,846
1,570,000	19,845	(53)	3/14/53	3.0045% — Annually	US SOFR — Annually	(18,646)
7,298,000	27,440	(96)	3/15/33	3.234% — Annually	US SOFR — Annually	(22,822)
9,923,000	76,705	(131)	3/15/33	3.28091% — Annually	US SOFR — Annually	(70,645)
22,232,000	38,017	(179)	3/17/28	US SOFR — Annually	3.404% — Annually	26,704
2,716,000	15,861	(92)	3/17/53	2.9695% — Annually	US SOFR — Annually	(14,102)

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$4,882,000	\$5,175	\$(64)	3/20/33	3.2019% — Annually	US SOFR — Annually	\$(2,925)
3,358,000	6,011	(44)	3/20/33	US SOFR — Annually	3.2105% — Annually	4,384
50,227,000	341,041 ^E	288,310	6/21/25	4.20% — Annually	US SOFR — Annually	(52,732)
281,398,000	6,860,483 ^E	5,981,517	6/21/28	3.80% — Annually	US SOFR — Annually	(878,966)
69,785,000	1,526,198 ^E	1,040,631	6/21/33	3.40% — Annually	US SOFR — Annually	(485,567)
2,366,000	50,609 ^E	94,513	6/21/53	US SOFR — Annually	2.80% — Annually	43,905
5,477,000	18,184	(44)	3/21/28	US SOFR — Annually	3.2915% — Annually	(20,468)
3,985,000	12,911	(135)	3/22/53	US SOFR — Annually	2.9225% — Annually	(14,940)
6,634,500	995	(88)	3/22/33	3.1875% — Annually	US SOFR — Annually	3,571
9,377,000	17,629	(75)	3/22/28	US SOFR — Annually	3.323% — Annually	(21,115)
15,387,000	120,172	(124)	3/23/28	3.5365% — Annually	US SOFR — Annually	(116,064)
7,401,000	58,024	(60)	3/23/28	3.537% — Annually	US SOFR — Annually	(56,049)
2,757,000	23,104	(94)	3/24/53	US SOFR — Annually	2.982% — Annually	21,990
1,233,000	8,767	(42)	3/24/53	2.9755% — Annually	US SOFR — Annually	(8,351)
3,775,000	34,655	(50)	3/24/33	US SOFR — Annually	3.2975% — Annually	33,473
1,483,000	1,616	(50)	3/24/53	2.9335% — Annually	US SOFR — Annually	2,131
11,928,500	25,408	(96)	3/24/28	US SOFR — Annually	3.317% — Annually	(29,029)
3,366,000	4,510	(44)	3/24/33	3.17535% — Annually	US SOFR — Annually	5,568
18,532,000	49,295	(149)	3/27/28	US SOFR — Annually	3.3045% — Annually	(52,916)
18,532,000	88,954	(149)	3/27/28	US SOFR — Annually	3.2575% — Annually	(92,695)
18,532,000	52,631	(149)	3/27/28	3.3005% — Annually	US SOFR — Annually	55,963
6,861,000	96,809	(55)	3/28/28	US SOFR — Annually	3.0525% — Annually	(98,199)
4,492,000	71,692	(59)	3/28/33	3.001% — Annually	US SOFR — Annually	72,533
38,212,000	337,030 ^E	(539)	6/13/33	3.041% — Annually	US SOFR — Annually	336,491

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 3/31/23 (Unaudited) cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$75,403,800	\$632,638 ^E	\$(709)	6/13/28	3.086% — Annually	US SOFR — Annually	\$631,929
14,044,000	146,198	(185)	4/4/33	US SOFR — Annually	3.064% — Annually	(146,383)
749,200	1,551 ^E	(15)	3/27/40	US SOFR — Annually	3.1525% — Annually	1,536
10,005,000	300	(81)	3/29/28	3.363% — Annually	US SOFR — Annually	818
9,916,000	9,222	(131)	3/29/33	US SOFR — Annually	3.20% — Annually	7,768
4,420,000	59,891	(150)	3/30/53	3.008% — Annually	US SOFR — Annually	(59,601)
4,982,000	19,878	(66)	3/30/33	US SOFR — Annually	3.236% — Annually	19,379
18,566,000	5,198	(70)	3/30/25	4.0585% — Annually	US SOFR — Annually	5,894
4,166,000	20,330	(55)	3/30/33	3.2465% — Annually	US SOFR — Annually	(20,023)
15,005,000	84,628	(121)	3/31/28	3.4855% — Annually	US SOFR — Annually	(84,197)
51,572,000	7,736	(193)	3/31/25	4.081% — Annually	US SOFR — Annually	(6,842)
9,847,000	155,583	(335)	3/31/53	US SOFR — Annually	3.0195% — Annually	154,750
9,899,500	86,720 ^E	(140)	3/13/34	US SOFR — Annually	3.118% — Annually	86,580
20,333,000	6,710	(76)	3/31/25	US SOFR — Annually	4.0905% — Annually	6,210
7,943,000	54,012	(105)	3/31/33	US SOFR — Annually	3.269% — Annually	53,561
8,049,000	31,311	(106)	4/4/33	US SOFR — Annually	3.2325% — Annually	31,204
18,646,000	17,900	(70)	4/4/25	US SOFR — Annually	4.113% — Annually	17,830
7,189,000	13,300	(95)	4/4/33	US SOFR — Annually	3.2085% — Annually	13,205
7,038,000	2,182	(93)	4/4/33	3.1830% — Annually	US SOFR — Annually	2,089
Total		\$6,759,803				\$3,185,067

^E Extended effective date.

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 3/31/23 (Unaudited)

Swap counterparty/ Referenced debt [†]	Rating ^{***}	Upfront premium received (paid) ^{**}	Notional amount	Value	Termination date	Payments received by fund	Unrealized appreciation/ (depreciation)
Citigroup Global Markets, Inc.							
CMBXNA BB.11 Index	BB-/P	\$42,375	\$75,000	\$30,128	11/18/54	500 bp— Monthly	\$12,320
CMBXNA BB.13 Index	BB-/P	75,581	756,000	326,138	12/16/72	500 bp— Monthly	(249,823)
CMBXNA BB.13 Index	BB-/P	78,819	865,000	373,161	12/16/72	500 bp— Monthly	(293,502)
CMBXNA BB.13 Index	BB-/P	82,147	901,000	388,691	12/16/72	500 bp— Monthly	(305,668)
CMBXNA BB.13 Index	BB-/P	129,386	1,371,000	591,449	12/16/72	500 bp— Monthly	(460,730)
CMBXNA BB.14 Index	BB/P	169,285	1,544,000	638,444	12/16/72	500 bp— Monthly	(467,658)
CMBXNA BB.6 Index	B+/P	617,410	1,040,492	438,255	5/11/63	500 bp— Monthly	180,177
CMBXNA BB.9 Index	B/P	36,851	181,000	76,853	9/17/58	500 bp— Monthly	(39,825)
CMBXNA BB.9 Index	B/P	287,137	1,406,000	596,988	9/17/58	500 bp— Monthly	(308,484)
CMBXNA BB.9 Index	B/P	1,102,022	1,964,000	833,914	9/17/58	500 bp— Monthly	270,017
CMBXNA BBB-.10 Index	BB+/P	89,090	718,000	205,276	11/17/59	300 bp— Monthly	(115,767)
CMBXNA BBB-.10 Index	BB+/P	96,874	888,000	253,879	11/17/59	300 bp— Monthly	(156,487)
CMBXNA BBB-.11 Index	BBB-/P	59,693	953,000	258,454	11/18/54	300 bp— Monthly	(198,205)
CMBXNA BBB-.13 Index	BBB-/P	57,739	314,000	90,463	12/16/72	300 bp— Monthly	(32,541)
CMBXNA BBB-.15 Index	BBB-/P	940	9,000	2,570	11/18/64	300 bp— Monthly	(1,625)
CMBXNA BBB-.15 Index	BBB-/P	299,147	1,120,000	319,872	11/18/64	300 bp— Monthly	(20,071)
CMBXNA BBB-.15Index	BBB-/P	40,101	236,000	67,402	11/18/64	300 bp— Monthly	(27,163)
CMBXNA BBB-.16 Index	BBB-/P	209,811	923,000	268,224	4/17/65	300 bp— Monthly	(57,874)
Credit Suisse International							
CMBXNA BB.7 Index	B-/P	36,784	275,000	112,283	1/17/47	500 bp— Monthly	(75,231)
Goldman Sachs International							
CMBXNAA.7 Index	BBB+/P	(1,645)	1,128,000	88,097	1/17/47	200 bp— Monthly	(89,303)
CMBXNA BB.14 Index	BB/P	244,886	1,573,000	650,436	12/16/72	500 bp— Monthly	(407,093)
CMBXNA BB.6 Index	B+/P	1,232,340	2,438,843	1,027,241	5/11/63	500 bp— Monthly	207,495

