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Putnam Variable Trust

Putnam VT Mortgage Securities Fund

Annual report

12 | 31 | 20

Message from the Trustees

February 8, 2021

Dear Shareholder:

The world welcomed 2021 with high hopes for improvement in the global economy and public health. Although COVID-19 infections have reached new levels, distribution of vaccines is underway, boosting optimism about a return to normal in the not-too-distant future. In the United States, new proposals to rebuild the economy are anticipated from the Biden administration. The stock and bond markets started the year in good shape, indicating that investors are willing to look beyond current challenges and see the potential for renewed economic growth.

Putnam continues to employ active strategies that seek superior investment performance for you and your fellow shareholders. Putnam's portfolio managers and analysts take a research-intensive approach that includes risk management strategies designed to serve you through changing conditions.

As always, thank you for investing with Putnam.

Respectfully yours,



Robert L. Reynolds
President and Chief Executive Officer
Putnam Investments



Kenneth R. Leibler
Chair, Board of Trustees

Performance summary (as of 12/31/20)

Investment objective

As high a level of current income as Putnam Investment Management, LLC, (Putnam Management) believes is consistent with preservation of capital

Net asset value December 31, 2020

Class IA: \$9.05

Class IB: \$9.02

Total return at net asset value

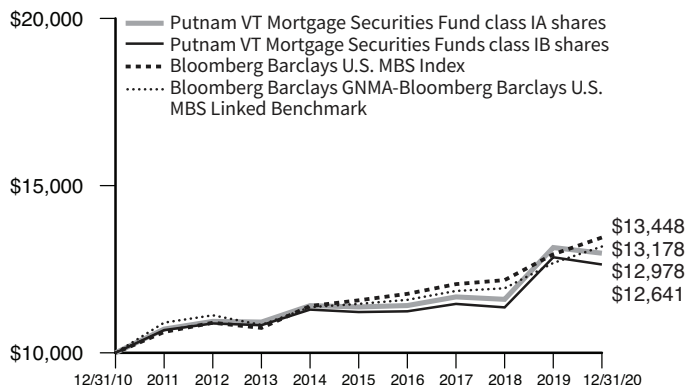
(as of 12/31/20)	Class IA shares*	Class IB shares*	Bloomberg Barclays U.S. MBS Index	Bloomberg Barclays Government Bond—Bloomberg Barclays U.S. MBS Linked Benchmark†
1 year	-1.29%	-1.68%	3.87%	3.87%
5 years	14.12	12.68	16.24	14.96
Annualized	2.68	2.42	3.05	2.83
10 years	29.78	26.41	34.48	31.78
Annualized	2.64	2.37	3.01	2.80
Life	160.75	147.67	167.22	152.62
Annualized	4.69	4.43	4.81	4.53

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

* Class inception date: February 1, 2000.

† The Bloomberg Barclays Government Bond-Bloomberg Barclays U.S. MBS Linked Benchmark represents performance of the Bloomberg Barclays Government Bond Index from the inception date of the fund, February 1, 2000, through April 29, 2018, and performance of the Bloomberg Barclays U.S. MBS Index from April 30, 2018 through the current period.

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



The Bloomberg Barclays U.S. MBS Index is an unmanaged index of agency mortgage-backed pass-through securities (both fixed rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

The Bloomberg Barclays Government Bond Index is an unmanaged index of U.S. Treasury and agency securities.

Source: Bloomberg Index Services Limited.

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

Portfolio composition

Commercial mortgage-backed securities (MBS)	45.5%
Agency collateralized mortgage obligations	39.0%
Agency pass-through	22.0%
Non-agency residential MBS	21.6%
Asset-backed securities	2.8%
Cash and net other assets	9.9%

Allocations are shown as a percentage of the fund's net assets. Cash and net other assets, if any, represent the market value weights of cash, derivatives, short-term securities, and other unclassified assets in the portfolio. Summary information may differ from the portfolio schedule included in the financial statements due to the inclusion of derivative securities, any interest accruals, the use of different classifications of securities for presentation purposes, and rounding. Allocations may not total 100% because the table includes the notional value of certain derivatives (the economic value for purposes of calculating periodic payment obligations), in addition to the market value of securities. Holdings and allocations may vary over time.

Credit quality

A-1+	11.8%
A-1	8.5%
AAA	57.2%
AA	6.7%
A	7.4%
BBB	10.3%
BB	3.5%
B	3.6%
CCC and below	2.4%
Not rated	-11.4%

Credit qualities are shown as a percentage of net assets. 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. To-be-announced (TBA) mortgage commitments, if any, are included based on their issuer ratings. Ratings may vary over time.

Cash, derivative instruments, and net other assets are shown in the not-rated category. Payables and receivables for TBA mortgage commitments are included in the not-rated category and may result in negative weights. The fund itself has not been rated by an independent rating agency.

Report from your fund's managers

How was the investment environment for the 12-month reporting period ended December 31, 2020?

The year began with risk assets rallying but quickly deteriorated in March due to the COVID-19 pandemic. The financial markets experienced a historic sell-off as investors sought safe-haven assets. With the economic toll climbing, the Federal Reserve reduced interest rates to near zero in mid-March and unleashed a torrent of bond-buying programs to stabilize the credit markets. These actions increased liquidity in the bond markets and eased investor fears. Congress soon followed with the largest stimulus package in history. Fixed-income investments rallied in the second quarter but experienced mixed results in the second half of 2020 after the Fed announced that it would allow inflation to run higher than the 2% target for some time before raising interest rates.

How did the fund perform in this environment?

For the 12-month reporting period, Putnam VT Mortgage Securities Fund's class IA shares returned -1.29%, underperforming the benchmark Bloomberg Barclays U.S. MBS Index, which returned 3.87%.

What strategies detracted from relative performance?

Exposure to mezzanine commercial mortgage-backed securities [CMBS], particularly the CMBX BBB-rated Series 6 index [2012 issuance], was the primary detractor for the period. [CMBX is a group of tradeable indexes that each reference a basket of 25 CMBS deals issued in a particular year.] The CMBS market struggled in large part due to negative sentiment surrounding the pandemic's impact on certain property types, most notably hotels and malls, as well as the lack of government support. In November and December, however, CMBS rallied on positive vaccine news, partially recouping earlier losses.

Exposure to residential mortgage credit through the credit risk transfer [CRT] sector detracted slightly. CRT securities sold off in March due to market illiquidity issues and the pricing in of extreme stress scenarios related to unemployment and home price appreciation but rebounded in subsequent months alongside a surprisingly resilient housing market.

What strategies helped the fund's relative performance?

Prepayment strategies as a whole displayed positive performance, primarily due to our mortgage basis strategy, which reflects our view on the yield differential between prevailing mortgage rates and U.S. Treasuries. We moved to a long position in the mortgage basis just before the Fed announced its purchase program in March and maintained a long position for much of the year, which proved beneficial. This was partially offset by agency interest-only [IO] securities, which faced headwinds from increased prepayment speeds as homeowners capitalized on historically low mortgage rates. Term-structure strategies also contributed to performance during the period.

How did you use derivatives during the period?

We used CMBX credit default swaps to hedge the fund's CMBS credit and market risks, and to gain access to specific areas of the market. We used interest-rate swaps and options to hedge the risks inherent in the fund's duration and yield-curve positioning, to

isolate the prepayment risk associated with our CMO holdings, and to help manage overall downside risk. We also used futures to hedge treasury-term structure risk and for yield-curve positioning.

What is your market outlook for 2021?

Regarding CMBS, we believe the distribution of viable vaccines significantly lessens the downside risk of prolonged economic lockdowns, and the sector's lagged recovery created compelling opportunities in mezzanine tranches, in our view. In the residential mortgage market, we are forecasting home prices to remain in moderate appreciation mode given accommodative monetary policy and supportive fiscal policies. We continue to find value in mezzanine and subordinated CRT bonds of seasoned vintages with low loan-to-values, as well as re-performing loans rated AAA- and AA and non-qualifying mortgage securities. We think the prepayment sector serves as a diversifier and would benefit from an economic slowdown or change to supportive fiscal policies. Our selection efforts are focused on securities backed by reverse mortgages, jumbo loan balances, and seasoned collateral.

The views expressed in this report are exclusively those of Putnam Management and are subject to change. They are not meant as investment advice. Please note that the holdings discussed in this report may not have been held by the fund for the entire period. Portfolio composition is subject to review in accordance with the fund's investment strategy and may vary in the future.

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Consider these risks before investing: Funds that invest in government securities are not guaranteed. Mortgage- and asset-backed securities are subject to prepayment risk, which means that they may increase in value less than other bonds when interest rates decline and decline in value more than other bonds when interest rates rise. The fund may have to invest the proceeds from prepaid investments, including mortgage- and asset-backed investments, in other investments with less attractive terms and yields. The fund's investments in mortgage-backed securities and asset-backed securities, and in certain other securities and derivatives, may be or become illiquid. The fund's exposure to privately issued mortgage-backed securities and mortgage-backed securities issued or guaranteed by the U.S. government or its agencies or instrumentalities may make the fund's net asset value more susceptible to economic, market, political and other developments affecting the housing or real estate markets. Bond investments are subject to interest-rate risk (the risk of bond prices falling if interest rates rise) and credit risk (the risk of an issuer defaulting on interest or principal payments). Interest-rate risk is generally greater for longer-term bonds, and credit risk is generally greater for below-investment-grade bonds. Default risk is generally

higher for non-qualified mortgages. Risks associated with derivatives include increased investment exposure (which may be considered leverage) and, in the case of over-the-counter instruments, the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations. Unlike bonds, funds that invest in bonds have fees and expenses. The value of investments in the fund's portfolio may fall or fail to rise over extended periods of time for a variety of reasons, including general economic, political, or financial market conditions; investor sentiment and market perceptions; government actions; geopolitical events or changes; and factors related to a specific issuer, geography (such as a region of the United States), industry, or sector, such as the housing or real estate markets. These and other factors may lead to increased volatility and reduced liquidity in the fund's portfolio holdings or in relevant markets. Our investment techniques, analyses, and judgments may not produce the outcome we intend. The investments we select for the fund may not perform as well as other securities that we do not select for the fund. We, or the fund's other service providers, may experience disruptions or operating errors that could have a negative effect on the fund. You can lose money by investing in the fund.

Your fund's managers



Portfolio Manager **Michael V. Salm** is Co-Chief Investment Officer, Fixed Income. He joined Putnam in 1997 and has been in the investment industry since 1989.

Brett S. Kozlowski, CFA, and Jatin Misra, PhD, CFA, are also Portfolio Managers of the fund.

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

ABOUT DERIVATIVES

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

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

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

Understanding your fund's expenses

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

Review your fund's expenses

The two left-hand columns of the Expenses per \$1,000 table show the expenses you would have paid on a \$1,000 investment in your fund from 7/1/20 to 12/31/20. They also show how much a \$1,000 investment would be worth at the close of the period, *assuming actual returns and expenses*. To estimate the ongoing expenses you paid over the period, divide your account value by \$1,000, then multiply the result by the number in the first line for the class of shares you own.

Compare your fund's expenses with those of other funds

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

Expense ratios

	Class IA	Class IB
Net expenses for the fiscal year ended 12/31/19*	0.50%	0.75%
Total annual operating expenses for the fiscal year ended 12/31/19	0.72%	0.97%
Annualized expense ratio for the six-month period ended 12/31/20†	0.50%	0.75%

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.

*Reflects Putnam Management's contractual obligation to limit certain fund expenses through 4/30/21.

†For the fund's most recent fiscal half year; may differ from expense ratios based on one-year data in the financial highlights.

Expenses per \$1,000

	Expenses and value for a \$1,000 investment, assuming actual returns for the 6 months ended 12/31/20		Expenses and value for a \$1,000 investment, assuming a hypothetical 5% annualized return for the 6 months ended 12/31/20	
	Class IA	Class IB	Class IA	Class IB
Expenses paid per \$1,000*†	\$2.58	\$3.87	\$2.54	\$3.81
Ending value (after expenses)	\$1,054.80	\$1,052.50	\$1,022.62	\$1,021.37

*Expenses for each share class are calculated using the fund's annualized expense ratio for each class, which represents the ongoing expenses as a percentage of average net assets for the six months ended 12/31/20. The expense ratio may differ for each share class.