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [†]	Rating ^{***}	Upfront premium received (paid) ^{**}	Notional amount	Value	Termi- nation date	Payments received by fund	Unrealized appreciation/ (depreciation)
Goldman Sachs International cont.							
CMBX NA BB.7 Index	B-/P	\$59,391	\$175,000	\$71,453	1/17/47	500 bp — Monthly	\$(11,892)
CMBX NA BB.7 Index	B-/P	77,674	231,000	94,317	1/17/47	500 bp — Monthly	(16,419)
CMBX NA BB.7 Index	B-/P	131,040	416,000	169,853	1/17/47	500 bp — Monthly	(38,408)
CMBX NA BBB-.11 Index	BBB-/P	64	1,000	271	11/18/54	300 bp — Monthly	(207)
CMBX NA BBB-.13 Index	BBB-/P	13,523	79,000	22,760	12/16/72	300 bp — Monthly	(9,191)
CMBX NA BBB-.14 Index	BBB-/P	175,307	1,024,000	287,949	12/16/72	300 bp — Monthly	(112,045)
CMBX NA BBB-.14 Index	BBB-/P	168,486	1,109,000	311,851	12/16/72	300 bp — Monthly	(142,718)
CMBX NA BBB-.15 Index	BBB-/P	26,714	430,000	122,808	11/18/64	300 bp — Monthly	(95,843)
CMBX NA BBB-.15 Index	BBB-/P	55,090	596,000	170,218	11/18/64	300 bp — Monthly	(114,780)
CMBX NA BBB-.15 Index	BBB-/P	53,068	596,000	170,218	11/18/64	300 bp — Monthly	(116,802)
CMBX NA BBB-.16 Index	BBB-/P	150,416	625,000	181,625	4/17/65	300 bp — Monthly	(30,845)
JPMorgan Securities LLC							
CMBX NA BB.10 Index	B/P	28,886	360,000	161,532	5/11/63	500 bp — Monthly	(132,296)
CMBX NA BB.7 Index	B-/P	16,440	48,000	19,598	1/17/47	500 bp — Monthly	(3,112)
CMBX NA BB.7 Index	B-/P	158,648	324,000	132,289	1/17/47	500 bp — Monthly	26,674
CMBX NA BBB-.8 Index	BB/P	103,543	664,000	146,877	10/17/57	300 bp — Monthly	(42,947)
Merrill Lynch International							
CMBX NAA.13 Index	A-/P	132,031	1,013,000	127,942	12/16/72	200 bp — Monthly	4,090
CMBX NAA.13 Index	A-/P	134,846	1,013,000	127,942	12/16/72	200 bp — Monthly	6,904
CMBX NA BB.6 Index	B+/P	186,736	1,127,594	474,942	5/11/63	500 bp — Monthly	(287,098)
CMBX NA BB.7 Index	B-/P	20,331	168,000	68,594	1/17/47	500 bp — Monthly	(48,100)
Morgan Stanley & Co. International PLC							
CMBX NAA.14 Index	A-/P	(667)	53,000	7,065	12/16/72	200 bp — Monthly	(7,711)
CMBX NAA.14 Index	A-/P	(1,323)	225,000	29,993	12/16/72	200 bp — Monthly	(31,228)
CMBX NAA.14 Index	A-/P	(3,557)	267,000	35,591	12/16/72	200 bp — Monthly	(39,045)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [†]	Rating ^{***}	Upfront premium received (paid) ^{**}	Notional amount	Value	Termination date	Payments received by fund	Unrealized appreciation/ (depreciation)
Morgan Stanley & Co. International PLC cont.							
CMBX NAA.15 Index	A-/P	\$3,624	\$177,000	\$25,081	11/18/64	200 bp— Monthly	\$(21,388)
CMBX NAA.6 Index	A/P	(2,510)	128,068	22,169	5/11/63	200 bp— Monthly	(24,626)
CMBX NABB.13 Index	BB-/P	575	6,000	2,588	12/16/72	500 bp— Monthly	(2,007)
CMBX NABB.13 Index	BB-/P	14,044	151,000	65,141	12/16/72	500 bp— Monthly	(50,950)
CMBX NABB.13 Index	BB-/P	14,439	153,000	66,004	12/16/72	500 bp— Monthly	(51,416)
CMBX NABB.13 Index	BB-/P	26,993	294,000	126,832	12/16/72	500 bp— Monthly	(99,553)
CMBX NABB.13 Index	BB-/P	55,818	301,000	129,851	12/16/72	500 bp— Monthly	(73,741)
CMBX NABB.13 Index	BB-/P	33,293	363,000	156,598	12/16/72	500 bp— Monthly	(122,952)
CMBX NABB.13 Index	BB-/P	61,324	673,000	290,332	12/16/72	500 bp— Monthly	(228,354)
CMBX NABB.13 Index	BB-/P	80,638	873,000	376,612	12/16/72	500 bp— Monthly	(295,126)
CMBX NABB.6 Index	B+/P	8,315	31,059	13,082	5/11/63	500 bp— Monthly	(4,737)
CMBX NABB.6 Index	B+/P	24,114	77,649	32,706	5/11/63	500 bp— Monthly	(8,515)
CMBX NABB.6 Index	B+/P	67,200	108,033	45,503	5/11/63	500 bp— Monthly	21,803
CMBX NABB.6 Index	B+/P	73,122	143,144	60,292	5/11/63	500 bp— Monthly	12,971
CMBX NABB.7 Index	B-/P	146,668	437,000	178,427	1/17/47	500 bp— Monthly	(31,334)
CMBX NABBB-.13 Index	BBB-/P	223	3,000	864	12/16/72	300 bp— Monthly	(639)
CMBX NABBB-.13 Index	BBB-/P	1,016	5,000	1,441	12/16/72	300 bp— Monthly	(422)
CMBX NABBB-.13 Index	BBB-/P	206,939	709,000	204,263	12/16/72	300 bp— Monthly	2,676
CMBX NABBB-.14 Index	BBB-/P	1,128	7,000	1,968	12/16/72	300 bp— Monthly	(423)
CMBX NABBB-.14 Index	BBB-/P	25,668	156,000	43,867	12/16/72	300 bp— Monthly	(18,108)
CMBX NABBB-.15 Index	BBB-/P	23,408	415,000	118,524	11/18/64	300 bp— Monthly	(94,874)
CMBX NABBB-.15 Index	BBB-/P	58,932	642,000	183,355	11/18/64	300 bp— Monthly	(124,049)
CMBX NABBB-.15 Index	BBB-/P	152,377	897,000	256,183	11/18/64	300 bp— Monthly	(103,283)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [*]	Rating ^{***}	Upfront premium received (paid) ^{**}	Notional amount	Value	Termi- nation date	Payments received by fund	Unrealized appreciation/ (depreciation)
Morgan Stanley & Co. International PLC cont.							
CMBX NA BBB-.16 Index	BBB-/P	\$153,210	\$674,000	\$195,864	4/17/65	300 bp — Monthly	\$(42,261)
CMBX NA BBB-.7 Index	BB-/P	9,392	138,000	30,236	1/17/47	300 bp — Monthly	(20,764)
CMBX NA BBB-.9 Index	BB+/P	47,282	487,000	120,240	9/17/58	300 bp — Monthly	(72,674)
Upfront premium received		7,970,394					745,127
Upfront premium (paid)		(9,702)					(6,079,933)
Total		\$7,960,692	Total				\$(5,334,806)

* 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 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 March 31, 2023. 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.

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 3/31/23 (Unaudited)

Swap counterparty/ Referenced debt [*]	Rating ^{***}	Upfront premium received (paid) ^{**}	Notional amount	Value	Termi- nation date	Payments (paid) by fund	Unrealized appreciation/ (depreciation)
Citigroup Global Markets, Inc.							
CMBX NAA.6 Index		\$(20,929)	\$98,694	\$17,084	5/11/63	(200 bp) — Monthly	\$(3,885)
CMBX NAA.6 Index		(2,545)	12,141	2,102	5/11/63	(200 bp) — Monthly	(448)
CMBX NAA.6 Index		(1,459)	7,050	1,220	5/11/63	(200 bp) — Monthly	(241)
CMBX NAA.6 Index		(821)	3,916	678	5/11/63	(200 bp) — Monthly	(145)
CMBX NAA.6 Index		(821)	3,916	678	5/11/63	(200 bp) — Monthly	(145)
CMBX NAA.6 Index		(483)	2,350	407	5/11/63	(200 bp) — Monthly	(77)
CMBX NA BB.10 Index		(15,241)	139,000	62,369	11/17/59	(500 bp) — Monthly	46,993
CMBX NA BB.10 Index		(11,793)	113,000	50,703	11/17/59	(500 bp) — Monthly	38,800
CMBX NA BB.11 Index		(4,242)	45,000	18,077	11/18/54	(500 bp) — Monthly	13,791
CMBX NA BB.11 Index		(3,887)	30,000	12,051	11/18/54	(500 bp) — Monthly	8,135
CMBX NA BB.6 Index		(11,333)	53,341	22,467	5/11/63	(500 bp) — Monthly	11,082
CMBX NA BB.7 Index		(105,844)	2,074,000	846,814	1/17/47	(500 bp) — Monthly	738,954