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

Report of Independent Registered Public Accounting Firm

To the Board of Trustees of Putnam Variable Trust
and Shareholders of Putnam VT Mortgage Securities Fund:

Opinion on the Financial Statements

We have audited the accompanying statement of assets and liabilities, including the fund's portfolio, of Putnam VT Mortgage Securities Fund (one of the funds constituting Putnam Variable Trust, referred to hereafter as the "Fund") as of December 31, 2020, the related statement of operations for the year ended December 31, 2020, the statement of changes in net assets for each of the two years in the period ended December 31, 2020, including the related notes, and the financial highlights for each of the five years in the period ended December 31, 2020 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Fund as of December 31, 2020, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period ended December 31, 2020 and the financial highlights for each of the five years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

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

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our procedures included confirmation of securities owned as of December 31, 2020 by correspondence with the custodian, transfer agent and brokers; when replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

PricewaterhouseCoopers LLP
Boston, Massachusetts
February 8, 2021

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

The fund's portfolio 12/31/20

MORTGAGE-BACKED SECURITIES (78.4%)*	Principal amount	Value
Agency collateralized mortgage obligations (37.9%)		
Federal Home Loan Mortgage Corporation		
REMICs IFB Ser. 3408, Class EK, ((-4.024 x 1 Month US LIBOR) + 25.79%), 25.155%, 4/15/37	\$18,624	\$34,454
REMICs IFB Ser. 3072, Class SM, ((-3.667 x 1 Month US LIBOR) + 23.80%), 23.215%, 11/15/35	25,213	44,878
REMICs IFB Ser. 3065, Class DC, ((-3 x 1 Month US LIBOR) + 19.86%), 19.384%, 3/15/35	125,351	175,492
REMICs IFB Ser. 2990, Class LB, ((-2.556 x 1 Month US LIBOR) + 16.95%), 16.54%, 6/15/34	15,005	18,306
REMICs IFB Ser. 4136, Class ES, IO, ((-1 x 1 Month US LIBOR) + 6.25%), 6.091%, 11/15/42	138,659	17,694
REMICs IFB Ser. 4436, Class SC, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 5.991%, 2/15/45	583,077	114,596
REMICs IFB Ser. 5003, Class DS, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.952%, 8/25/50	1,159,620	201,324
REMICs Ser. 4122, Class TI, IO, 4.50%, 10/15/42	166,126	20,688
REMICs Ser. 4018, Class DI, IO, 4.50%, 7/15/41	174,330	14,144
REMICs Ser. 4953, Class AI, IO, 4.00%, 2/25/50	1,720,060	211,413
REMICs Ser. 4546, Class PI, IO, 4.00%, 12/15/45	351,874	32,378
REMICs Ser. 4530, Class HI, IO, 4.00%, 11/15/45	151,713	13,529
REMICs Ser. 4500, Class GI, IO, 4.00%, 8/15/45	232,083	28,031
REMICs Ser. 4425, IO, 4.00%, 1/15/45	233,261	26,170
REMICs Ser. 4425, Class EI, IO, 4.00%, 1/15/45	354,728	37,566
REMICs Ser. 4452, Class QI, IO, 4.00%, 11/15/44	255,829	40,997
REMICs Ser. 4213, Class GI, IO, 4.00%, 11/15/41	460,910	27,446
REMICs Ser. 4019, Class JI, IO, 4.00%, 5/15/41	291,750	19,716
REMICs Ser. 3996, Class IK, IO, 4.00%, 3/15/39	38,158	35
REMICs Ser. 4621, Class QI, IO, 3.50%, 10/15/46	465,884	38,925
REMICs Ser. 4165, Class AI, IO, 3.50%, 2/15/43	206,439	23,570
REMICs Ser. 4136, Class IQ, IO, 3.50%, 11/15/42	340,862	41,025
REMICs Ser. 4199, Class CI, IO, 3.50%, 12/15/37	42,430	284
Strips Ser. 304, Class C37, IO, 3.50%, 12/15/27	157,512	9,927
REMICs Ser. 4150, Class DI, IO, 3.00%, 1/15/43	251,041	22,594
REMICs Ser. 4141, Class PI, IO, 3.00%, 12/15/42	243,791	25,078
REMICs Ser. 4158, Class TI, IO, 3.00%, 12/15/42	525,543	41,224
REMICs Ser. 4165, Class TI, IO, 3.00%, 12/15/42	563,984	48,824
REMICs Ser. 4171, Class NI, IO, 3.00%, 6/15/42	359,610	27,752
REMICs Ser. 4183, Class MI, IO, 3.00%, 2/15/42	176,691	11,061
REMICs Ser. 4201, Class JI, IO, 3.00%, 12/15/41	217,038	9,715
REMICs Ser. 3835, Class FO, PO, zero %, 4/15/41	317,395	301,030
REMICs Ser. 3391, PO, zero %, 4/15/37	4,282	4,004
REMICs Ser. 3300, PO, zero %, 2/15/37	1,677	1,568
REMICs Ser. 3326, Class WF, zero %, 10/15/35	1,163	1,056
Strips Ser. 315, PO, zero %, 9/15/43	685,443	633,676
Federal National Mortgage Association		
REMICs IFB Ser. 06-62, Class PS, ((-6 x 1 Month US LIBOR) + 39.90%), 39.012%, 7/25/36	13,831	26,556
REMICs IFB Ser. 06-8, Class HP, ((-3.667 x 1 Month US LIBOR) + 24.57%), 24.024%, 3/25/36	24,496	43,329
REMICs IFB Ser. 07-53, Class SP, ((-3.667 x 1 Month US LIBOR) + 24.20%), 23.657%, 6/25/37	26,355	46,385
REMICs IFB Ser. 08-24, Class SP, ((-3.667 x 1 Month US LIBOR) + 23.28%), 22.741%, 2/25/38	96,309	132,943
REMICs IFB Ser. 05-122, Class SE, ((-3.5 x 1 Month US LIBOR) + 23.10%), 22.582%, 11/25/35	21,270	31,055
REMICs IFB Ser. 05-75, Class GS, ((-3 x 1 Month US LIBOR) + 20.25%), 19.806%, 8/25/35	18,031	25,145
REMICs IFB Ser. 05-106, Class JC, ((-3.101 x 1 Month US LIBOR) + 20.12%), 19.665%, 12/25/35	30,735	44,565
REMICs IFB Ser. 05-83, Class QP, ((-2.6 x 1 Month US LIBOR) + 17.39%), 17.009%, 11/25/34	7,032	8,438

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Federal National Mortgage Association		
REMICs IFB Ser. 11-4, Class CS, ((-2 x 1 Month US LIBOR) + 12.90%), 12.604%, 5/25/40	\$51,335	\$62,629
REMICs IFB Ser. 11-123, Class KS, IO, ((-1 x 1 Month US LIBOR) + 6.60%), 6.452%, 10/25/41	44,575	5,591
REMICs IFB Ser. 18-47, Class SA, IO, ((-1 x 1 Month US LIBOR) + 6.25%), 6.102%, 7/25/48	488,853	105,534
REMICs IFB Ser. 18-36, Class SD, IO, ((-1 x 1 Month US LIBOR) + 6.25%), 6.102%, 6/25/48	1,333,485	278,935
REMICs IFB Ser. 18-20, Class SB, IO, ((-1 x 1 Month US LIBOR) + 6.25%), 6.102%, 3/25/48	659,085	117,449
REMICs IFB Ser. 17-104, Class SL, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 6.002%, 1/25/48	1,122,965	198,218
REMICs IFB Ser. 16-81, Class SA, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 6.002%, 11/25/46	2,108,660	451,152
REMICs Ser. 15-58, Class KI, IO, 6.00%, 3/25/37	528,489	107,012
REMICs IFB Ser. 16-83, Class BS, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.952%, 11/25/46	1,465,566	328,456
REMICs IFB Ser. 16-85, Class SL, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.952%, 11/25/46	2,153,408	425,298
REMICs IFB Ser. 16-50, Class SM, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.952%, 8/25/46	985,061	201,055
REMICs IFB Ser. 19-45, Class SD, IO, ((-1 x 1 Month US LIBOR) + 6.05%), 5.902%, 8/25/49	894,355	150,375
REMICs IFB Ser. 16-8, Class SA, IO, ((-1 x 1 Month US LIBOR) + 6.05%), 5.902%, 3/25/46	1,568,062	270,023
REMICs IFB Ser. 19-71, Class CS, IO, ((-1 x 1 Month US LIBOR) + 6.00%), 5.852%, 11/25/49	89,564	23,869
REMICs Ser. 16-3, Class MI, IO, 5.50%, 2/25/46	333,220	61,879
REMICs Ser. 15-86, Class MI, IO, 5.50%, 11/25/45	450,448	85,621
REMICs Ser. 10-109, Class IM, IO, 5.50%, 9/25/40	951,876	160,464
REMICs Ser. 18-51, Class BI, IO, 5.50%, 7/25/38	675,610	93,076
REMICs Ser. 17-19, Class IH, IO, 5.00%, 3/25/47	526,258	91,785
REMICs Ser. 12-151, Class IM, IO, 5.00%, 4/25/42	531,495	70,857
REMICs Ser. 20-31, IO, 4.50%, 5/25/50	2,373,790	331,920
REMICs Ser. 17-66, IO, 4.50%, 9/25/47	810,331	127,494
REMICs Ser. 17-32, Class IP, IO, 4.50%, 5/25/47	802,184	135,317
REMICs Ser. 15-83, IO, 4.00%, 10/25/43	506,087	49,179
REMICs Ser. 12-118, Class PI, IO, 4.00%, 6/25/42	470,689	46,385
REMICs Ser. 12-62, Class MI, IO, 4.00%, 3/25/41	160,006	10,400
REMICs Ser. 12-104, Class HI, IO, 4.00%, 9/25/27	309,447	22,939
REMICs Ser. 16-70, Class QI, IO, 3.50%, 10/25/46	1,065,297	88,015
REMICs Ser. 15-10, Class AI, IO, 3.50%, 8/25/43	310,900	19,584
REMICs Ser. 12-124, Class JI, IO, 3.50%, 11/25/42	89,831	7,260
REMICs Ser. 13-22, Class PI, IO, 3.50%, 10/25/42	334,783	27,389
REMICs Ser. 12-114, Class NI, IO, 3.50%, 3/25/41	441,315	24,503
REMICs Ser. 13-55, Class IK, IO, 3.00%, 4/25/43	199,424	18,150
REMICs Ser. 13-6, Class JI, IO, 3.00%, 2/25/43	433,578	36,312
REMICs Ser. 12-151, Class PI, IO, 3.00%, 1/25/43	190,503	18,241
REMICs Ser. 12-145, Class TI, IO, 3.00%, 11/25/42	103,945	5,079
REMICs Ser. 13-35, Class IP, IO, 3.00%, 6/25/42	156,219	7,206
REMICs Ser. 13-55, Class PI, IO, 3.00%, 5/25/42	214,146	9,492
REMICs Ser. 13-53, Class JI, IO, 3.00%, 12/25/41	237,579	14,020
REMICs Ser. 13-23, Class PI, IO, 3.00%, 10/25/41	116,431	2,773
REMICs Ser. 13-30, Class IP, IO, 3.00%, 10/25/41	171,907	4,585
REMICs Ser. 13-23, Class LI, IO, 3.00%, 6/25/41	97,855	3,062
REMICs Ser. 14-28, Class AI, IO, 3.00%, 3/25/40	269,755	7,780
Trust FRB Ser. 03-W8, Class 3F2, (1 Month US LIBOR + 0.35%), 0.498%, 5/25/42	2,704	2,717
REMICs FRB Ser. 07-95, Class A3, (1 Month US LIBOR + 0.25%), 0.40%, 8/27/36	1,868,618	1,674,349
REMICs Ser. 08-53, Class DO, PO, zero %, 7/25/38	23,817	23,126
REMICs Ser. 07-44, Class CO, PO, zero %, 5/25/37	8,936	8,132

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Government National Mortgage Association		
IFB Ser. 13-182, Class SP, IO, ((-1 x 1 Month US LIBOR) + 6.70%), 6.548%, 12/20/43	\$225,667	\$48,925
IFB Ser. 11-156, Class SK, IO, ((-1 x 1 Month US LIBOR) + 6.60%), 6.448%, 4/20/38	613,883	151,495
IFB Ser. 18-89, Class LS, IO, ((-1 x 1 Month US LIBOR) + 6.20%), 6.048%, 6/20/48	543,024	83,075
IFB Ser. 13-87, Class SA, IO, ((-1 x 1 Month US LIBOR) + 6.20%), 6.048%, 6/20/43	1,074,561	215,611
Ser. 16-75, Class LI, IO, 6.00%, 1/20/40	305,113	63,786
IFB Ser. 19-56, Class SK, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 5.998%, 5/20/49	1,434,642	199,553
IFB Ser. 19-35, Class SE, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 5.997%, 1/16/44	582,859	115,083
IFB Ser. 19-158, Class AS, IO, ((-1 x 1 Month US LIBOR) + 6.15%), 5.997%, 9/16/43	997,304	192,934
IFB Ser. 19-100, Class JS, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.948%, 8/20/49	752,281	105,587
IFB Ser. 18-148, Class GS, IO, ((-1 x 1 Month US LIBOR) + 6.10%), 5.947%, 2/16/46	552,657	112,939
IFB Ser. 20-15, Class CS, IO, ((-1 x 1 Month US LIBOR) + 6.05%), 5.898%, 2/20/50	71,841	8,678
IFB Ser. 20-7, Class SK, IO, ((-1 x 1 Month US LIBOR) + 6.05%), 5.898%, 1/20/50	1,038,559	178,249
IFB Ser. 19-125, Class SG, IO, ((-1 x 1 Month US LIBOR) + 6.05%), 5.898%, 10/20/49	841,523	235,901
IFB Ser. 19-121, Class SD, IO, ((-1 x 1 Month US LIBOR) + 6.00%), 5.848%, 10/20/49	332,107	93,764
Ser. 14-137, Class ID, IO, 5.50%, 9/16/44	338,935	68,357
Ser. 15-89, Class LI, IO, 5.00%, 12/20/44	510,249	94,059
Ser. 14-133, Class IP, IO, 5.00%, 9/16/44	241,103	42,825
Ser. 14-76, IO, 5.00%, 5/20/44	289,955	48,313
Ser. 13-51, Class QI, IO, 5.00%, 2/20/43	212,270	30,219
Ser. 13-3, Class IT, IO, 5.00%, 1/20/43	122,313	21,711
Ser. 13-6, Class OI, IO, 5.00%, 1/20/43	92,043	16,938
Ser. 10-35, Class UI, IO, 5.00%, 3/20/40	134,109	24,147
Ser. 10-9, Class UI, IO, 5.00%, 1/20/40	438,722	82,673
Ser. 09-121, Class UI, IO, 5.00%, 12/20/39	343,827	62,535
Ser. 18-1, IO, 4.50%, 1/20/48	564,705	81,927
Ser. 18-127, Class IB, IO, 4.50%, 6/20/45	79,950	6,809
Ser. 13-34, Class HI, IO, 4.50%, 3/20/43	317,088	47,844
Ser. 13-39, Class IJ, IO, 4.50%, 3/20/43	897,842	144,190
Ser. 12-129, IO, 4.50%, 11/16/42	276,828	50,543
Ser. 12-91, Class IN, IO, 4.50%, 5/20/42	485,336	80,680
Ser. 10-35, Class AI, IO, 4.50%, 3/20/40	304,153	26,807
Ser. 10-35, Class DI, IO, 4.50%, 3/20/40	187,909	30,103
Ser. 10-35, Class QI, IO, 4.50%, 3/20/40	110,861	17,819
Ser. 10-9, Class QI, IO, 4.50%, 1/20/40	89,672	13,792
Ser. 09-121, Class BI, IO, 4.50%, 12/16/39	111,647	20,463
Ser. 09-121, Class CI, IO, 4.50%, 12/16/39	433,591	75,206
Ser. 16-69, IO, 4.00%, 5/20/46	465,970	58,265
Ser. 15-53, Class MI, IO, 4.00%, 4/16/45	315,357	56,764
Ser. 14-100, Class NI, IO, 4.00%, 6/20/43	420,595	28,780
Ser. 13-67, Class IP, IO, 4.00%, 4/16/43	470,258	80,038
Ser. 13-165, Class IL, IO, 4.00%, 3/20/43	100,752	13,273
Ser. 12-56, Class IB, IO, 4.00%, 4/20/42	292,260	42,764
Ser. 12-38, Class MI, IO, 4.00%, 3/20/42	1,061,788	177,191
Ser. 12-47, Class CI, IO, 4.00%, 3/20/42	130,667	18,002
Ser. 14-104, IO, 4.00%, 3/20/42	329,101	38,034
Ser. 14-4, Class IK, IO, 4.00%, 7/20/39	71,590	1,749
Ser. 11-71, Class IK, IO, 4.00%, 4/16/39	88,070	2,071
Ser. 10-114, Class MI, IO, 4.00%, 3/20/39	37,951	263

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Government National Mortgage Association		
Ser. 14-182, Class BI, IO, 4.00%, 1/20/39	\$453,194	\$50,155
Ser. 20-175, Class JI, IO, 3.50%, 11/20/50	2,205,506	323,674
Ser. 16-156, Class PI, IO, 3.50%, 11/20/46	167,392	3,984
Ser. 18-127, Class IE, IO, 3.50%, 1/20/46	262,770	18,483
Ser. 13-79, Class PI, IO, 3.50%, 4/20/43	205,247	19,201
Ser. 15-168, Class IG, IO, 3.50%, 3/20/43	281,218	23,843
Ser. 13-37, Class JI, IO, 3.50%, 1/20/43	139,787	13,034
Ser. 13-27, Class PI, IO, 3.50%, 12/20/42	69,102	6,481
Ser. 12-136, IO, 3.50%, 11/20/42	387,923	54,616
Ser. 18-127, Class IA, IO, 3.50%, 4/20/42	608,082	39,379
Ser. 14-102, Class IG, IO, 3.50%, 3/16/41	107,265	6,473
Ser. 15-52, Class KI, IO, 3.50%, 11/20/40	333,081	21,650
Ser. 15-99, Class TI, IO, 3.50%, 4/20/39	185,382	1,849
Ser. 15-24, Class AI, IO, 3.50%, 12/20/37	292,017	10,895
Ser. 17-H03, Class KI, IO, 3.484%, 1/20/67	1,372,350	163,015
Ser. 16-H06, Class AI, IO, 3.231%, 2/20/66	663,583	54,287
Ser. 16-H03, Class AI, IO, 3.189%, 1/20/66	1,324,029	98,182
Ser. 15-H10, Class HI, IO, 3.102%, 4/20/65	1,961,415	148,087
Ser. 14-160, Class IB, IO, 3.00%, 11/20/40	304,017	5,756
Ser. 14-141, Class CI, IO, 3.00%, 3/20/40	107,760	2,963
Ser. 14-174, Class AI, IO, 3.00%, 11/16/29	331,467	24,860
Ser. 16-H18, Class QI, IO, 2.937%, 6/20/66	1,162,480	116,182
Ser. 16-H24, Class KI, IO, 2.881%, 11/20/66	673,733	71,466
Ser. 16-H04, Class KI, IO, 2.808%, 2/20/66	1,378,560	83,877
Ser. 16-H10, Class AI, IO, 2.776%, 4/20/66	1,160,349	69,608
Ser. 16-H13, Class IK, IO, 2.637%, 6/20/66	1,171,570	140,938
Ser. 15-H13, Class AI, IO, 2.633%, 6/20/65	1,118,119	89,216
Ser. 15-H22, Class GI, IO, 2.599%, 9/20/65	1,219,268	124,000
Ser. 17-H08, Class GI, IO, 2.583%, 2/20/67	850,729	106,395
Ser. 20-138, Class IB, IO, 2.50%, 9/20/50	1,654,251	181,568
Ser. 16-H17, Class DI, IO, 2.467%, 7/20/66	1,196,112	101,709
FRB Ser. 15-H16, Class XI, IO, 2.464%, 7/20/65	695,470	64,261
Ser. 17-H14, Class LI, IO, 2.439%, 6/20/67	708,754	73,534
Ser. 17-H08, Class EI, IO, 2.386%, 2/20/67	1,154,710	116,728
Ser. 16-H04, Class HI, IO, 2.383%, 7/20/65	777,297	48,426
Ser. 16-H23, Class NI, IO, 2.371%, 10/20/66	1,683,406	154,200
Ser. 17-H04, Class BI, IO, 2.337%, 2/20/67	849,197	88,304
Ser. 16-H27, Class GI, IO, 2.334%, 12/20/66	1,390,111	159,907
Ser. 16-H07, Class PI, IO, 2.281%, 3/20/66	2,111,797	215,306
Ser. 15-H04, Class AI, IO, 2.267%, 12/20/64	941,943	63,514
Ser. 17-H14, Class JI, IO, 2.26%, 6/20/67	521,303	64,362
Ser. 17-H08, Class NI, IO, 2.244%, 3/20/67	841,564	75,741
Ser. 17-H20, Class AI, IO, 2.239%, 10/20/67	2,091,191	235,912
Ser. 16-H24, Class JI, IO, 2.198%, 11/20/66	520,096	51,958
Ser. 15-H20, Class CI, IO, 2.198%, 8/20/65	1,271,042	118,079
Ser. 16-H06, Class DI, IO, 2.187%, 7/20/65	1,219,748	80,335
Ser. 17-H09, IO, 2.185%, 4/20/67	812,861	64,981
Ser. 17-H10, Class MI, IO, 2.153%, 4/20/67	956,453	73,551
Ser. 16-H24, IO, 2.146%, 9/20/66	841,277	88,656
Ser. 17-H06, Class MI, IO, 2.128%, 2/20/67	1,446,823	131,947
Ser. 16-H06, Class HI, IO, 2.078%, 2/20/66	1,032,246	75,906
Ser. 15-H24, Class HI, IO, 2.045%, 9/20/65	974,824	50,090
Ser. 18-H05, Class ID, IO, 2.019%, 3/20/68	490,798	51,178
Ser. 18-H01, Class XI, IO, 1.97%, 1/20/68	1,097,596	136,911
Ser. 15-H25, Class BI, IO, 1.942%, 10/20/65	837,716	71,960
Ser. 15-H22, Class AI, IO, 1.941%, 9/20/65	1,417,514	122,190
Ser. 17-H16, Class HI, IO, 1.909%, 8/20/67	781,713	61,261
Ser. 15-H23, Class TI, IO, 1.906%, 9/20/65	908,645	79,143
Ser. 14-H25, Class BI, IO, 1.692%, 12/20/64	956,572	63,583
Ser. 17-H25, Class CI, IO, 1.67%, 12/20/67	1,501,647	178,935

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Agency collateralized mortgage obligations cont.		
Government National Mortgage Association		
Ser. 18-H02, Class IM, IO, 1.652%, 2/20/68	\$771,486	\$ 91,730
Ser. 18-H02, IO, 1.651%, 1/20/68	380,662	36,463
Ser. 14-H21, Class AI, IO, 1.637%, 10/20/64	1,280,903	97,319
Ser. 17-H06, Class EI, IO, 1.589%, 2/20/67	540,962	31,615
Ser. 14-H18, Class CI, IO, 1.582%, 9/20/64	869,821	65,428
Ser. 16-H08, Class GI, IO, 1.43%, 4/20/66	770,441	37,744
Ser. 17-H25, Class AI, IO, 1.358%, 12/20/67	450,362	44,535
FRB Ser. 11-H07, Class FI, IO, 1.238%, 2/20/61 W	2,269,515	58,327
Ser. 17-H25, IO, 0.573%, 11/20/67	884,613	88,185
Ser. 10-151, Class KO, PO, zero %, 6/16/37	20,239	18,797
Ser. 06-36, Class OD, PO, zero %, 7/16/36	905	815
	17,711,650	
Commercial mortgage-backed securities (18.9%)		
Bank FRB Ser. 20-BN25, Class C, 3.354%, 1/15/63 W	114,000	115,451
Bank 144A Ser. 17-BNK9, Class D, 2.80%, 11/15/54	101,000	79,925
Barclays Commercial Mortgage Trust 144A		
Ser. 19-C4, Class E, 3.25%, 8/15/52	111,000	87,086
Bear Stearns Commercial Mortgage Securities Trust		
FRB Ser. 07-T26, Class AJ, 5.432%, 1/12/45 W	71,000	55,735
Benchmark Mortgage Trust FRB Ser. 18-B1, Class C, 4.115%, 1/15/51 W		
	47,000	50,255
CD Commercial Mortgage Trust FRB Ser. 17-CD4, Class C, 4.349%, 5/10/50 W		
	77,000	82,612
Citigroup Commercial Mortgage Trust Ser. 13-GC11, Class C, 4.134%, 4/10/46 W		
	70,000	72,196
COMM Mortgage Trust		
FRB Ser. 12-CR1, Class C, 5.319%, 5/15/45 W	68,000	53,837
FRB Ser. 14-UBS2, Class C, 4.96%, 3/10/47 W	61,000	63,769
FRB Ser. 14-CR16, Class C, 4.928%, 4/10/47 W	83,000	87,609
FRB Ser. 18-COR3, Class C, 4.561%, 5/10/51 W	67,000	69,915
FRB Ser. 15-CR23, Class C, 4.291%, 5/10/48 W	72,000	75,326
Ser. 13-LC6, Class C, 4.242%, 1/10/46 W	117,000	118,170
COMM Mortgage Trust 144A		
FRB Ser. 13-LC13, Class D, 5.287%, 8/10/46 W	101,000	86,452
FRB Ser. 14-CR17, Class D, 4.847%, 5/10/47 W	228,000	209,831
FRB Ser. 14-CR17, Class E, 4.847%, 5/10/47 W	124,000	95,480
FRB Ser. 14-UBS3, Class D, 4.768%, 6/10/47 W	104,000	103,694
FRB Ser. 13-CR6, Class D, 4.09%, 3/10/46 W	160,000	133,383
FRB Ser. 18-COR3, Class D, 2.811%, 5/10/51 W	88,000	69,176
CSAIL Commercial Mortgage Trust		
Ser. 19-C15, Class B, 4.476%, 3/15/52	112,000	128,215
FRB Ser. 15-C1, Class C, 4.264%, 4/15/50 W	124,000	118,855
CSAIL Commercial Mortgage Trust 144A		
FRB Ser. 18-C14, Class D, 4.891%, 11/15/51 W	73,000	68,193
Ser. 20-C19, Class D, 2.50%, 3/15/53	63,000	55,640
DBUBS Mortgage Trust 144A		
FRB Ser. 11-LC2A, Class D, 5.487%, 7/10/44 W	103,000	98,444
FRB Ser. 11-LC3A, Class D, 5.335%, 8/10/44 W	167,000	157,582
FREM Mortgage Trust 144A		
FRB Ser. 19-KF65, Class B, (1 Month US LIBOR + 2.40%), 2.553%, 7/25/29	87,000	84,547
FRB Ser. 19-KF66, Class B, (1 Month US LIBOR + 2.40%), 2.553%, 7/25/29	83,955	82,854
GS Mortgage Securities Corp., II 144A		
FRB Ser. 13-GC10, Class D, 4.402%, 2/10/46 W	154,000	134,074
Ser. 13-GC10, Class C, 4.285%, 2/10/46 W	49,000	49,778
GS Mortgage Securities Trust		
FRB Ser. 14-GC18, Class C, 4.989%, 1/10/47 W	155,000	127,875
FRB Ser. 14-GC20, Class C, 4.962%, 4/10/47 W	62,000	58,280