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [†]	Upfront premium received (paid)**	Notional amount	Value	Termi- nation date	Payments (paid) by fund	Unrealized appreciation/ (depreciation)
Citigroup Global Markets, Inc. cont.						
CMBX NA BB.8 Index	\$(155,393)	\$435,825	\$205,666	10/17/57	(500 bp) — Monthly	\$49,850
CMBX NA BBB-.10 Index	(486,410)	2,829,000	808,811	11/17/59	(300 bp) — Monthly	320,751
CMBX NA BBB-.10 Index	(326,142)	1,405,000	401,690	11/17/59	(300 bp) — Monthly	74,728
CMBX NA BBB-.10 Index	(234,757)	984,000	281,326	11/17/59	(300 bp) — Monthly	45,995
CMBX NA BBB-.10 Index	(143,198)	656,000	187,550	11/17/59	(300 bp) — Monthly	43,969
CMBX NA BBB-.10 Index	(136,239)	626,000	178,973	11/17/59	(300 bp) — Monthly	42,369
CMBX NA BBB-.10 Index	(62,719)	492,000	140,663	11/17/59	(300 bp) — Monthly	77,657
CMBX NA BBB-.10 Index	(115,406)	469,000	134,087	11/17/59	(300 bp) — Monthly	18,408
CMBX NA BBB-.10 Index	(97,719)	328,000	93,775	11/17/59	(300 bp) — Monthly	(4,135)
CMBX NA BBB-.10 Index	(12,748)	100,000	28,590	11/17/59	(300 bp) — Monthly	15,784
CMBX NA BBB-.10 Index	(2,569)	21,000	6,004	11/17/59	(300 bp) — Monthly	3,423
CMBX NA BBB-.11 Index	(159,306)	497,000	134,786	11/18/54	(300 bp) — Monthly	(24,810)
CMBX NA BBB-.11 Index	(48,685)	149,000	40,409	11/18/54	(300 bp) — Monthly	(8,363)
CMBX NA BBB-.11 Index	(21,489)	146,000	39,595	11/18/54	(300 bp) — Monthly	18,021
CMBX NA BBB-.12 Index	(540,439)	1,618,000	468,896	8/17/61	(300 bp) — Monthly	(72,487)
CMBX NA BBB-.12 Index	(529,327)	1,502,000	435,280	8/17/61	(300 bp) — Monthly	(94,924)
CMBX NA BBB-.12 Index	(256,604)	1,460,000	423,108	8/17/61	(300 bp) — Monthly	165,652
CMBX NA BBB-.12 Index	(206,461)	915,000	265,167	8/17/61	(300 bp) — Monthly	58,172
CMBX NA BBB-.12 Index	(53,286)	888,000	257,342	8/17/61	(300 bp) — Monthly	203,539
CMBX NA BBB-.12 Index	(113,989)	671,000	194,456	8/17/61	(300 bp) — Monthly	80,076
CMBX NA BBB-.12 Index	(74,871)	213,000	61,727	8/17/61	(300 bp) — Monthly	(13,268)
CMBX NA BBB-.8 Index	(338,892)	2,144,000	474,253	10/17/57	(300 bp) — Monthly	134,110
CMBX NA BBB-.8 Index	(199,245)	1,436,000	317,643	10/17/57	(300 bp) — Monthly	117,561

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [†]	Upfront premium received (paid)**	Notional amount	Value	Termi- nation date	Payments (paid) by fund	Unrealized appreciation/ (depreciation)
Citigroup Global Markets, Inc. cont.						
CMBX NA BBB-.8 Index	\$(117,188)	\$750,000	\$165,900	10/17/57	(300 bp) — Monthly	\$48,275
CMBX NA BBB-.8 Index	(99,623)	718,000	158,822	10/17/57	(300 bp) — Monthly	58,780
CMBX NA BBB-.8 Index	(108,544)	684,000	151,301	10/17/57	(300 bp) — Monthly	42,358
CMBX NA BBB-.8 Index	(52,318)	393,000	86,932	10/17/57	(300 bp) — Monthly	34,384
CMBX NA BBB-.9 Index	(251,259)	1,062,000	262,208	9/17/58	(300 bp) — Monthly	10,329
Credit Suisse International						
CMBX NA BB.10 Index	(46,565)	349,000	156,596	11/17/59	(500 bp) — Monthly	109,692
CMBX NA BB.10 Index	(41,383)	348,000	156,148	11/17/59	(500 bp) — Monthly	114,426
CMBX NA BB.10 Index	(22,747)	183,000	82,112	11/17/59	(500 bp) — Monthly	59,187
Goldman Sachs International						
CMBX NA BB.8 Index	(47,893)	125,626	59,283	10/17/57	(500 bp) — Monthly	11,268
CMBX NA BB.9 Index	(301,266)	1,891,000	802,919	9/17/58	(500 bp) — Monthly	499,814
CMBX NA BB.9 Index	(208,068)	1,317,000	559,198	9/17/58	(500 bp) — Monthly	349,849
CMBX NA BB.9 Index	(43,422)	271,000	115,067	9/17/58	(500 bp) — Monthly	71,382
CMBX NA BB.9 Index	(22,287)	140,000	59,444	9/17/58	(500 bp) — Monthly	37,021
CMBX NA BBB-.12 Index	(342,536)	1,918,000	555,836	8/17/61	(300 bp) — Monthly	212,181
CMBX NA BBB-.12 Index	(26,169)	146,000	42,311	8/17/61	(300 bp) — Monthly	16,057
JPMorgan Securities LLC						
CMBX NA BB.11 Index	(111,197)	145,844	61,430	5/11/63	(500 bp) — Monthly	(49,910)
Merrill Lynch International						
CMBX NA BB.10 Index	(9,047)	159,000	71,343	11/17/59	(500 bp) — Monthly	62,142
Morgan Stanley & Co. International PLC						
CMBX NA BB.10 Index	(196,526)	647,000	290,309	11/17/59	(500 bp) — Monthly	93,154
CMBX NA BB.8 Index	(397,971)	1,109,374	523,513	10/17/57	(500 bp) — Monthly	124,464
CMBX NA BB.8 Index	(234,901)	643,591	303,711	10/17/57	(500 bp) — Monthly	68,184

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 3/31/23 (Unaudited) cont.

Swap counterparty/ Referenced debt [*]	Upfront premium received (paid)**	Notional amount	Value	Termi- nation date	Payments (paid) by fund	Unrealized appreciation/ (depreciation)
Morgan Stanley & Co. International PLC cont.						
CMBX NA BB.8 Index	\$(111,807)	\$306,334	\$144,559	10/17/57	(500 bp) — Monthly	\$32,454
CMBX NA BB.8 Index	(12,320)	32,856	15,505	10/17/57	(500 bp) — Monthly	3,152
CMBX NA BB.9 Index	(3,804)	28,000	11,889	9/17/58	(500 bp) — Monthly	8,058
CMBX NA BBB-.10 Index	(196,183)	1,590,000	454,581	11/17/59	(300 bp) — Monthly	257,471
CMBX NA BBB-.10 Index	(151,882)	623,000	178,116	11/17/59	(300 bp) — Monthly	25,870
CMBX NA BBB-.10 Index	(49,002)	226,000	64,613	11/17/59	(300 bp) — Monthly	15,479
CMBX NA BBB-.10 Index	(43,032)	199,000	56,894	11/17/59	(300 bp) — Monthly	13,746
CMBX NA BBB-.10 Index	(23,716)	187,000	53,463	11/17/59	(300 bp) — Monthly	29,638
CMBX NA BBB-.10 Index	(36,186)	153,000	43,743	11/17/59	(300 bp) — Monthly	7,467
CMBX NA BBB-.10 Index	(13,217)	126,000	36,023	11/17/59	(300 bp) — Monthly	22,733
CMBX NA BBB-.11 Index	(25,498)	162,000	43,934	11/18/54	(300 bp) — Monthly	18,342
CMBX NA BBB-.12 Index	(68,165)	300,000	86,940	8/17/61	(300 bp) — Monthly	18,600
CMBX NA BBB-.12 Index	(54,047)	259,000	75,058	8/17/61	(300 bp) — Monthly	20,861
CMBX NA BBB-.12 Index	(50,930)	246,000	71,291	8/17/61	(300 bp) — Monthly	20,217
CMBX NA BBB-.12 Index	(72,026)	233,000	67,523	8/17/61	(300 bp) — Monthly	(4,639)
CMBX NA BBB-.8 Index	(84,840)	606,000	134,047	10/17/57	(300 bp) — Monthly	48,854
CMBX NA BBB-.8 Index	(93,274)	602,000	133,162	10/17/57	(300 bp) — Monthly	39,537
CMBX NA BBB-.8 Index	(74,278)	584,000	129,181	10/17/57	(300 bp) — Monthly	54,563
CMBX NA BBB-.8 Index	(2,053)	15,000	3,318	10/17/57	(300 bp) — Monthly	1,256
Upfront premium received	—	Unrealized appreciation				4,989,065
Upfront premium (paid)	(8,342,462)	Unrealized (depreciation)				(277,477)
Total	\$(8,342,462)	Total				\$4,711,588

* 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.