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Commercial mortgage-backed securities cont.		
GS Mortgage Securities Trust		
FRB Ser. 14-GC22, Class C, 4.692%, 6/10/47 W	\$85,000	\$83,270
FRB Ser. 15-GC30, Class C, 4.077%, 5/10/50 W	78,000	82,820
GS Mortgage Securities Trust 144A		
FRB Ser. 12-GC6, Class C, 5.651%, 1/10/45 W	62,000	56,420
FRB Ser. 14-GC24, Class D, 4.532%, 9/10/47 W	329,000	125,020
Ser. 12-GCJ9, Class C, 4.448%, 11/10/45 W	139,000	142,295
FRB Ser. 13-GC13, Class D, 4.084%, 7/10/46 W	105,000	79,665
JPMBB Commercial Mortgage Securities Trust		
FRB Ser. 14-C18, Class C, 4.794%, 2/15/47 W	110,000	102,707
FRB Ser. 13-C14, Class C, 4.702%, 8/15/46 W	136,000	101,479
FRB Ser. 14-C22, Class C, 4.554%, 9/15/47 W	79,000	68,105
FRB Ser. 13-C12, Class C, 4.099%, 7/15/45 W	97,000	95,738
JPMBB Commercial Mortgage Securities Trust 144A		
FRB Ser. C14, Class D, 4.702%, 8/15/46 W	229,000	143,313
FRB Ser. 14-C25, Class D, 3.948%, 11/15/47 W	139,000	99,392
JPMDB Commercial Mortgage Securities Trust		
Ser. 17-C5, Class C, 4.512%, 3/15/50 W	88,000	85,028
FRB Ser. 17-C7, Class C, 4.179%, 10/15/50 W	93,000	100,440
JPMorgan Chase Commercial Mortgage Securities Trust		
Ser. 06-LDP9, Class AMS, 5.337%, 5/15/47	170,066	154,239
FRB Ser. 13-C16, Class C, 5.027%, 12/15/46 W	55,000	57,993
FRB Ser. 12-CBX, Class B, 4.922%, 6/15/45 W	148,000	140,892
FRB Ser. 13-LC11, Class D, 4.167%, 4/15/46 W	168,000	128,415
Ser. 13-LC11, Class B, 3.499%, 4/15/46	49,000	48,305
JPMorgan Chase Commercial Mortgage Securities Trust 144A		
FRB Ser. 11-C3, Class D, 5.696%, 2/15/46 W	245,000	136,372
FRB Ser. 10-C2, Class D, 5.655%, 11/15/43 W	131,000	83,577
FRB Ser. 12-C8, Class C, 4.622%, 10/15/45 W	200,000	165,777
ML-CFC Commercial Mortgage Trust FRB Ser. 06-4, Class C, 5.324%, 12/12/49 W		
	117,304	70,384
Morgan Stanley Bank of America Merrill Lynch Trust		
FRB Ser. 14-C14, Class C, 5.05%, 2/15/47 W	46,000	49,711
FRB Ser. 16-C29, Class C, 4.746%, 5/15/49 W	92,000	90,882
FRB Ser. 13-C9, Class C, 4.03%, 5/15/46 W	77,000	77,273
Morgan Stanley Bank of America Merrill Lynch Trust 144A		
FRB Ser. 14-C15, Class D, 4.906%, 4/15/47 W	180,000	177,747
FRB Ser. 15-C23, Class D, 4.145%, 7/15/50 W	122,000	119,471
FRB Ser. 13-C10, Class F, 4.082%, 7/15/46 W	141,000	44,765
Morgan Stanley Capital I Trust 144A		
FRB Ser. 11-C1, Class E, 5.563%, 9/15/47 W	118,000	117,569
FRB Ser. 11-C3, Class E, 5.244%, 7/15/49 W	148,000	111,033
FRB Ser. 19-L3, Class E, 2.50%, 11/15/52	69,000	53,889
Multifamily Connecticut Avenue Securities Trust 144A		
FRB Ser. 20-01, Class M10, 3.898%, 3/25/50	171,000	166,206
FRB Ser. 19-01, Class M10, 3.398%, 10/15/49	446,000	415,508
FRB Ser. 19-01, Class M7, 1.848%, 10/15/49	82,486	78,774
UBS Commercial Mortgage Trust Ser. 19-C17, Class C, 3.758%, 10/15/52 W		
	151,000	151,420
UBS Commercial Mortgage Trust 144A		
FRB Ser. 12-C1, Class D, 5.569%, 5/10/45 W	281,000	202,473
FRB Ser. 12-C1, Class E, 5.00%, 5/10/45 W	289,000	102,906
Ser. 18-C11, Class D, 3.00%, 6/15/51 W	74,000	57,382
Ser. 18-C10, Class D, 3.00%, 5/15/51	70,000	58,070

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Commercial mortgage-backed securities cont.		
UBS-Barclays Commercial Mortgage Trust 144A		
FRB Ser. 12-C4, Class D, 4.47%, 12/10/45 W	\$109,000	\$58,828
Ser. 13-C6, Class B, 3.875%, 4/10/46 W	138,000	137,752
UBS-Citigroup Commercial Mortgage Trust 144A		
FRB Ser. 11-C1, Class D, 6.05%, 1/10/45 W	181,000	159,943
Wells Fargo Commercial Mortgage Trust		
FRB Ser. 18-C48, Class C, 5.12%, 1/15/52 W	53,000	58,826
FRB Ser. 18-C46, Class C, 4.978%, 8/15/51 W	51,000	57,489
FRB Ser. 20-C57, Class C, 4.024%, 8/15/53 W	109,000	120,063
FRB Ser. 20-C56, Class C, 3.75%, 6/15/53 W	76,000	82,268
Ser. 16-BNK1, Class C, 3.071%, 8/15/49 W	87,000	73,665
Wells Fargo Commercial Mortgage Trust 144A		
Ser. 12-LC5, Class D, 4.758%, 10/15/45 W	71,000	68,160
WF-RBS Commercial Mortgage Trust 144A		
FRB Ser. 11-C5, Class C, 5.656%, 11/15/44 W	158,000	159,173
FRB Ser. 12-C6, Class C, 5.579%, 4/15/45 W	113,000	116,286
FRB Ser. 11-C4, Class C, 5.193%, 6/15/44 W	208,000	206,197
FRB Ser. 12-C9, Class D, 4.811%, 11/15/45 W	290,000	237,392
		8,837,006
Residential mortgage-backed securities (non-agency) (21.6%)		
American Home Mortgage Investment Trust FRB		
Ser. 07-1, Class GA1C, (1 Month US LIBOR + 0.19%), 0.338%, 5/25/47	498,797	253,072
Arroyo Mortgage Trust 144A Ser. 18-1, Class A3, 4.157%, 4/25/48 W	69,632	70,746
Bayview Financial Mortgage Pass-Through Trust		
Ser. 06-C, Class 1A3, 6.528%, 11/28/36	449,842	457,386
Bear Stearns Alt-A Trust FRB Ser. 05-8, Class 21A1, 2.951%, 10/25/35 W	157,048	139,977
Bellemeade Re, Ltd. 144A		
FRB Ser. 17-1, Class M2, (1 Month US LIBOR + 3.35%), 3.498%, 10/25/27 (Bermuda)	123,377	124,082
FRB Ser. 18-2A, Class M1C, (1 Month US LIBOR + 1.60%), 1.748%, 8/25/28 (Bermuda)	119,228	118,284
Carrington Mortgage Loan Trust FRB Ser. 06-NC2, Class A4, (1 Month US LIBOR + 0.24%), 0.388%, 6/25/36	490,000	466,362
Chevy Chase Funding, LLC Mortgage-Backed Certificates 144A FRB Ser. 06-4A, Class A2, (1 Month US LIBOR + 0.18%), 0.328%, 11/25/47	227,755	180,138
Citigroup Mortgage Loan Trust, Inc. FRB		
Ser. 07-AR5, Class 1A1A, 3.461%, 4/25/37 W	265,607	260,414
Countrywide Alternative Loan Trust		
FRB Ser. 06-OA19, Class A1, (1 Month US LIBOR + 0.18%), 0.332%, 2/20/47	243,274	185,980
FRB Ser. 07-OA6, Class A1A, (1 Month US LIBOR + 0.14%), 0.288%, 6/25/37	53,421	49,147
Countrywide Asset-Backed Certificates FRB		
Ser. 07-10, Class 1A1, (1 Month US LIBOR + 0.18%), 0.328%, 6/25/47	331,570	314,449
Eagle Re, Ltd. 144A FRB Ser. 20-1, Class B1, (1 Month US LIBOR + 2.85%), 2.998%, 1/25/30	182,000	168,599
Federal Home Loan Mortgage Corporation		
Structured Agency Credit Risk Debt Notes FRB		
Ser. 15-HQA1, Class B, (1 Month US LIBOR + 8.80%), 8.948%, 3/25/28	247,357	264,831
Structured Agency Credit Risk Debt FRN		
Ser. 16-DNA3, Class M3, (1 Month US LIBOR + 5.00%), 5.148%, 12/25/28	288,941	302,224
Structured Agency Credit Risk Debt FRN		
Ser. 14-HQ3, Class M3, (1 Month US LIBOR + 4.75%), 4.898%, 10/25/24	99,466	100,842

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Federal Home Loan Mortgage Corporation		
Seasoned Credit Risk Transfer Trust Ser. 19-3, Class M, 4.75%, 10/25/58 W	\$50,000	\$51,966
Structured Agency Credit Risk Debt FRN		
Ser. 14-DNA4, Class M3, (1 Month US LIBOR + 4.55%), 4.698%, 10/25/24	85,571	87,339
Structured Agency Credit Risk Debt FRN		
Ser. 15-HQ1, Class M3, (1 Month US LIBOR + 3.80%), 3.948%, 3/25/25	11,755	11,769
Structured Agency Credit Risk Debt FRN		
Ser. 17-DNA2, Class M2, (1 Month US LIBOR + 3.45%), 3.598%, 10/25/29	250,000	257,750
Structured Agency Credit Risk Debt FRN		
Ser. 17-HQA2, Class M2, (1 Month US LIBOR + 2.65%), 2.798%, 12/25/29	231,960	232,328
Structured Agency Credit Risk Debt FRN		
Ser. 18-HQA1, Class M2, (1 Month US LIBOR + 2.30%), 2.448%, 9/25/30	206,780	205,625
Federal Home Loan Mortgage Corporation 144A		
Structured Agency Credit Risk Trust FRB		
Ser. 19-HQA1, Class B2, (1 Month US LIBOR + 12.25%), 12.398%, 2/25/49	50,000	56,066
Structured Agency Credit Risk Trust REMICs FRB		
Ser. 20-DNA5, Class B2, (US 30 DAY AVERAGE SORF + 11.50%), 11.582%, 10/25/50	56,000	68,539
Structured Agency Credit Risk Trust FRB		
Ser. 18-HQA2, Class B2, (1 Month US LIBOR + 11.00%), 11.148%, 10/25/48	93,000	104,401
Structured Agency Credit Risk Trust FRB		
Ser. 19-DNA1, Class B2, (1 Month US LIBOR + 10.75%), 10.898%, 1/25/49	32,000	35,527
Structured Agency Credit Risk Trust FRB		
Ser. 19-DNA2, Class B2, (1 Month US LIBOR + 10.50%), 10.648%, 3/25/49	114,000	113,141
Structured Agency Credit Risk Trust REMICs FRB		
Ser. 20-DNA4, Class B2, (1 Month US LIBOR + 10.00%), 10.148%, 8/25/50	65,000	78,091
Structured Agency Credit Risk Trust REMICs FRB		
Ser. 20-HQA3, Class B2, (1 Month US LIBOR + 10.00%), 10.148%, 7/25/50	64,000	75,360
Structured Agency Credit Risk Trust FRB		
Ser. 19-DNA3, Class B2, (1 Month US LIBOR + 8.15%), 8.298%, 7/25/49	34,000	32,701
Structured Agency Credit Risk Trust FRB		
Ser. 18-DNA3, Class B2, (1 Month US LIBOR + 7.75%), 7.898%, 9/25/48	431,000	415,866
Structured Agency Credit Risk Trust FRB		
Ser. 19-DNA4, Class B2, (1 Month US LIBOR + 6.25%), 6.398%, 10/25/49	90,000	91,181
Structured Agency Credit Risk Trust FRB		
Ser. 19-FTR3, Class FTR3, (1 Month US LIBOR + 4.80%), 4.95%, 9/25/47	29,000	25,520
Structured Agency Credit Risk Trust FRB		
Ser. 19-DNA1, Class B1, (1 Month US LIBOR + 4.65%), 4.798%, 1/25/49	50,000	50,941
Seasoned Credit Risk Transfer Trust Ser. 19-2, Class M, 4.75%, 8/25/58 W	69,000	71,656
Seasoned Credit Risk Transfer Trust FRB		
Ser. 18-3, Class 3, 4.75%, 8/25/57 W	70,000	73,161
Structured Agency Credit Risk Trust FRB		
Ser. 18-HQA2, Class B1, (1 Month US LIBOR + 4.25%), 4.398%, 10/25/48	144,000	147,246
Structured Agency Credit Risk Trust REMICs FRB		
Ser. 20-HQA2, Class M2, (1 Month US LIBOR + 3.10%), 3.248%, 3/25/50	66,000	66,333

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Federal Home Loan Mortgage Corporation 144A		
Structured Agency Credit Risk Trust FRB Ser. 19-DNA1, Class M2, (1 Month US LIBOR + 2.65%), 2.798%, 1/25/49	\$67,389	\$66,834
Structured Agency Credit Risk Trust FRB Ser. 19-DNA2, Class M2, (1 Month US LIBOR + 2.45%), 2.598%, 3/25/49	94,416	93,944
Federal National Mortgage Association		
Connecticut Avenue Securities FRB Ser. 16-C02, Class 1B, (1 Month US LIBOR + 12.25%), 12.398%, 9/25/28	51,680	62,704
Connecticut Avenue Securities FRB Ser. 16-C03, Class 1B, (1 Month US LIBOR + 11.75%), 11.898%, 10/25/28	155,010	188,712
Connecticut Avenue Securities FRB Ser. 16-C05, Class 2B, (1 Month US LIBOR + 10.75%), 10.898%, 1/25/29	9,966	11,955
Connecticut Avenue Securities FRB Ser. 16-C02, Class 1M2, (1 Month US LIBOR + 6.00%), 6.148%, 9/25/28	65,291	68,953
Connecticut Avenue Securities FRB Ser. 15-C04, Class 1M2, (1 Month US LIBOR + 5.70%), 5.848%, 4/25/28	41,552	44,334
Connecticut Avenue Securities FRB Ser. 17-C02, Class 2B1, (1 Month US LIBOR + 5.50%), 5.648%, 9/25/29	44,000	46,567
Connecticut Avenue Securities FRB Ser. 16-C03, Class 1M2, (1 Month US LIBOR + 5.30%), 5.448%, 10/25/28	177,498	186,727
Connecticut Avenue Securities FRB Ser. 18-C04, Class 2B1, (1 Month US LIBOR + 4.50%), 4.648%, 12/25/30	371,000	379,637
Connecticut Avenue Securities FRB Ser. 17-C07, Class 2B1, (1 Month US LIBOR + 4.45%), 4.598%, 5/25/30	158,000	164,052
Connecticut Avenue Securities FRB Ser. 17-C06, Class 2B1, (1 Month US LIBOR + 4.45%), 4.598%, 2/25/30	60,000	61,500
Connecticut Avenue Securities FRB Ser. 16-C05, Class 2M2, (1 Month US LIBOR + 4.45%), 4.598%, 1/25/29	16,789	17,435
Connecticut Avenue Securities FRB Ser. 18-C05, Class 1B1, (1 Month US LIBOR + 4.25%), 4.398%, 1/25/31	90,000	91,754
Connecticut Avenue Securities FRB Ser. 17-C06, Class 1B1, (1 Month US LIBOR + 4.15%), 4.298%, 2/25/30	200,000	202,096
Connecticut Avenue Securities FRB Ser. 18-C06, Class 2B1, (1 Month US LIBOR + 4.10%), 4.248%, 3/25/31	59,000	59,772
Connecticut Avenue Securities FRB Ser. 17-C07, Class 1B1, (1 Month US LIBOR + 4.00%), 4.148%, 5/25/30	220,000	220,437
Connecticut Avenue Securities FRB Ser. 17-C05, Class 1B1, (1 Month US LIBOR + 3.60%), 3.748%, 1/25/30	92,000	92,000
Connecticut Avenue Securities FRB Ser. 18-C01, Class 1B1, (1 Month US LIBOR + 3.55%), 3.698%, 7/25/30	108,000	109,080
Connecticut Avenue Securities FRB Ser. 17-C01, Class 1M2, (1 Month US LIBOR + 3.55%), 3.698%, 7/25/29	137,204	141,145

MORTGAGE-BACKED SECURITIES (78.4%)* cont.	Principal amount	Value
Residential mortgage-backed securities (non-agency) cont.		
Federal National Mortgage Association		
Connecticut Avenue Securities FRB Ser. 17-C03, Class 1M2, (1 Month US LIBOR + 3.00%), 3.148%, 10/25/29	\$155,542	\$156,911
Connecticut Avenue Securities FRB Ser. 18-C05, Class 1M2, (1 Month US LIBOR + 2.35%), 2.498%, 1/25/31	66,129	66,253
Connecticut Avenue Securities FRB Ser. 18-C01, Class 1M2, (1 Month US LIBOR + 2.25%), 2.398%, 7/25/30	18,224	18,135
Federal National Mortgage Association 144A		
Connecticut Avenue Securities Trust FRB Ser. 19-R04, Class 2B1, (1 Month US LIBOR + 5.25%), 5.398%, 6/25/39	420,000	427,875
Connecticut Avenue Securities Trust FRB Ser. 19-R01, Class 2B1, (1 Month US LIBOR + 4.35%), 4.498%, 7/25/31	47,000	47,764
Connecticut Avenue Securities Trust FRB Ser. 19-R05, Class 1B1, (1 Month US LIBOR + 4.10%), 4.248%, 7/25/39	98,000	97,591
Connecticut Avenue Securities Trust FRB Ser. 20-SBT1, Class 1M2, (1 Month US LIBOR + 3.65%), 3.798%, 2/25/40	79,000	79,246
Connecticut Avenue Securities Trust FRB Ser. 20-R02, Class 2B1, (1 Month US LIBOR + 3.00%), 3.148%, 1/25/40	35,000	33,004
Connecticut Avenue Securities Trust FRB Ser. 19-R01, Class 2M2, (1 Month US LIBOR + 2.45%), 2.598%, 7/25/31	110,836	110,766
JPMorgan Alternative Loan Trust FRB Ser. 06-A6, Class 1A1, (1 Month US LIBOR + 0.16%), 0.468%, 11/25/36	110,980	100,594
Legacy Mortgage Asset Trust 144A FRB Ser. 19-GS2, Class A2, 4.25%, 1/25/59	100,000	99,800
Morgan Stanley ABS Capital I, Inc. Trust FRB Ser. 04-HE9, Class M2, (1 Month US LIBOR + 0.93%), 1.078%, 11/25/34	40,435	39,539
Morgan Stanley Re-REMIC Trust 144A FRB Ser. 10-R4, Class 4B, (1 Month US LIBOR + 0.23%), 0.891%, 2/26/37	103,567	93,968
Oaktown Re II, Ltd. 144A FRB Ser. 18-1A, Class M2, (1 Month US LIBOR + 2.85%), 2.998%, 7/25/28 (Bermuda)	220,000	212,706
Structured Asset Mortgage Investments II Trust FRB Ser. 06-AR7, Class A1BG, (1 Month US LIBOR + 0.12%), 0.268%, 8/25/36	45,134	40,832
Towd Point Mortgage Trust 144A Ser. 19-2, Class A2, 3.75%, 12/25/58 W	102,000	112,939
WaMu Mortgage Pass-Through Certificates Trust FRB Ser. 05-AR12, Class 1A8, 2.917%, 10/25/35 W	66,062	65,330
FRB Ser. 05-AR8, Class 2AC2, (1 Month US LIBOR + 0.92%), 1.068%, 7/25/45	90,743	87,484
Wells Fargo Home Equity Asset-Backed Securities Trust FRB Ser. 07-2, Class A3, (1 Month US LIBOR + 0.23%), 0.378%, 4/25/37	74,726	72,516
		10,081,931
Total mortgage-backed securities (cost \$37,904,076)		\$36,630,587

U.S. GOVERNMENT AND AGENCY			
MORTGAGE OBLIGATIONS (37.6%)*		Principal amount	Value
U.S. Government Guaranteed Mortgage Obligations (14.2%)			
Government National Mortgage Association			
Pass-Through Certificates			
6.50%, with due dates from 4/15/28 to 7/20/36	\$25,120		\$29,715
6.00%, with due dates from 4/15/28 to 11/20/38	66,916		78,125
5.50%, 4/20/38	95,381		111,328
5.00%, 3/20/50	24,746		28,026
4.70%, 8/20/67	101,317		116,179
4.50%, TBA, 1/1/51	2,000,000		2,146,250
4.50%, with due dates from 2/20/34 to 5/20/48	881,954		990,061
3.00%, TBA, 1/1/51	2,000,000		2,091,406
2.00%, TBA, 1/1/51	1,000,000		1,045,625
			6,636,715
U.S. Government Agency Mortgage Obligations (23.4%)			
Federal Home Loan Mortgage Corporation			
Pass-Through Certificates			
7.50%, with due dates from 9/1/30 to 7/1/31	9,361		10,940
7.00%, with due dates from 11/1/26 to 4/1/32	57,270		66,281
5.50%, 12/1/33	11,801		13,600
4.50%, with due dates from 7/1/44 to 8/1/44	125,026		140,384
4.00%, with due dates from 12/1/44 to 9/1/45	559,492		618,090
Federal National Mortgage Association			
Pass-Through Certificates			
7.50%, with due dates from 9/1/30 to 11/1/30	7,533		8,687
7.00%, with due dates from 12/1/28 to 12/1/35	250,297		293,054
6.50%, 9/1/36	6,955		8,291
6.00%, 1/1/38	71,034		85,268
5.50%, 1/1/38	304,969		352,099
5.00%, 2/1/39	8,309		9,591
4.50%, with due dates from 7/1/44 to 5/1/45	161,455		179,702
3.50%, 6/1/56	635,479		710,629
3.50%, 1/1/47	58,282		62,242
Uniform Mortgage-Backed Securities			
4.50%, TBA, 1/1/51	2,000,000		2,167,500
2.00%, TBA, 1/1/51	5,000,000		5,195,313
1.50%, TBA, 1/1/51	1,000,000		1,010,469
			10,932,140
Total U.S. government and agency mortgage obligations (cost \$17,337,742)			\$17,568,855
PURCHASED SWAP OPTIONS OUTSTANDING(6.6%)*			
Counterparty		Notional/	
Fixed right % to receive or (pay)/	Expiration	Contract	
Floating rate index/Maturity date	date/strike	amount	Value
Bank of America N.A.			
3.312/3 month USD-LIBOR-BBA/Nov-38	Nov-28/3.312	\$4,197,400	\$660,041
(3.312)/3 month USD-LIBOR-BBA/Nov-38	Nov-28/3.312	4,197,400	71,692
(1.315)/3 month USD-LIBOR-BBA/Jan-51	Jan-21/1.315	675,200	20,945
(1.185)/3 month USD-LIBOR-BBA/Dec-25	Dec-23/1.185	3,009,000	8,245
(1.1213)/3 month USD-LIBOR-BBA/Jan-31	Jan-21/1.1213	1,504,500	241
Barclays Bank PLC			
(0.418)/3 month USD-LIBOR-BBA/Jan-26			
(United Kingdom)	Jan-21/0.418	15,513,400	24,977

PURCHASED SWAP OPTIONS OUTSTANDING(6.6%)* <i>cont.</i>			
Counterparty		Notional/ Contract amount	
Fixed right % to receive or (pay)/ Floating rate index/Maturity date	Expiration date/strike		Value
Citibank, N.A.			
1.629/3 month USD- LIBOR-BBA/Jan-26	Jan-21/1.629	\$1,397,200	\$83,217
1.996/3 month USD- LIBOR-BBA/Jan-26	Jan-21/1.996	1,397,200	37,599
(1.3175)/3 month USD- LIBOR-BBA/Jan-51	Jan-21/1.3175	675,200	20,641
(1.232)/3 month USD- LIBOR-BBA/Jan-51	Jan-21/1.232	300,100	14,690
1.232/3 month USD- LIBOR-BBA/Jan-51	Jan-21/1.232	300,100	1,675
(1.996)/3 month USD- LIBOR-BBA/Jan-26	Jan-21/1.996	1,397,200	56
(1.629)/3 month USD- LIBOR-BBA/Jan-26	Jan-21/1.629	1,397,200	1
Goldman Sachs International			
(2.983)/3 month USD- LIBOR-BBA/May-52	May-22/2.983	1,045,200	5,195
(0.43)/3 month USD- LIBOR-BBA/Jan-26	Jan-21/0.43	3,470,200	3,713
0.43/3 month USD- LIBOR-BBA/Jan-26	Jan-21/0.43	3,470,200	3,505
JPMorgan Chase Bank N.A.			
(0.964)/3 month USD- LIBOR-BBA/Mar-31	Mar-21/0.964	17,228,900	180,214
1.101/3 month USD- LIBOR-BBA/Mar-31	Mar-21/1.101	1,323,900	26,385
Morgan Stanley & Co. International PLC			
2.7725/3 month USD- LIBOR-BBA/Feb-31	Feb-21/2.7725	3,267,200	584,208
2.8025/3 month USD- LIBOR-BBA/Apr-56	Apr-26/2.8025	1,376,200	450,788
3.00/3 month USD- LIBOR-BBA/Apr-72	Apr-47/3.00	790,100	267,228
3.00/3 month USD- LIBOR-BBA/Feb-73	Feb-48/3.00	790,100	261,397
2.75/3 month USD- LIBOR-BBA/May-73	May-48/2.75	790,100	223,432
1.613/3 month USD- LIBOR-BBA/Aug-34	Aug-24/1.613	951,100	49,980
(2.8025)/3 month USD- LIBOR-BBA/Apr-56	Apr-26/2.8025	1,376,200	48,195
(1.613)/3 month USD- LIBOR-BBA/Aug-34	Aug-24/1.613	951,100	35,942
(2.904)/3 month USD- LIBOR-BBA/May-51	May-21/2.904	447,900	143
(2.7725)/3 month USD- LIBOR-BBA/Feb-31	Feb-21/2.7725	3,267,200	3
Toronto-Dominion Bank			
(1.04)/3 month USD- LIBOR-BBA/Mar-55 (Canada)	Mar-25/1.04	105,000	20,617
Total purchased swap options outstanding (cost \$2,025,852)		\$3,104,965	