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:

	Valuation inputs		
Investments in securities:	Level 1	Level 2	Level 3
Asset-backed securities	\$—	\$2,159,453	\$—
Mortgage-backed securities	—	389,630,161	—
U.S. government and agency mortgage obligations	—	1,920,133,832	—
U.S. treasury obligations	—	1,685,635	—
Short-term investments	17,363,000	34,983,372	—
Totals by level	\$17,363,000	\$2,348,592,453	\$—

	Valuation inputs		
Other financial instruments:	Level 1	Level 2	Level 3
Futures contracts	\$(1,654,946)	\$—	\$—
Forward premium swap option contracts	—	576,213	—
TBA sale commitments	—	(992,320,689)	—
Interest rate swap contracts	—	3,201,534	—
Credit default contracts	—	(241,448)	—
Totals by level	\$(1,654,946)	\$(988,784,390)	\$—

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

Statement of assets and liabilities 3/31/23 (Unaudited)

ASSETS

Investment in securities, at value (Notes 1 and 8):	
Unaffiliated issuers (identified cost \$2,372,179,519)	\$2,353,019,760
Affiliated issuers (identified cost \$12,935,693) (Note 5)	12,935,693
Interest and other receivables	4,462,478
Receivable for shares of the fund sold	43,606
Receivable for investments sold	328,692,731
Receivable for sales of TBA securities (Note 1)	798,680,971
Receivable for variation margin on centrally cleared swap contracts (Note 1)	4,289,528
Unrealized appreciation on forward premium swap option contracts (Note 1)	16,671,699
Unrealized appreciation on OTC swap contracts (Note 1)	15,875,205
Premium paid on OTC swap contracts (Note 1)	8,352,164
Prepaid assets	60,441
Total assets	3,543,084,276

LIABILITIES

Payable for investments purchased	328,409,004
Payable for purchases of TBA securities (Note 1)	1,709,163,969
Payable for shares of the fund repurchased	440,410
Payable for compensation of Manager (Note 2)	152,332
Payable for custodian fees (Note 2)	37,199
Payable for investor servicing fees (Note 2)	157,590
Payable for Trustee compensation and expenses (Note 2)	486,165
Payable for administrative services (Note 2)	2,858
Payable for distribution fees (Note 2)	271,541
Payable for variation margin on futures contracts (Note 1)	109,829
Payable for variation margin on centrally cleared swap contracts (Note 1)	5,254,805
Unrealized depreciation on OTC swap contracts (Note 1)	6,357,410
Premium received on OTC swap contracts (Note 1)	11,335,137
Unrealized depreciation on forward premium swap option contracts (Note 1)	16,095,486
TBA sale commitments, at value (proceeds receivable \$988,123,023) (Note 1)	992,320,689
Collateral on certain derivative contracts and TBA commitments, at value (Notes 1 and 8)	19,048,635
Other accrued expenses	134,853
Total liabilities	3,089,777,912
Net assets	\$453,306,364

REPRESENTED BY

Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$822,882,769
Total distributable earnings (Note 1)	(369,576,405)
Total — Representing net assets applicable to capital shares outstanding	\$453,306,364

(Continued on next page)

Statement of assets and liabilities *cont.*

COMPUTATION OF NET ASSET VALUE AND OFFERING PRICE

Net asset value and redemption price per class A share (\$415,259,855 divided by 46,519,317 shares)	\$8.93
Offering price per class A share (100/96.00 of \$8.93)*	\$9.30
Net asset value and offering price per class B share (\$368,800 divided by 41,522 shares)**	\$8.88
Net asset value and offering price per class C share (\$2,943,173 divided by 333,610 shares)**	\$8.82
Net asset value, offering price and redemption price per class R share (\$4,604,670 divided by 523,482 shares)	\$8.80
Net asset value, offering price and redemption price per class R6 share (\$5,762,513 divided by 655,132 shares)	\$8.80
Net asset value, offering price and redemption price per class Y share (\$24,367,353 divided by 2,770,121 shares)	\$8.80

*On single retail sales of less than \$100,000. On sales of \$100,000 or more the offering price is reduced.

**Redemption price per share is equal to net asset value less any applicable contingent deferred sales charge.

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

Statement of operations Six months ended 3/31/23 (Unaudited)

INVESTMENT INCOME	
Interest (including interest income of \$565,612 from investments in affiliated issuers) (Note 5)	\$17,125,072
Total investment income	17,125,072
EXPENSES	
Compensation of Manager (Note 2)	920,194
Investor servicing fees (Note 2)	488,857
Custodian fees (Note 2)	41,602
Trustee compensation and expenses (Note 2)	13,136
Distribution fees (Note 2)	567,698
Administrative services (Note 2)	10,515
Other	179,532
Fees waived and reimbursed by Manager (Note 2)	(10)
Total expenses	2,221,524
Expense reduction (Note 2)	(24,094)
Net expenses	2,197,430
Net investment income	14,927,642
REALIZED AND UNREALIZED GAIN (LOSS)	
Net realized gain (loss) on:	
Securities from unaffiliated issuers (Notes 1 and 3)	(32,130,027)
Futures contracts (Note 1)	5,397,216
Swap contracts (Note 1)	2,559,874
Written options (Note 1)	(28,041,644)
Total net realized loss	(52,214,581)
Change in net unrealized appreciation (depreciation) on:	
Securities from unaffiliated issuers and TBA sale commitments	32,206,797
Futures contracts	(4,866,096)
Swap contracts	(7,994,700)
Written options	27,955,206
Total change in net unrealized appreciation	47,301,207
Net loss on investments	(4,913,374)
Net increase in net assets resulting from operations	\$10,014,268

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

Statement of changes in net assets

DECREASE IN NET ASSETS	Six months ended 3/31/23*	Year ended 9/30/22
Operations		
Net investment income	\$14,927,642	\$29,924,948
Net realized loss on investments	(52,214,581)	(149,335,022)
Change in net unrealized appreciation of investments	47,301,207	28,324,944
Net increase (decrease) in net assets resulting from operations	10,014,268	(91,085,130)
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class A	(41,932,884)	(23,649,447)
Class B	(48,237)	(32,892)
Class C	(305,425)	(181,093)
Class R	(440,519)	(233,305)
Class R6	(540,694)	(288,950)
Class Y	(2,542,164)	(2,187,672)
Increase (decrease) from capital share transactions (Note 4)	5,192,737	(102,258,803)
Total decrease in net assets	(30,602,918)	(219,917,292)
NET ASSETS		
Beginning of period	483,909,282	703,826,574
End of period	\$453,306,364	\$483,909,282

*Unaudited.

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

Financial highlights

(For a common share outstanding throughout the period)

Period ended	INVESTMENT OPERATIONS			LESS DISTRIBUTIONS	
	Net asset value, beginning of period	Net investment income (loss) ^a	Net realized and unrealized gain (loss) on investments	Total from investment operations	From net investment income
Class A					
March 31, 2023**	\$9.65	.29	(.08)	.21	(.93)
September 30, 2022	11.87	.55	(2.28)	(1.73)	(.49)
September 30, 2021	12.02	.53	(.19)	.34	(.14)
September 30, 2020	12.96	.48	(.87)	(.39)	(.55)
September 30, 2019	12.37	.44	.74	1.18	(.59)
September 30, 2018	12.89	.45	(.53)	(.08)	(.44)
Class B					
March 31, 2023**	\$9.60	.26	(.09)	.17	(.89)
September 30, 2022	11.81	.47	(2.27)	(1.80)	(.41)
September 30, 2021	11.97	.43	(.19)	.24	(.11)
September 30, 2020	12.89	.39	(.86)	(.47)	(.45)
September 30, 2019	12.31	.35	.72	1.07	(.49)
September 30, 2018	12.83	.34	(.52)	(.18)	(.34)
Class C					
March 31, 2023**	\$9.54	.26	(.08)	.18	(.90)
September 30, 2022	11.74	.46	(2.25)	(1.79)	(.41)
September 30, 2021	11.90	.42	(.18)	.24	(.11)
September 30, 2020	12.84	.39	(.88)	(.49)	(.45)
September 30, 2019	12.25	.35	.73	1.08	(.49)
September 30, 2018	12.77	.33	(.51)	(.18)	(.34)
Class R					
March 31, 2023**	\$9.52	.28	(.08)	.20	(.92)
September 30, 2022	11.71	.52	(2.24)	(1.72)	(.47)
September 30, 2021	11.88	.49	(.20)	.29	(.13)
September 30, 2020	12.81	.45	(.86)	(.41)	(.52)
September 30, 2019	12.23	.41	.72	1.13	(.55)
September 30, 2018	12.76	.40	(.53)	(.13)	(.40)
Class R6					
March 31, 2023**	\$9.52	.31	(.08)	.23	(.95)
September 30, 2022	11.71	.59	(2.25)	(1.66)	(.53)
September 30, 2021	11.88	.57	(.20)	.37	(.15)
September 30, 2020	12.82	.52	(.86)	(.34)	(.60)
September 30, 2019	12.24	.49	.72	1.21	(.63)
September 30, 2018 [†]	12.41	.26	(.21)	.05	(.22)

See notes to financial highlights at the end of this section.

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

				RATIOS AND SUPPLEMENTAL DATA			
From return of capital	Total distributions	Net asset value, end of period	Total return at net asset value (%) ^b	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) ^c	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%) ^d
—	(.93)	\$8.93	2.06 [*]	\$415,260	.48 ^{e*}	3.16 ^{e*}	828 [*]
—	(.49)	9.65	(14.96)	442,394	.92 ^{e,f}	5.02 ^e	863
(.35)	(.49)	11.87	2.80	606,657	.78 ^{e,g}	4.29 ^{e,g}	974
—	(.55)	12.02	(3.05)	680,883	.75 ^{e,g}	3.88 ^{e,g}	916
—	(.59)	12.96	9.80	780,517	.75 ^{e,g}	3.55 ^{e,g}	1,089
—	(.44)	12.37	(.67)	826,165	.84 ^{e,g,h}	3.57 ^{e,g}	1,403
—	(.89)	\$8.88	1.65 [*]	\$369	.85 ^{e*}	2.79 ^{e*}	828 [*]
—	(.41)	9.60	(15.61)	618	1.67 ^{e,f}	4.25 ^e	863
(.29)	(.40)	11.81	1.92	1,165	1.53 ^{e,g}	3.50 ^{e,g}	974
—	(.45)	11.97	(3.69)	2,190	1.50 ^{e,g}	3.14 ^{e,g}	916
—	(.49)	12.89	8.91	5,214	1.49 ^{e,g}	2.85 ^{e,g}	1,089
—	(.34)	12.31	(1.42)	8,280	1.57 ^{e,g,h}	2.73 ^{e,g}	1,403
—	(.90)	\$8.82	1.69 [*]	\$2,943	.85 ^{e*}	2.79 ^{e*}	828 [*]
—	(.41)	9.54	(15.60)	3,467	1.67 ^{e,f}	4.25 ^e	863
(.29)	(.40)	11.74	1.94	5,938	1.53 ^{e,g}	3.44 ^{e,g}	974
—	(.45)	11.90	(3.82)	14,611	1.50 ^{e,g}	3.13 ^{e,g}	916
—	(.49)	12.84	9.04	23,972	1.50 ^{e,g}	2.83 ^{e,g}	1,089
—	(.34)	12.25	(1.45)	31,674	1.59 ^{e,g,h}	2.68 ^{e,g}	1,403
—	(.92)	\$8.80	1.95 [*]	\$4,605	.60 ^{e*}	3.04 ^{e*}	828 [*]
—	(.47)	9.52	(15.11)	4,593	1.17 ^{e,f}	4.77 ^e	863
(.33)	(.46)	11.71	2.41	6,479	1.03 ^{e,g}	4.02 ^{e,g}	974
—	(.52)	11.88	(3.26)	7,813	1.00 ^{e,g}	3.63 ^{e,g}	916
—	(.55)	12.81	9.55	11,126	1.00 ^{e,g}	3.32 ^{e,g}	1,089
—	(.40)	12.23	(1.03)	14,329	1.09 ^{e,g,h}	3.20 ^{e,g}	1,403
—	(.95)	\$8.80	2.28 [*]	\$5,763	.27 ^{e*}	3.37 ^{e*}	828 [*]
—	(.53)	9.52	(14.58)	5,123	.53 ^{e,f}	5.40 ^e	863
(.39)	(.54)	11.71	3.07	6,069	.41 ^{e,g}	4.67 ^{e,g}	974
—	(.60)	11.88	(2.71)	5,928	.37 ^{e,g}	4.26 ^{e,g}	916
—	(.63)	12.82	10.25	7,454	.37 ^{e,g}	3.96 ^{e,g}	1,089
—	(.22)	12.24	.42 [*]	7,530	.16 ^{e,g,h}	2.11 ^{e,g}	1,403

Financial highlights *cont.*

Period ended	INVESTMENT OPERATIONS			LESS DISTRIBUTIONS	
	Net asset value, beginning of period	Net investment income (loss) ^a	Net realized and unrealized gain (loss) on investments	Total from investment operations	From net investment income
Class Y					
March 31, 2023 ^{**}	\$9.52	.30	(.08)	.22	(.94)
September 30, 2022	11.71	.58	(2.25)	(1.67)	(.52)
September 30, 2021	11.88	.55	(.19)	.36	(.15)
September 30, 2020	12.81	.51	(.86)	(.35)	(.58)
September 30, 2019	12.23	.48	.72	1.20	(.62)
September 30, 2018	12.76	.47	(.53)	(.06)	(.47)

Before April 19, 2018, the fund was managed with a materially different investment strategy and may have achieved materially different performance results under its current investment strategy from that shown for periods before this date.

* Not annualized.

** Unaudited.

† For the period April 20, 2018 (commencement of operations) to September 30, 2018.

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

^b Total return assumes dividend reinvestment and does not reflect the effect of sales charges.

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

^d Portfolio turnover includes TBA purchase and sale commitments.

^e Reflects an involuntary contractual expense limitation and/or waivers of certain fund expenses in connection with investments in Putnam Government Money Market Fund in effect during the period. As a result of such limitations and/or waivers, the expenses of each class reflect a reduction of less than 0.01% as a percentage of average net assets.

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

^g Reflects an involuntary contractual expense limitation in effect during the period. As a result of such limitation, the expenses of each class reflect a reduction of the following amounts as a percentage of average net assets (Note 2):

	9/30/21	9/30/20	9/30/19	9/30/18
Class A	0.11%	0.14%	0.15%	0.12%
Class B	0.11	0.14	0.15	0.12
Class C	0.11	0.14	0.15	0.12
Class R	0.11	0.14	0.15	0.12
Class R6	0.11	0.14	0.15	0.10
Class Y	0.11	0.14	0.15	0.12

^h Includes one-time merger costs of 0.02%.

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

RATIOS AND SUPPLEMENTAL DATA

From return of capital	Total distributions	Net asset value, end of period	Total return at net asset value (%) ^b	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) ^c	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%) ^d
—	(.94)	\$8.80	2.21 [*]	\$24,367	.35 ^{e*}	3.29 ^{e*}	828 [*]
—	(.52)	9.52	(14.71)	27,715	.67 ^{e,f}	5.23 ^e	863
(.38)	(.53)	11.71	2.93	77,518	.53 ^{e,g}	4.59 ^{e,g}	974
—	(.58)	11.88	(2.75)	61,132	.50 ^{e,g}	4.14 ^{e,g}	916
—	(.62)	12.81	10.12	89,152	.50 ^{e,g}	3.89 ^{e,g}	1,089
—	(.47)	12.23	(.49)	105,371	.59 ^{e,g,h}	3.75 ^{e,g}	1,403

Notes to financial statements 3/31/23 (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. Additionally, references to “OTC”, if any, represent over-the-counter and references to “ESG”, if any, represent environmental, social and governance. Unless otherwise noted, the “reporting period” represents the period from October 1, 2022 through March 31, 2023.

Putnam Mortgage Securities Fund (the fund) is a Massachusetts business trust, which is registered under the Investment Company Act of 1940, as amended, as a diversified, open-end management investment company. The goal of the fund is to seek as high a level of current income as Putnam Management believes is consistent with preservation of capital. The fund invests mainly in mortgages, mortgage-related fixed income securities and related derivatives that are either investment-grade or below-investment-grade in quality (sometimes referred to as “junk bonds”). Under normal circumstances, the fund invests at least 80% of its net assets (plus any borrowings for investment purposes) in mortgages, mortgage-related fixed income securities and related derivatives (i.e., derivatives used to acquire exposure to, or whose underlying securities are, mortgages or mortgage-related securities). The fund generally uses the net unrealized gain or loss, or market value, of mortgage-related derivatives for purposes of this policy, but may use the notional value of a derivative if that is determined to be a more appropriate measure of the fund’s investment exposure. This policy may be changed only after 60 days’ notice to shareholders.

The fund expects to invest in mortgage-backed investments that are obligations of U.S. government agencies and instrumentalities and accordingly are backed by the full faith and credit of the United States (e.g., Ginnie Mae mortgage-backed bonds) as well as in mortgage-backed investments that are backed by only the credit of a federal agency or government-sponsored entity (e.g., Fannie Mae and Freddie Mac mortgage-backed bonds), and that have short- to long-term maturities.