PURCHASED OPTIONS OUTSTANDING (0.9%)*		Expiration	Notional	Contract	
Counterparty	date/strike price	amount	amount	Value	
JPMorgan Chase Bank N.A.					
Government National Mortgage Association 30 yr 3.50% TBA commitments (Call)	Jan-21/\$105.34	\$7,000,000	\$7,000,000	\$45,941	
Government National Mortgage Association 30 yr 4.00% TBA commitments (Call)	Jan-21/106.41	6,000,000	6,000,000	12,690	
Uniform Mortgage-Backed Securities 30 yr 2.00% TBA commitments (Call)	Feb-21/103.31	14,000,000	14,000,000	111,328	
Uniform Mortgage-Backed Securities 30 yr 2.00% TBA commitments (Call)	Feb-21/103.34	7,000,000	7,000,000	53,837	
Uniform Mortgage-Backed Securities 30 yr 2.50% TBA commitments (Call)	Jan-21/104.50	10,000,000	10,000,000	94,760	
Uniform Mortgage-Backed Securities 30 yr 3.00% TBA commitments (Call)	Jan-21/104.53	26,000,000	26,000,000	70,460	
Uniform Mortgage-Backed Securities 30 yr 3.50% TBA commitments (Call)	Jan-21/105.56	22,000,000	22,000,000	42,174	
Uniform Mortgage-Backed Securities 30 yr 4.00% TBA commitments (Call)	Jan-21/106.59	5,000,000	5,000,000	10,575	
Total purchased options outstanding (cost \$154,375)				\$441,765	
ASSET-BACKED SECURITIES (2.8%)*		Principal amount		Value	
1Sharpe Mortgage Trust 144A FRB Ser. 20-1, Class NOTE, (BBA LIBOR USD 3 Month + 2.90%), 3.107%, 7/25/24			\$209,000	\$209,523	
Mello Warehouse Securitization Trust 144A FRB Ser. 20-1, Class A, (1 Month US LIBOR + 0.90%), 1.048%, 10/25/53			50,000	50,000	
FRB Ser. 20-2, Class A, (1 Month US LIBOR + 0.80%), 0.953%, 11/25/53			30,000	30,000	
FRB Ser. 19-1, Class A, (1 Month US LIBOR + 0.80%), 0.948%, 6/25/52			152,000	151,905	
Mortgage Repurchase Agreement Financing Trust FRB Ser. 20-4, Class A1, (1 Month US LIBOR + 1.35%), 1.499%, 4/23/23			100,000	100,004	
Mortgage Repurchase Agreement Financing Trust 144A FRB Ser. 20-5, Class A1, (1 Month US LIBOR + 1.00%), 1.149%, 8/10/23			73,000	73,365	
Station Place Securitization Trust 144A FRB Ser. 20-6, Class A, (1 Month US LIBOR + 1.75%), 1.893%, 9/7/21			159,000	159,000	
FRB Ser. 20-13, Class A, (1 Month US LIBOR + 1.50%), 1.643%, 10/10/21			139,000	139,000	
FRB Ser. 20-15, Class A, (1 Month US LIBOR + 1.37%), 1.513%, 12/10/21			138,000	138,000	
FRB Ser. 20-WL1, Class A, (1 Month US LIBOR + 1.15%), 1.298%, 6/25/51			129,000	129,000	
FRB Ser. 20-2, Class A, (1 Month US LIBOR + 0.83%), 0.978%, 3/26/21			130,000	130,000	
Total asset-backed securities (cost \$1,309,000)				\$1,309,797	

SHORT-TERM INVESTMENTS (20.3%)*	Principal amount	Value
Interest in \$82,600,000 joint tri-party repurchase agreement dated 12/31/2020 with HSBC Securities (USA), Inc. due 1/4/2021 — maturity value of \$4,000,031 for an effective yield of 0.070% (collateralized by various mortgage backed securities with a coupon rate of 3.5% and due dates ranging from 12/20/2042 to 9/20/2043, valued at \$84,252,656)		
U.S. Treasury Bills 0.088%, 2/9/21 # Δ \$	\$4,000,000	\$4,000,000
U.S. Treasury Bills 0.094%, 2/4/21 Δ	1,100,000	1,099,951
U.S. Treasury Bills 0.089%, 2/2/21 Δ	500,000	499,976
U.S. Treasury Bills 0.084%, 1/19/21 Δ	1,200,000	1,199,926
U.S. Treasury Bills 0.090%, 2/16/21 Δ \$	700,000	699,988
U.S. Treasury Bills 0.084%, 4/8/21 \$	600,000	599,950
U.S. Treasury Bills 0.084%, 4/8/21 \$	100,000	99,980
U.S. Treasury Bills 0.074%, 3/18/21 Δ \$	100,000	99,983
U.S. Treasury Bills 0.079%, 3/25/21 \$	1,200,000	1,199,830
U.S. Treasury Bills 0.079%, 3/25/21 \$	100,000	99,983
Total short-term investments (cost \$9,499,436)		\$9,499,584
Total investments (cost \$68,230,481)		\$68,555,553

Key to holding's abbreviations

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.
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
PO	Principal Only
TBA	To Be Announced Commitments

Notes to the fund's portfolio

Unless noted otherwise, the notes to the fund's portfolio are for the close of the fund's reporting period, which ran from January 1, 2020 through December 31, 2020 (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 \$46,747,229.

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 \$162,984 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 7).

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 \$4,905,458 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 7).

\$ 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 \$364,946 and is included in Investments in securities on the Statement of assets and liabilities (Notes 1 and 7).

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

At the close of the reporting period, the fund maintained liquid assets totaling \$32,629,614 to cover certain derivative contracts and delayed delivery securities.

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

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 12/31/20	Number of contracts	Notional amount	Value	Expiration date	Unrealized appreciation/ (depreciation)
U.S. Treasury Bond Ultra 30 yr (Long)	2	\$427,125	\$427,125	Mar-21	\$(8,309)
U.S. Treasury Note 2 yr (Short)	374	82,645,234	82,645,234	Mar-21	(79,732)
U.S. Treasury Note 5 yr (Short)	13	1,640,133	1,640,133	Mar-21	(3,694)
Unrealized appreciation					—
Unrealized (depreciation)					(91,735)
Total					\$(91,735)

WRITTEN SWAP OPTIONS OUTSTANDING at 12/31/20 (premiums \$2,976,092)

Counterparty	Fixed Obligation % to receive or (pay)/Floating rate index/Maturity date	Expiration date/strike	Notional/ Contract amount	Value
Bank of America N.A.				
1.5843/3 month USD-LIBOR-BBA/Jan-51	Jan-21/1.5843	\$571,700	\$326	
(0.00)/3 month USD-LIBOR-BBA/Jun-24	Jun-22/0.00	3,009,000	1,956	
1.525/3 month USD-LIBOR-BBA/Jan-51	Jan-21/1.525	1,350,400	8,602	
2.074/3 month USD-LIBOR-BBA/Dec-53	Dec-23/2.074	240,700	12,553	
3.195/3 month USD-LIBOR-BBA/Nov-55	Nov-25/3.195	1,981,700	40,724	
(3.195)/3 month USD-LIBOR-BBA/Nov-55	Nov-25/3.195	1,981,700	814,617	
Barclays Bank PLC				
(0.418)/3 month USD-LIBOR-BBA/Jan-26	Jan-21/0.418	15,513,400	14,272	
Citibank, N.A.				
1.805/3 month USD-LIBOR-BBA/Jan-31	Jan-21/1.805	1,397,200	1	
(1.242)/3 month USD-LIBOR-BBA/Apr-51	Apr-21/1.242	210,000	4,815	
1.5275/3 month USD-LIBOR-BBA/Jan-51	Jan-21/1.5275	1,350,400	8,399	
1.242/3 month USD-LIBOR-BBA/Apr-51	Apr-21/1.242	210,000	13,994	
1.865/3 month USD-LIBOR-BBA/Oct-39	Oct-29/1.865	721,000	40,773	
(1.865)/3 month USD-LIBOR-BBA/Oct-39	Oct-29/1.865	721,000	48,228	
(1.805)/3 month USD-LIBOR-BBA/Jan-31	Jan-21/1.805	1,397,200	120,215	
Goldman Sachs International				
2.823/3 month USD-LIBOR-BBA/May-27	May-22/2.823	4,180,800	878	
2.9425/3 month USD-LIBOR-BBA/Feb-34	Feb-24/2.9425	2,064,300	13,294	

WRITTEN SWAP OPTIONS OUTSTANDING at 12/31/20

(premiums \$2,976,092) *cont.*

Counterparty	Fixed Obligation % to receive or (pay)/Floating rate index/Maturity date	Expiration date/strike	Notional/ Contract amount	Value
Goldman Sachs International cont.				
(2.9425)/3 month USD-LIBOR-BBA/Feb-34	Feb-24/2.9425	\$2,064,300	\$316,932	
JPMorgan Chase Bank N.A.				
1.333/3 month USD-LIBOR-BBA/Jan-24	Jan-23/1.333	810,300	186	
3.229/3 month USD-LIBOR-BBA/Nov-33	Nov-23/3.229	2,042,400	8,190	
(1.333)/3 month USD-LIBOR-BBA/Jan-24	Jan-23/1.333	810,300	8,200	
(0.968)/3 month USD-LIBOR-BBA/Mar-35	Mar-25/0.968	320,000	8,310	
(0.7785)/3 month USD-LIBOR-BBA/Mar-31	Mar-21/0.7785	2,647,700	10,088	
(1.07)/3 month USD-LIBOR-BBA/Mar-32	Mar-27/1.07	574,100	10,299	
1.07/3 month USD-LIBOR-BBA/Mar-32	Mar-27/1.07	574,100	24,038	
0.968/3 month USD-LIBOR-BBA/Mar-35	Mar-25/0.968	320,000	24,819	
(0.964)/3 month USD-LIBOR-BBA/Mar-31	Mar-21/0.964	17,228,900	204,162	
(3.229)/3 month USD-LIBOR-BBA/Nov-33	Nov-23/3.229	2,042,400	370,165	
Morgan Stanley & Co. International PLC				
2.664/3 month USD-LIBOR-BBA/May-26	May-21/2.664	1,791,800	2	
3.01/3 month USD-LIBOR-BBA/Feb-36	Feb-26/3.01	891,000	11,993	
2.97/3 month USD-LIBOR-BBA/Feb-36	Feb-26/2.97	891,000	12,358	
1.512/3 month USD-LIBOR-BBA/Aug-32	Aug-22/1.512	951,100	16,834	
(1.512)/3 month USD-LIBOR-BBA/Aug-32	Aug-22/1.512	951,100	47,536	
2.7875/3 month USD-LIBOR-BBA/Apr-59	Apr-29/2.7875	1,238,600	61,509	
(2.97)/3 month USD-LIBOR-BBA/Feb-36	Feb-26/2.97	891,000	125,043	
(3.01)/3 month USD-LIBOR-BBA/Feb-36	Feb-26/3.01	891,000	127,662	
(2.75)/3 month USD-LIBOR-BBA/May-49	May-25/2.75	790,100	204,818	
(3.00)/3 month USD-LIBOR-BBA/Jan-49	Jan-24/3.00	790,100	255,542	
(3.00)/3 month USD-LIBOR-BBA/Apr-48	Apr-23/3.00	790,100	261,839	
(2.7875)/3 month USD-LIBOR-BBA/Apr-59	Apr-29/2.7875	1,238,600	407,598	
Toronto-Dominion Bank				
(1.17)/3 month USD-LIBOR-BBA/Mar-55	Mar-25/1.17	47,500	3,657	
1.05/3 month USD-LIBOR-BBA/Mar-27	Mar-25/1.05	1,385,000	11,883	
1.17/3 month USD-LIBOR-BBA/Mar-55	Mar-25/1.17	94,900	16,617	

WRITTEN SWAP OPTIONS OUTSTANDING at 12/31/20(premiums \$2,976,092) *cont.***Counterparty****Fixed Obligation % to receive or (pay)/Floating rate index/Maturity date****Expiration date/strike****Notional/Contract amount****Value****UBSAG**