The fund also expects to invest in lower-rated, higher-yielding mortgage-backed securities, including non-agency residential mortgage-backed securities (which may be backed by non-qualified or “sub-prime” mortgages), commercial mortgage-backed securities, and collateralized mortgage obligations (including interest only, principal only, and other prepayment derivatives). Non-agency (i.e., privately issued) securities typically are lower-rated and higher yielding than securities issued or backed by agencies such as Ginnie Mae, Fannie Mae or Freddie Mac. The fund currently has significant investment exposure to commercial mortgage-backed securities. While the fund’s emphasis will be on mortgage-backed securities, it may also invest to a lesser extent in other types of asset-backed securities.

Putnam Management may consider, among other factors, credit, interest rate, prepayment and liquidity risks, as well as general market conditions, when deciding whether to buy or sell investments.

The fund typically uses, to a significant extent, derivatives, including credit default swaps, interest rate swaps, total return swaps, to-be-announced (TBA) commitments, futures, options and swaptions, including on mortgage-backed securities and indices, for both hedging and non-hedging purposes, including to obtain or adjust exposure to mortgage-backed investments.

The fund offers the following share classes. The expenses for each class of shares may differ based on the distribution and investor servicing fees of each class, which are identified in Note 2.

Share class	Sales charge	Contingent deferred sales charge	Conversion feature
Class A	Up to 4.00%	1.00% on certain redemptions of shares bought with no initial sales charge	None
Class B*	None	5.00% phased out over six years	Converts to class A shares after 8 years
Class C	None	1.00% eliminated after one year	Converts to class A shares after 8 years
Class R†	None	None	None
Class R6†	None	None	None
Class Y†	None	None	None

* Purchases of class B shares are closed to new and existing investors except by exchange from class B shares of another Putnam fund or through dividend and/or capital gains reinvestment.

† Not available to all investors.

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

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

Under the fund's Amended and Restated Agreement and Declaration of Trust, any claims asserted against or on behalf of the Putnam Funds, including claims against Trustees and Officers, must be brought in state and federal courts located within the Commonwealth of Massachusetts.

Note 1: Significant accounting policies

The following is a summary of significant accounting policies consistently followed by the fund in the preparation of its financial statements. The preparation of financial statements is in conformity with accounting principles generally accepted in the United States of America and requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities in the financial statements and the reported amounts of increases and decreases in net assets from operations. Actual results could differ from those estimates. Subsequent events after the Statement of assets and liabilities date through the date that the financial statements were issued have been evaluated in the preparation of the financial statements.

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

Security valuation Portfolio securities and other investments are valued using policies and procedures adopted by the Board of Trustees. The Trustees have formed a Pricing Committee to oversee the implementation of these procedures and have delegated responsibility for valuing the fund's assets in accordance with these procedures to Putnam Management. Putnam Management has established an internal Valuation Committee that is responsible for making fair value determinations, evaluating the effectiveness of the pricing policies of the fund and reporting to the Pricing Committee.

Investments, including mortgage backed securities and short-term investments with remaining maturities of 60 days or less, are valued on the basis of valuations provided by an independent pricing service approved by the Trustees or dealers selected by Putnam Management. Such service providers use information with respect to transactions in bonds, quotations from bond dealers, market transactions in comparable securities and various relationships between securities in determining value. These securities will generally be categorized as Level 2.

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.

Certain investments, including certain restricted and illiquid securities and derivatives, are also valued at fair value following procedures approved by the Trustees. These valuations consider such factors as significant market or specific security events such as interest rate or credit quality changes, various relationships with other securities, discount rates, U.S. Treasury, U.S. swap and credit yields, index levels, convexity exposures, recovery rates, sales and other multiples and resale restrictions. These securities are classified as Level 2 or as Level 3 depending on the priority of the significant inputs.

To assess the continuing appropriateness of fair valuations, the Valuation Committee reviews and affirms the reasonableness of such valuations on a regular basis after considering all relevant information that is reasonably available. Such valuations and procedures are reviewed periodically by the Trustees. Certain securities may be valued on the basis of a price provided by a single source. The fair value of securities is generally determined as the amount that the fund could reasonably expect to realize from an orderly disposition of such securities over

a reasonable period of time. By its nature, a fair value price is a good faith estimate of the value of a security in a current sale and does not reflect an actual market price, which may be different by a material amount.

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

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

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

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.

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.

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 and for yield curve positioning.

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.

Credit default contracts The fund entered into OTC and/or centrally cleared credit default contracts to hedge credit risk, 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 pledged to the fund is held in a segregated account by the fund's custodian and, with respect to those amounts which can be sold or repledged, are presented in the fund's portfolio.

Collateral pledged by the fund is segregated by the fund's custodian and identified in the fund's portfolio. Collateral can be in the form of cash or debt securities issued by the U.S. Government or related agencies or other securities as agreed to by the fund and the applicable counterparty. Collateral requirements are determined based on the fund's net position with each counterparty.

With respect to ISDA Master Agreements, termination events applicable to the fund may occur upon a decline in the fund's net assets below a specified threshold over a certain period of time. Termination events applicable to counterparties may occur upon a decline in the counterparty's long-term or short-term credit ratings below a specified level. In each case, upon occurrence, the other party may elect to terminate early and cause settlement of all derivative and foreign exchange contracts outstanding, including the payment of any losses and costs resulting from such early termination, as reasonably determined by the terminating party. Any decision by one or more of the fund's counterparties to elect early termination could impact the fund's future derivative activity.

At the close of the reporting period, the fund had a net liability position of \$3,306,300 on open derivative contracts subject to the Master Agreements. Collateral pledged by the fund at period end for these agreements totaled \$2,818,200 and may include amounts related to unsettled agreements.

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 \$320 million syndicated unsecured committed line of credit, provided by State Street (\$160 million) and JPMorgan Chase Bank, N.A. (\$160 million), and a \$235.5 million unsecured uncommitted line of credit, provided by State Street. Prior to May 2, 2023, the fund participated, along with other Putnam funds, in a \$100 million (\$317.5 million prior to October 14, 2022) unsecured committed line of credit and a \$235.5 million unsecured uncommitted line of credit, both provided by State Street. Borrowings may be made for temporary or emergency purposes, including the funding of shareholder redemption requests and trade settlements. Interest is charged to the fund based on the fund's borrowing at a rate equal to 1.25% plus the higher of (1) the Federal Funds rate and (2) the Overnight Bank Funding Rate for the committed line of credit and 1.30% plus the higher of (1) the Federal Funds rate and (2) the Overnight Bank Funding Rate for the uncommitted line of credit. A closing fee equal to 0.04% of the committed line of credit and 0.04% of the uncommitted line of credit has been paid by the participating funds and a \$75,000 fee has been paid by the participating funds to State Street as agent of the syndicated committed line of credit. In addition, a commitment fee of 0.21% per annum on any unutilized portion of the committed line of credit is allocated to the participating funds based on their relative net assets and paid quarterly. During the reporting period, the fund had no borrowings against these arrangements.

Federal taxes It is the policy of the fund to distribute all of its taxable income within the prescribed time period and otherwise comply with the provisions of the Internal Revenue Code of 1986, as amended (the Code), applicable to regulated investment companies. It is also the intention of the fund to distribute an amount sufficient to avoid imposition of any excise tax under Section 4982 of the Code.

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.

Under the Regulated Investment Company Modernization Act of 2010, the fund will be permitted to carry forward capital losses incurred for an unlimited period and the carry forwards will retain their character as either short-term or long-term capital losses. At September 30, 2022, the fund had the following capital loss carryovers available, to the extent allowed by the Code, to offset future net capital gain, if any:

Loss carryover		
Short-term	Long-term	Total
\$150,877,060	\$84,902,298	\$235,779,358

Tax cost of investments includes adjustments to net unrealized appreciation (depreciation) which may not necessarily be final tax cost basis adjustments, but closely approximate the tax basis unrealized gains and losses that may be realized and distributed to shareholders. The aggregate identified cost on a tax basis is \$1,483,332,722, resulting in gross unrealized appreciation and depreciation of \$31,969,238 and \$139,785,843, respectively, or net unrealized depreciation of \$107,816,605.

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.

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:

0.550%	of the first \$5 billion,	0.350%	of the next \$50 billion,
0.500%	of the next \$5 billion,	0.330%	of the next \$50 billion,
0.450%	of the next \$10 billion,	0.320%	of the next \$100 billion and
0.400%	of the next \$10 billion,	0.315%	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 0.195% of the fund's average net assets.

Putnam Management has contractually agreed, through January 30, 2024, to waive fees and/or reimburse the fund's expenses to the extent necessary to limit the cumulative expenses of the fund, exclusive of brokerage, interest, taxes, investment-related expenses, extraordinary expenses, acquired fund fees and expenses and payments under the fund's investor servicing contract, investment management contract and distribution 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 not reduced as a result of this limit.

The fund invests in Putnam Government Money Market Fund, an open-end management investment company managed by Putnam Management. Management fees paid by the fund are reduced by an amount equal to the management fees paid by Putnam Government Money Market Fund with respect to assets invested by the fund in Putnam Government Money Market Fund. For the reporting period, management fees paid were reduced by \$10 relating to the fund's investment in Putnam Government Money Market Fund.

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 0.20% of the average net assets of the portion of the fund managed by PIL.

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

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

Putnam Investor Services, Inc., an affiliate of Putnam Management, provides investor servicing agent functions to the fund. Putnam Investor Services, Inc. received fees for investor servicing for class A, class B, class C, class R and class Y shares that included (1) a per account fee for each direct and underlying non-defined contribution account (retail account) of the fund; (2) a specified rate of the fund's assets attributable to defined contribution plan accounts; and (3) a specified rate based on the average net assets in retail accounts. Putnam Investor Services, Inc. has agreed that the aggregate investor servicing fees for each fund's retail and defined contribution accounts for these share classes will not exceed an annual rate of 0.25% of the fund's average assets attributable to such accounts.

Class R6 shares paid a monthly fee based on the average net assets of class R6 shares at an annual rate of 0.05%.

During the reporting period, the expenses for each class of shares related to investor servicing fees were as follows:

Class A	\$451,851	Class R	4,822
Class B	520	Class R6	1,371
Class C	3,346	Class Y	26,947
		Total	\$488,857

The fund has entered into expense offset arrangements with Putnam Investor Services, Inc. and State Street whereby Putnam Investor Services, Inc.'s and State Street's fees are reduced by credits allowed on cash balances. For the reporting period, the fund's expenses were reduced by \$24,094 under the expense offset arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$424, 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 distribution plans (the Plans) with respect to the following share classes pursuant to Rule 12b-1 under the Investment Company Act of 1940. The purpose of the Plans 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 Plans provide payments by the fund to Putnam Retail Management Limited Partnership at an annual rate of up to the following amounts (Maximum %) of the average net assets attributable to each class. The Trustees have approved payment by the fund at the following annual rate (Approved %) of the average net assets attributable to each class. During the reporting period, the class-specific expenses related to distribution fees were as follows:

	Maximum %	Approved %	Amount
Class A	0.35%	0.25%	\$537,793
Class B	1.00%	1.00%	2,482
Class C	1.00%	1.00%	15,945
Class R	1.00%	0.50%	11,478
Total			\$567,698

For the reporting period, Putnam Retail Management Limited Partnership, acting as underwriter, received net commissions of \$3,065 from the sale of class A shares and received \$8 and \$26 in contingent deferred sales charges from redemptions of class B and class C shares, respectively.

A deferred sales charge of up to 1.00% is assessed on certain redemptions of class A shares. For the reporting period, Putnam Retail Management Limited Partnership, acting as underwriter, received \$222 on class A redemptions.

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)	\$10,218,692,431	\$10,150,417,885
U.S. government securities (Long-term)	—	—
Total	\$10,218,692,431	\$10,150,417,885

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, including, if applicable, direct exchanges pursuant to share conversions, in capital shares were as follows:

Class A	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	555,835	\$5,159,422	947,739	\$10,520,300
Shares issued in connection with reinvestment of distributions	4,089,573	37,753,132	1,940,273	21,196,088
	4,645,408	42,912,554	2,888,012	31,716,388
Shares repurchased	(3,992,255)	(37,288,333)	(8,149,082)	(90,180,792)
Net increase (decrease)	653,153	\$5,624,221	(5,261,070)	\$(58,464,404)

Class B	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	276	\$2,541	138	\$1,502
Shares issued in connection with reinvestment of distributions	4,922	45,268	2,822	30,809
	5,198	47,809	2,960	32,311
Shares repurchased	(28,037)	(259,285)	(37,277)	(408,936)
Net decrease	(22,839)	\$(211,476)	(34,317)	\$(376,625)

Class C	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	12,688	\$116,265	44,039	\$487,703
Shares issued in connection with reinvestment of distributions	31,495	287,602	15,713	170,270
	44,183	403,867	59,752	657,973
Shares repurchased	(73,960)	(681,547)	(201,969)	(2,190,938)
Net decrease	(29,777)	\$(277,680)	(142,217)	\$(1,532,965)

Class R	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	27,571	\$254,096	76,433	\$844,833
Shares issued in connection with reinvestment of distributions	48,404	440,519	21,652	233,292
	75,975	694,615	98,085	1,078,125
Shares repurchased	(35,062)	(330,921)	(168,625)	(1,869,459)
Net increase (decrease)	40,913	\$363,694	(70,540)	\$(791,334)

Class R6	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	74,548	\$688,110	59,263	\$676,344
Shares issued in connection with reinvestment of distributions	58,571	532,890	26,443	284,888
	133,119	1,221,000	85,706	961,232
Shares repurchased	(16,351)	(146,223)	(65,483)	(712,905)
Net increase	116,768	\$1,074,777	20,223	\$248,327

Class Y	SIX MONTHS ENDED 3/31/23		YEAR ENDED 9/30/22	
	Shares	Amount	Shares	Amount
Shares sold	242,061	\$2,210,008	1,147,656	\$12,805,314
Shares issued in connection with reinvestment of distributions	200,947	1,829,224	109,908	1,187,759
	443,008	4,039,232	1,257,564	13,993,073
Shares repurchased	(584,742)	(5,420,031)	(4,963,533)	(55,334,875)
Net decrease	(141,734)	\$(1,380,799)	(3,705,969)	\$(41,341,802)

Note 5: Affiliated transactions

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

Name of affiliate	Fair value as of 9/30/22	Purchase cost	Sale proceeds	Investment income	Shares outstanding and fair value as of 3/31/23
Short-term investments					
Putnam Government Money Market Fund*	\$10,000	\$—	\$10,000	\$123	\$—
Putnam Short Term Investment Fund**	8,479,918	202,253,701	197,797,926	565,489	12,935,693
Total Short-term investments	\$8,489,918	\$202,253,701	\$197,807,926	\$565,612	\$12,935,693

* Management fees incurred through investment in Putnam Government Money Market Fund have been waived by the fund (Note 2). 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. The fund may invest in higher-yielding, lower-rated bonds that may have a higher rate of default. The fund may invest a significant portion of its assets in securitized debt instruments, including mortgage-backed and asset-backed investments. The yields and values of these investments are sensitive to changes in interest rates, the rate of principal payments on the underlying assets and the market's perception of the issuers. The market for these investments may be volatile and limited, which may make them difficult to buy or sell.

On July 27, 2017, the United Kingdom's Financial Conduct Authority ("FCA"), which regulates LIBOR, announced its intention to cease compelling banks to provide the quotations needed to sustain LIBOR after 2021. ICE Benchmark Administration, the administrator of LIBOR, ceased publication of most LIBOR settings on a representative basis at the end of 2021 and is expected to cease publication of a majority of U.S. dollar LIBOR settings on a representative basis after June 30, 2023. In addition, global regulators have announced that, with limited exceptions, no new LIBOR-based contracts should be entered into after 2021. LIBOR has historically been a common benchmark interest rate index used to make adjustments to variable-rate loans. It is used throughout global banking and financial industries to determine interest rates for a variety of financial instruments and borrowing arrangements. Actions by regulators have resulted in the establishment of alternative reference rates to LIBOR in most major currencies. Various financial industry groups have been planning for the transition away from LIBOR, but there are obstacles to converting certain longer-term securities and transactions to new reference rates. Markets are developing slowly and questions around liquidity in these rates and how to appropriately adjust these rates to mitigate any economic value transfer at the time of transition remain a significant concern. Neither the effect of the transition process nor its ultimate success can yet be known. The transition process might lead to increased

volatility and illiquidity in markets that rely on LIBOR to determine interest rates. It could also lead to a reduction in the value of some LIBOR-based investments and reduce the effectiveness of related transactions, such as hedges. While some LIBOR-based instruments may contemplate a scenario where LIBOR is no longer available by providing for an alternative rate-setting methodology, not all may have such provisions and there may be significant uncertainty regarding the effectiveness of any such alternative methodologies. Since the usefulness of LIBOR as a benchmark could deteriorate during the transition period, these effects could occur at any time.