1.9875/3 month

USD-LIBOR-BBA/Oct-36

Oct-26/1.9875

\$836,400

\$33,657

(1.9875)/3 month

USD-LIBOR-BBA/Oct-36

Oct-26/1.9875

836,400

59,872

Total**\$3,787,456****WRITTEN OPTIONS OUTSTANDING at 12/31/20 (premiums \$154,375)****Counterparty****Expiration date/strike price****Notional amount****Contract amount****Value****JPMorgan Chase Bank N.A.**

Government National

Mortgage Association

30 yr 3.50% TBA

commitments (Put)

Jan-21/\$105.34

\$7,000,000

\$7,000,000

\$7

Government National

Mortgage Association

30 yr 4.00% TBA

commitments (Put)

Jan-21/106.41

6,000,000

6,000,000

36

Uniform Mortgage-

Backed Securities

30 yr 2.00% TBA

commitments (Put)

Feb-21/103.31

14,000,000

14,000,000

48,454

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 12/31/20**Counterparty****Fixed right or obligation % to receive or (pay)/Floating rate index/Maturity date****Expiration date/strike****Contract amount****Premium receivable/(payable)****Unrealized appreciation/(depreciation)****Bank of America N.A.**

2.2275/3 month USD-LIBOR-BBA/May-24 (Purchased)

May-22/2.2275

\$4,806,000

\$(44,335)

\$139,326

(1.275)/3 month USD-LIBOR-BBA/Mar-50 (Purchased)

Mar-30/1.275

671,400

(87,450)

16,261

(0.765)/3 month USD-LIBOR-BBA/Sep-31 (Purchased)

Sep-21/0.765

391,200

(9,271)

4,554

(2.3075)/3 month USD-LIBOR-BBA/Jun-52 (Purchased)

Jun-22/2.3075

503,600

(11,394)

(2,040)

0.765/3 month USD-LIBOR-BBA/Sep-31 (Purchased)

Sep-21/0.765

391,200

(9,271)

(5,453)

1.275/3 month USD-LIBOR-BBA/Mar-50 (Purchased)

Mar-30/1.275

671,400

(87,450)

(29,468)

(2.2275)/3 month USD-LIBOR-BBA/May-24 (Purchased)

May-22/2.2275

4,806,000

(44,335)

(44,119)

2.3075/3 month USD-LIBOR-BBA/Jun-52 (Purchased)

Jun-22/2.3075

503,600

(236,781)

(119,842)

Citibank, N.A.

2.689/3 month USD-LIBOR-BBA/Nov-49 (Purchased)

Nov-24/2.689

237,000

(30,514)

31,286

(1.102)/3 month USD-LIBOR-BBA/Nov-32 (Purchased)

Nov-22/1.102

144,400

(4,588)

852

1.007/3 month USD-LIBOR-BBA/Jun-31 (Purchased)

Jun-21/1.007

300,900

(4,867)

265

(1.007)/3 month USD-LIBOR-BBA/Jun-31 (Purchased)

Jun-21/1.007

300,900

(4,867)

(373)

1.102/3 month USD-LIBOR-BBA/Nov-32 (Purchased)

Nov-22/1.102

144,400

(4,588)

(700)

(0.462)/3 month USD-LIBOR-BBA/Jun-26 (Purchased)

Jun-21/0.462

1,069,600

(10,362)

(3,305)

0.462/3 month USD-LIBOR-BBA/Jun-26 (Purchased)

Jun-21/0.462

1,069,600

(10,362)

(5,872)

(2.689)/3 month USD-LIBOR-BBA/Nov-49 (Purchased)

Nov-24/2.689

237,000

(30,514)

(23,762)

1.245/3 month USD-LIBOR-BBA/Aug-24 (Written)

Aug-22/1.245

3,364,200

30,782

29,639

(1.245)/3 month USD-LIBOR-BBA/Aug-24 (Written)

Aug-22/1.245

3,364,200

30,782

(28,999)

Goldman Sachs International

2.8175/3 month USD-LIBOR-BBA/Mar-47 (Purchased)

Mar-27/2.8175

233,300

(29,454)

23,913

1.727/3 month USD-LIBOR-BBA/Jan-55 (Purchased)

Jan-25/1.727

313,700

(28,766)

14,841

(1.727)/3 month USD-LIBOR-BBA/Jan-55 (Purchased)

Jan-25/1.727

313,700

(46,898)

(15,456)

(2.8175)/3 month USD-LIBOR-BBA/Mar-47 (Purchased)

Mar-27/2.8175

233,300

(29,454)

(20,920)

FORWARD PREMIUM SWAP OPTION CONTRACTS OUTSTANDING at 12/31/20 cont.

Counterparty Fixed right or obligation % to receive or (pay)/ Floating rate index/Maturity date	Expiration date/strike	Contract amount	Premium receivable/ (payable)	Unrealized appreciation/ (depreciation)
JPMorgan Chase Bank N.A.				
2.8325/3 month USD-LIBOR-BBA/Feb-52 (Purchased)	Feb-22/2.8325	\$1,166,600	\$(162,887)	\$253,327
2.902/3 month USD-LIBOR-BBA/Nov-49 (Purchased)	Nov-24/2.902	237,000	(36,640)	33,789
2.032/3 month USD-LIBOR-BBA/Jan-55 (Purchased)	Jan-25/2.032	301,600	(34,835)	20,952
2.50/3 month USD-LIBOR-BBA/Nov-39 (Purchased)	Nov-29/2.50	395,400	(22,854)	18,267
(2.032)/3 month USD-LIBOR-BBA/Jan-55 (Purchased)	Jan-25/2.032	301,600	(34,835)	(13,494)
(2.902)/3 month USD-LIBOR-BBA/Nov-49 (Purchased)	Nov-24/2.902	237,000	(25,430)	(20,264)
(2.50)/3 month USD-LIBOR-BBA/Nov-39 (Purchased)	Nov-29/2.50	395,400	(41,122)	(24,799)
(2.8325)/3 month USD-LIBOR-BBA/Feb-52 (Purchased)	Feb-22/2.8325	1,166,600	(162,887)	(157,363)
(1.168)/3 month USD-LIBOR-BBA/Jun-37 (Written)	Jun-27/1.168	427,800	27,529	11,512
1.168/3 month USD-LIBOR-BBA/Jun-37 (Written)	Jun-27/1.168	427,800	27,529	(8,286)
Morgan Stanley & Co. International PLC				
2.505/3 month USD-LIBOR-BBA/Nov-49 (Purchased)	Nov-24/2.505	237,000	(25,501)	28,231
3.27/3 month USD-LIBOR-BBA/Oct-53 (Purchased)	Oct-23/3.27	67,100	(7,656)	22,193
(2.764)/3 month USD-LIBOR-BBA/Feb-31 (Purchased)	Feb-21/2.764	3,267,200	(5,356)	(5,358)
(3.27)/3 month USD-LIBOR-BBA/Oct-53 (Purchased)	Oct-23/3.27	67,100	(7,656)	(6,994)
(2.505)/3 month USD-LIBOR-BBA/Nov-49 (Purchased)	Nov-24/2.505	237,000	(36,308)	(27,938)
2.764/3 month USD-LIBOR-BBA/Feb-31 (Purchased)	Feb-21/2.764	3,267,200	(637,698)	(54,497)
UBSAG				
1.6125/3 month USD-LIBOR-BBA/Aug-34 (Purchased)	Aug-24/1.6125	951,100	(26,089)	23,882
(0.902)/3 month USD-LIBOR-BBA/Apr-35 (Purchased)	Apr-25/0.902	202,800	(11,347)	5,386
(0.983)/3 month USD-LIBOR-BBA/Apr-32 (Purchased)	Apr-30/0.983	676,000	(10,715)	4,394
(0.87)/3 month USD-LIBOR-BBA/Apr-28 (Purchased)	Apr-27/0.87	1,690,100	(11,400)	3,194
(0.8925)/3 month USD-LIBOR-BBA/Apr-28 (Purchased)	Apr-23/0.8925	507,000	(10,748)	(2,956)
0.8925/3 month USD-LIBOR-BBA/Apr-28 (Purchased)	Apr-23/0.8925	507,000	(10,748)	(3,113)
0.983/3 month USD-LIBOR-BBA/Apr-32 (Purchased)	Apr-30/0.983	676,000	(10,715)	(4,867)
0.87/3 month USD-LIBOR-BBA/Apr-28 (Purchased)	Apr-27/0.87	1,690,100	(11,400)	(4,884)
0.902/3 month USD-LIBOR-BBA/Apr-35 (Purchased)	Apr-25/0.902	202,800	(11,347)	(6,370)
(1.6125)/3 month USD-LIBOR-BBA/Aug-34 (Purchased)	Aug-24/1.6125	951,100	(69,549)	(33,555)
1.30/3 month USD-LIBOR-BBA/Aug-26 (Written)	Aug-21/1.30	2,021,100	60,039	58,875
(0.958)/3 month USD-LIBOR-BBA/May-30 (Written)	May-25/0.958	405,600	10,779	4,316
0.958/3 month USD-LIBOR-BBA/May-30 (Written)	May-25/0.958	405,600	10,779	(2,876)
(1.30)/3 month USD-LIBOR-BBA/Aug-26 (Written)	Aug-21/1.30	2,021,100	16,157	(60,837)
Wells Fargo Bank, N.A.				
2.2775/3 month USD-LIBOR-BBA/Jul-52 (Purchased)	Jul-22/2.2775	264,700	(22,367)	37,235
(2.2775)/3 month USD-LIBOR-BBA/Jul-52 (Purchased)	Jul-22/2.2775	264,700	(22,367)	(16,862)
Unrealized appreciation				786,490
Unrealized (depreciation)				(755,622)
Total				\$30,868

**TBA SALE COMMITMENTS OUTSTANDING at 12/31/20
(proceeds receivable \$7,190,039)**

	Principal amount	Settlement date	Value
Uniform Mortgage-Backed Securities, 2.00%, 1/1/51	\$5,000,000	1/14/21	\$5,195,313
Uniform Mortgage-Backed Securities, 1.50%, 1/1/51	2,000,000	1/14/21	2,020,937
Total			\$7,216,250

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 12/31/20

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$191,900	\$8,837 [£]	\$(1)	2/2/24	3 month USD-LIBOR-BBA — Quarterly	2.5725% — Semiannually	\$8,836
496,600	22,428 [£]	(3)	2/2/24	2.528% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(22,431)
1,039,500	70,151	(210)	12/2/23	3 month USD-LIBOR-BBA — Quarterly	2.536% — Semiannually	71,867
359,400	16,533 [£]	(61)	2/2/24	3 month USD-LIBOR-BBA — Quarterly	2.57% — Semiannually	16,472
647,500	26,393 [£]	(4)	2/2/24	3 month USD-LIBOR-BBA — Quarterly	2.3075% — Semiannually	26,390
950,400	38,928 [£]	(5)	2/9/24	3 month USD-LIBOR-BBA — Quarterly	2.32% — Semiannually	38,923
229,300	15,985 [£]	(5)	11/20/39	3 month USD-LIBOR-BBA — Quarterly	2.55% — Semiannually	15,980
705,700	86,895	(10)	12/7/30	2.184% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(87,822)
1,219,900	151,474	—	12/14/30	2.1935% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(152,603)
514,200	121,888 [£]	—	6/14/52	2.4105% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(121,888)
658,600	33,867 [£]	(7)	6/5/29	3 month USD-LIBOR-BBA — Quarterly	2.2225% — Semiannually	33,859
55,100	11,606 [£]	(2)	6/22/52	2.3075% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(11,608)
18,000	3,519 [£]	(1)	7/5/52	2.25% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(3,520)
1,364,300	39,913 [£]	(8)	2/7/24	1.733% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(39,920)
210,100	22,683 [£]	(3)	1/22/31	2.035% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(22,686)
561,600	61,924 [£]	(19)	8/8/52	1.9185% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(61,943)
419,900	14,731 [£]	(14)	9/12/52	1.626% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(14,745)
7,210,300	64,085	(20,206)	10/15/21	3 month USD-LIBOR-BBA — Quarterly	1.316% — Semiannually	60,210
7,498,800	79,465	(20,005)	10/21/21	3 month USD-LIBOR-BBA — Quarterly	1.5025% — Semiannually	78,238
33,100	3,700 [£]	(1)	1/16/55	2.032% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(3,701)
18,800	1,844 [£]	(1)	1/24/55	3 month USD-LIBOR-BBA — Quarterly	1.977% — Semiannually	1,844
5,588,600	30,184	3,060	11/3/21	0.83% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(32,621)
5,588,600	53,617	(10,380)	11/3/21	3 month USD-LIBOR-BBA — Quarterly	1.331% — Semiannually	53,236
236,500	11,828 [£]	(8)	3/4/52	1.265% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	11,820
176,500	2,672 [£]	(3)	3/4/31	3 month USD-LIBOR-BBA — Quarterly	1.101% — Semiannually	2,669
6,772,000	22,788	(26)	9/8/21	0.68% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(36,250)
14,651,200	44,144	(55)	10/15/21	0.571% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(54,341)
1,169,000	80,219 [£]	(40)	1/27/47	3 month USD-LIBOR-BBA — Quarterly	1.27% — Semiannually	(80,259)
98,700	6,831 [£]	(3)	3/7/50	1.275% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	6,827
177,700	26,659 [£]	(6)	3/10/52	0.8725% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	26,653