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

Note 7: Summary of derivative activity

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

Purchased TBA commitment option contracts (contract amount)	\$42,100,000
Purchased swap option contracts (contract amount)	\$1,547,300,000
Written TBA commitment option contracts (contract amount)	\$42,100,000
Written swap option contracts (contract amount)	\$745,600,000
Futures contracts (number of contracts)	900
OTC interest rate swap contracts (notional)	\$420,000,000
Centrally cleared interest rate swap contracts (notional)	\$3,150,600,000
OTC credit default contracts (notional)	\$88,900,000

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	\$13,054,050	Payables	\$13,295,498
Interest rate contracts	Investments, Receivables, Net assets — Unrealized appreciation	81,923,856*	Payables, Net assets — Unrealized depreciation	79,801,055*
Total		\$94,977,906		\$93,096,553

* 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	Options	Futures	Swaps	Total
Credit contracts	\$—	\$—	\$(1,652,353)	\$(1,652,353)
Interest rate contracts	(20,197,821)	5,397,216	4,212,227	(10,588,378)
Total	\$(20,197,821)	\$5,397,216	\$2,559,874	\$(12,240,731)

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

Derivatives not accounted for as hedging instruments under ASC 815	Options	Futures	Swaps	Total
Credit contracts	\$—	\$—	\$1,761,089	\$1,761,089
Interest rate contracts	14,560,786	(4,866,096)	(9,755,789)	(61,099)
Total	\$14,560,786	\$(4,866,096)	\$(7,994,700)	\$1,699,990

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.	Citigroup Global Markets, Inc.	Credit Suisse International
Assets:						
OTC Interest rate swap contracts*#	\$—	\$—	\$—	\$—	\$—	\$—
Centrally cleared interest rate swap contracts [§]	—	—	4,289,528	—	—	—
OTC Credit default contracts — protection sold*#	—	—	—	—	—	—
OTC Credit default contracts — protection purchased*#	—	—	—	—	7,423,242	394,000
Futures contracts [§]	—	—	—	—	—	—
Forward premium swap option contracts#	9,349,594	704,093	—	3,942,546	—	—
Total Assets	\$9,349,594	\$704,093	\$4,289,528	\$3,942,546	\$7,423,242	\$394,000
Liabilities:						
OTC Interest rate swap contracts*#	—	—	—	—	—	—
Centrally cleared interest rate swap contracts [§]	—	—	5,254,805	—	—	—
OTC Credit default contracts — protection sold*#	—	—	—	—	5,747,317	112,015
OTC Credit default contracts — protection purchased*#	—	—	—	—	—	—
Futures contracts [§]	—	—	—	—	—	—
Forward premium swap option contracts#	8,168,874	590,755	—	3,626,224	—	—
Total Liabilities	\$8,168,874	\$590,755	\$5,254,805	\$3,626,224	\$5,747,317	\$112,015
Total Financial and Derivative Net Assets	\$1,180,720	\$113,338	\$(965,277)	\$316,322	\$1,675,925	\$281,985
Total collateral received (pledged)†##	\$1,180,720	\$113,338	\$—	\$316,322	\$1,675,925	\$281,985
Net amount	\$—	\$—	\$(965,277)	\$—	\$—	\$—
<i>Controlled collateral received (including TBA commitments)**</i>	\$1,685,635	\$220,000	\$—	\$356,000	\$6,083,000	\$300,000
<i>Uncontrolled collateral received</i>	\$—	\$—	\$—	\$—	\$—	\$—
<i>Collateral (pledged) (including TBA commitments)**</i>	\$—	\$—	\$—	\$—	\$—	\$—

Deutsche Bank AG	Goldman Sachs International	JP Morgan Chase Bank N.A.	JP Morgan Securities LLC	Merrill Lynch International	Morgan Stanley & Co. International PLC	Toronto-Dominion Bank	UBS AG	Total
\$—	\$—	\$—	\$—	\$—	\$6,776,270	\$—	\$—	\$6,776,270
—	—	—	—	—	—	—	—	4,289,528
—	—	—	—	—	—	—	—	—
—	2,189,213	—	61,287	71,189	2,915,119	—	—	13,054,050
—	—	—	—	—	—	—	—	—
310,944	103,612	1,984,331	—	—	—	119,778	156,801	16,671,699
\$310,944	\$2,292,825	\$1,984,331	\$61,287	\$71,189	\$9,691,389	\$119,778	\$156,801	\$40,791,547
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	5,254,805
—	3,364,405	—	459,198	798,148	2,814,415	—	—	13,295,498
—	—	—	—	—	—	—	—	—
—	—	—	109,829	—	—	—	—	109,829
28,044	627,732	2,344,279	—	—	361,369	69,238	278,971	16,095,486
\$28,044	\$3,992,137	\$2,344,279	\$569,027	\$798,148	\$3,175,784	\$69,238	\$278,971	\$34,755,618
\$282,900	\$(1,699,312)	\$(359,948)	\$(507,740)	\$(726,959)	\$6,515,605	\$50,540	\$(122,170)	\$6,035,929
\$220,000	\$(1,559,407)	\$(338,018)	\$(400,887)	\$(408,360)	\$6,515,605	\$50,540	\$(111,528)	
\$62,900	\$(139,905)	\$(21,930)	\$(106,853)	\$(318,599)	\$—	\$—	\$(10,642)	
\$220,000	\$—	\$—	\$3,206,000	\$—	\$6,908,000	\$70,000	\$—	\$19,048,635
\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
\$—	\$(1,559,407)	\$(338,018)	\$(400,887)	\$(408,360)	\$—	\$—	\$(111,528)	\$(2,818,200)

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

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

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

Covered by master netting agreement (Note 1).

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

§ Includes current day's variation margin only as reported on the Statement of assets and liabilities, which is not collateralized. Cumulative appreciation/(depreciation) for futures contracts and centrally cleared swap contracts is represented in the tables listed after the fund's portfolio. Collateral pledged for initial margin on futures contracts and centrally cleared swap contracts, which is not included in the table above, amounted to \$1,176,183 and \$17,228,767, respectively.

Putnam family of funds

The following is a list of Putnam's open-end mutual funds offered to the public. *Investors should carefully consider the investment objective, risks, charges, and expenses of a fund before investing. For a prospectus, or a summary prospectus if available, containing this and other information for any Putnam fund or product, contact your financial advisor or call Putnam Investor Services at 1-800-225-1581. Please read the prospectus carefully before investing.*

Blend

Core Equity Fund
Emerging Markets Equity Fund
Focused Equity Fund
Focused International Equity Fund
International Capital Opportunities Fund
International Equity Fund
Research Fund

Global Sector

Global Health Care Fund
Global Technology Fund

Growth

Large Cap Growth Fund
Small Cap Growth Fund
Sustainable Future Fund
Sustainable Leaders Fund

Value

International Value Fund
Large Cap Value Fund
Small Cap Value Fund

Income

Convertible Securities Fund
Core Bond Fund
Diversified Income Trust
Floating Rate Income Fund
Global Income Trust
Government Money Market Fund*
High Yield Fund
Income Fund
Money Market Fund†
Mortgage Opportunities Fund
Mortgage Securities Fund
Short Duration Bond Fund
Ultra Short Duration Income Fund

Tax-free Income

Intermediate-Term Municipal Income Fund
Short-Term Municipal Income Fund
Strategic Intermediate Municipal Fund
Tax Exempt Income Fund
Tax-Free High Yield Fund
State tax-free income funds:‡
California, Massachusetts, Minnesota,
New Jersey, New York, Ohio, and Pennsylvania

Asset Allocation

George Putnam Balanced Fund

Dynamic Asset Allocation Balanced Fund

Dynamic Asset Allocation Conservative Fund

Dynamic Asset Allocation Growth Fund

Multi-Asset Income Fund

Asset Allocation (cont.)

Retirement Advantage Maturity Fund

Retirement Advantage 2065 Fund

Retirement Advantage 2060 Fund

Retirement Advantage 2055 Fund

Retirement Advantage 2050 Fund

Retirement Advantage 2045 Fund

Retirement Advantage 2040 Fund

Retirement Advantage 2035 Fund

Retirement Advantage 2030 Fund

Retirement Advantage 2025 Fund

Sustainable Retirement Maturity Fund

Sustainable Retirement 2065 Fund

Sustainable Retirement 2060 Fund

Sustainable Retirement 2055 Fund

Sustainable Retirement 2050 Fund

Sustainable Retirement 2045 Fund

Sustainable Retirement 2040 Fund

Sustainable Retirement 2035 Fund

Sustainable Retirement 2030 Fund

Sustainable Retirement 2025 Fund

* You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

† You could lose money by investing in the fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. The fund may impose a fee upon sale of your shares or may temporarily suspend your ability to sell shares if the fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to the fund, and you should not expect that the sponsor will provide financial support to the fund at any time.

‡ Not available in all states.

Check your account balances and the most recent month-end performance in the Individual Investors section at putnam.com.

Fund information

Founded over 85 years ago, Putnam Investments was built around the concept that a balance between risk and reward is the hallmark of a well-rounded financial program. We manage funds across income, value, blend, growth, sustainable, and asset allocation categories.

Investment Manager

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

Investment Sub-Advisor

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

Marketing Services

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

Custodian

State Street Bank and Trust Company

Legal Counsel

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Vice President and BSA Compliance Officer

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Susan G. Malloy
Vice President and Assistant Treasurer

Alan G. McCormack
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Denere P. Poulack
Assistant Vice President, Assistant Clerk, and Assistant Treasurer

Janet C. Smith
Vice President, Principal Financial Officer, Principal Accounting Officer, and Assistant Treasurer

Stephen J. Tate
Vice President and Chief Legal Officer

Mark C. Trenchard
Vice President

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