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 12/31/20 *cont.*

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$132,100	\$25,043 [£]	\$(5)	3/11/52	0.717% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	\$25,039
498,700	3,768 [£]	(7)	3/17/32	3 month USD-LIBOR-BBA — Quarterly	1.03% — Semiannually	(3,775)
103,300	2,463 [£]	(1)	3/24/32	3 month USD-LIBOR-BBA — Quarterly	1.07% — Semiannually	(2,465)
52,000	2,730 [£]	(1)	3/24/35	3 month USD-LIBOR-BBA — Quarterly	0.968% — Semiannually	(2,730)
334,800	10,779 [£]	(5)	4/25/32	0.7925% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	10,774
40,600	1,913 [£]	(1)	6/28/37	3 month USD-LIBOR-BBA — Quarterly	1.168% — Semiannually	(1,914)
3,600,400	12,504	(29)	7/14/25	3 month USD-LIBOR-BBA — Quarterly	0.30% — Semiannually	(9,331)
1,661,800	37,670	(22)	7/15/30	3 month USD-LIBOR-BBA — Quarterly	0.645% — Semiannually	(33,602)
861,900	3,203	(8)	8/31/25	0.3084% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	2,458
1,423,900	2,815 [£]	(8)	7/5/24	0.2429% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	2,807
2,561,800	12,635	(21)	8/12/25	3 month USD-LIBOR-BBA — Quarterly	0.277% — Semiannually	(10,676)
303,600	22,860 [£]	23,885	9/2/52	3 month USD-LIBOR-BBA — Quarterly	1.188% — Semiannually	1,025
3,275,000	9,124	(31)	10/13/25	0.344% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	8,283
3,574,900	1,612	(13)	9/16/22	3 month USD-LIBOR-BBA — Quarterly	0.214% — Semiannually	3,482
3,461,900	1,257	(28)	10/13/25	0.41% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(2,636)
1,263,000	1,983	648	10/16/25	3 month USD-LIBOR-BBA — Quarterly	0.37% — Semiannually	(983)
3,703,000	55,393	(2,522)	10/16/30	0.75% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	48,908
572,000	35,734	(1,541)	10/16/50	1.16% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	33,092
443,200	659	—	12/7/30	3 month USD-LIBOR-BBA — Quarterly	0.932% — Semiannually	865
363,400	1,614	—	12/7/30	0.871% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	1,459
3,461,900	9,905	(28)	11/16/25	0.471% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(10,993)
129,100	3,293	(4)	12/17/50	1.305% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	3,235
1,655,000	2,246 [£]	(9)	7/5/24	3 month USD-LIBOR-BBA — Quarterly	0.41% — Semiannually	2,237
82,600	3,059	(57)	12/1/50	3 month USD-LIBOR-BBA — Quarterly	1.26% — Semiannually	(3,045)
2,155,300	4,660	(14)	12/2/23	0.300% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(4,785)
2,340,000	24,762	(45)	12/2/33	3 month USD-LIBOR-BBA — Quarterly	1.02% — Semiannually	(23,328)
30,421,000	34,011 [£]	(28,766)	3/17/23	3 month USD-LIBOR-BBA — Quarterly	0.25% — Semiannually	5,245
3,084,000	1,409 [£]	(4,950)	3/17/26	0.45% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(3,541)
46,000	229 [£]	345	3/17/31	3 month USD-LIBOR-BBA — Quarterly	0.90% — Semiannually	115
3,078,000	129,919 [£]	148,508	3/17/51	3 month USD-LIBOR-BBA — Quarterly	1.25% — Semiannually	18,589

CENTRALLY CLEARED INTEREST RATE SWAP CONTRACTS OUTSTANDING at 12/31/20 cont.

Notional amount	Value	Upfront premium received (paid)	Termination date	Payments made by fund	Payments received by fund	Unrealized appreciation/ (depreciation)
\$3,539,600	\$1,324	\$(29)	12/16/25	3 month USD-LIBOR-BBA — Quarterly	0.428% — Semiannually	\$1,581
229,000	236 [£]	(3)	6/22/31	3 month USD-LIBOR-BBA — Quarterly	1.0025% — Semiannually	233
1,077,000	1,343	(9)	12/31/25	3 month USD-LIBOR-BBA — Quarterly	0.4515% — Semiannually	1,327
8,117,000	812	(31)	1/5/23	0.201% — Semiannually	3 month USD-LIBOR-BBA — Quarterly	(842)
1,112,000	2,624	(15)	1/5/31	3 month USD-LIBOR-BBA — Quarterly	0.944% — Semiannually	2,609
Total		\$87,156				\$(233,797)

[£] Extended effective date.

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 12/31/20

Swap counterparty/ Notional amount	Value	Upfront premium received (paid)	Termination date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
Bank of America N.A.						
\$14,030	\$13,656	\$—	1/12/41	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	\$(165)
10,465	10,186	—	1/12/41	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(123)
Barclays Bank PLC						
151,855	152,139	—	1/12/40	4.00% (1 month USD-LIBOR) — Monthly	Synthetic MBX Index 4.00% 30 year Fannie Mae pools — Monthly	567
22,959	23,002	—	1/12/40	4.00% (1 month USD-LIBOR) — Monthly	Synthetic MBX Index 4.00% 30 year Fannie Mae pools — Monthly	86
2,986,942	2,986,942	—	1/12/41	5.00% (1 month USD-LIBOR) — Monthly	Synthetic MBX Index 5.00% 30 year Fannie Mae pools — Monthly	6,629
185,228	185,025	—	1/12/40	5.00% (1 month USD-LIBOR) — Monthly	Synthetic MBX Index 5.00% 30 year Fannie Mae pools — Monthly	210
167,266	167,376	—	1/12/39	(6.00%) 1 month USD-LIBOR — Monthly	Synthetic MBX Index 6.00% 30 year Fannie Mae pools — Monthly	(543)
2,743,168	2,744,909	—	1/12/38	(6.50%) 1 month USD-LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(9,155)
774	762	—	1/12/43	3.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 3.50% 30 year Fannie Mae pools — Monthly	(2)
13,048	12,693	—	1/12/42	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(164)
17,364	16,902	—	1/12/41	(4.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	204
10,204	10,021	—	1/12/41	(5.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 5.00% 30 year Fannie Mae pools — Monthly	21
10,519	10,424	—	1/12/39	6.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.00% 30 year Fannie Mae pools — Monthly	42

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 12/31/20 cont.

Swap counterparty/ Notional amount	Value	Upfront premium received (paid)	Termination date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
Barclays Bank PLC cont.						
\$15,079	\$14,626	\$—	1/12/38	6.50% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	\$(263)
1,072	1,040	—	1/12/38	6.50% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(19)
Citibank, N.A.						
34,061	34,061	—	1/12/41	5.00% (1 month USD- LIBOR) — Monthly	Synthetic MBX Index 5.00% 30 year Fannie Mae pools — Monthly	76
Credit Suisse International						
1,654	1,628	—	1/12/43	3.50% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 3.50% 30 year Fannie Mae pools — Monthly	(4)
26,177	25,384	—	1/12/44	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(413)
12,016	11,696	—	1/12/41	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(141)
7,167	6,915	—	1/12/45	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(139)
5,229	5,046	—	1/12/45	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(101)
12,016	11,696	—	1/12/41	(4.00%) 1 month USD- LIBOR — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	141
15,427	15,151	—	1/12/41	(5.00%) 1 month USD- LIBOR — Monthly	Synthetic TRS Index 5.00% 30 year Fannie Mae pools — Monthly	32
Goldman Sachs International						
9,935	9,942	—	1/12/38	(6.50%) 1 month USD- LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(33)
26,503	26,519	—	1/12/38	(6.50%) 1 month USD- LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(88)
73,536	73,583	—	1/12/38	(6.50%) 1 month USD- LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(245)
195,747	195,871	—	1/12/38	(6.50%) 1 month USD- LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(653)
268,133	268,303	—	1/12/38	(6.50%) 1 month USD- LIBOR — Monthly	Synthetic MBX Index 6.50% 30 year Fannie Mae pools — Monthly	(895)
21,710	21,340	—	1/12/44	(3.00%) 1 month USD- LIBOR — Monthly	Synthetic TRS Index 3.00% 30 year Fannie Mae pools — Monthly	59
32,380	31,500	—	1/12/42	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(407)
32,380	31,500	—	1/12/42	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(407)
25,573	24,878	—	1/12/42	4.00% (1 month USD- LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(322)

OTC TOTAL RETURN SWAP CONTRACTS OUTSTANDING at 12/31/20 *cont.*

Swap counterparty/ Notional amount	Value	Upfront premium received (paid)	Termination date	Payments received (paid) by fund	Total return received by or paid by fund	Unrealized appreciation/ (depreciation)
Goldman Sachs International <i>cont.</i>						
\$23,964	\$23,313	\$—	1/12/42	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	\$(301)
21,637	21,049	—	1/12/42	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(272)
20,022	19,488	—	1/12/41	(4.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	235
19,743	19,389	—	1/12/41	(5.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 5.00% 30 year Fannie Mae pools — Monthly	41
63,442	62,869	—	1/12/39	6.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.00% 30 year Fannie Mae pools — Monthly	251
44,536	44,134	—	1/12/39	6.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.00% 30 year Fannie Mae pools — Monthly	176
26,290	26,052	—	1/12/39	6.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.00% 30 year Fannie Mae pools — Monthly	104
102	101	—	1/12/39	6.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.00% 30 year Fannie Mae pools — Monthly	—
32,979	31,990	—	1/12/38	6.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(575)
30,093	29,190	—	1/12/38	6.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(524)
29,161	28,286	—	1/12/38	6.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(508)
23,216	22,519	—	1/12/38	6.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(404)
6,575	6,378	—	1/12/38	6.50% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 6.50% 30 year Fannie Mae pools — Monthly	(115)
JPMorgan Chase Bank N.A.						
11,241	10,941	—	1/12/41	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(132)
1,651	1,607	—	1/12/41	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(19)
19,726	19,373	—	1/12/41	(5.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 5.00% 30 year Fannie Mae pools — Monthly	41
JPMorgan Securities LLC						
13,814	13,395	—	1/12/44	4.00% (1 month USD-LIBOR) — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	(218)
148,982	144,933	—	1/12/42	(4.00%) 1 month USD-LIBOR — Monthly	Synthetic TRS Index 4.00% 30 year Fannie Mae pools — Monthly	1,873
Upfront premium received		—		Unrealized appreciation		10,788
Upfront premium (paid)		—		Unrealized (depreciation)		(17,350)
Total		\$—		Total		\$(6,562)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 12/31/20

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.							
CMBX NAA.6 Index	A/P	\$151	\$1,000	\$75	5/11/63	200 bp— Monthly	\$76
CMBX NAA.6 Index	A/P	364	3,000	226	5/11/63	200 bp— Monthly	139
CMBX NAA.6 Index	A/P	1,317	11,000	828	5/11/63	200 bp— Monthly	493
CMBX NAA.6 Index	A/P	1,667	14,000	1,054	5/11/63	200 bp— Monthly	618
CMBX NAA.6 Index	A/P	1,903	15,000	1,130	5/11/63	200 bp— Monthly	779
CMBX NAA.6 Index	A/P	2,626	22,000	1,657	5/11/63	200 bp— Monthly	978
CMBX NAA.6 Index	A/P	3,290	28,000	2,108	5/11/63	200 bp— Monthly	1,192
CMBX NAA.6 Index	A/P	4,988	30,000	2,259	5/11/63	200 bp— Monthly	2,740
CMBX NAA.6 Index	A/P	6,533	39,000	2,937	5/11/63	200 bp— Monthly	3,611
CMBX NAA.6 Index	A/P	17,640	126,000	9,488	5/11/63	200 bp— Monthly	8,201
CMBX NAA.6 Index	A/P	25,308	212,000	15,964	5/11/63	200 bp— Monthly	9,426
CMBX NA BB.11 Index	BB–/P	12,430	22,000	5,161	11/18/54	500 bp— Monthly	7,290
CMBX NA BB.9 Index	B+/P	5,611	10,000	3,380	9/17/58	500 bp— Monthly	2,241
CMBX NA BBB–.13 Index	BBB–/P	2,368	27,000	1,669	12/16/72	300 bp— Monthly	715
CMBX NA BBB–.13 Index	BBB–/P	30,775	327,000	20,209	12/16/72	300 bp— Monthly	10,757
CMBX NA BBB–.6 Index	BB/P	4,935	75,000	20,025	5/11/63	300 bp— Monthly	(15,047)
CMBX NA BBB–.6 Index	BB/P	6,792	103,000	27,501	5/11/63	300 bp— Monthly	(20,649)
CMBX NA BBB–.6 Index	BB/P	8,101	119,000	31,773	5/11/63	300 bp— Monthly	(23,602)
CMBX NA BBB–.6 Index	BB/P	301,265	4,731,000	1,263,177	5/11/63	300 bp— Monthly	(959,152)
Credit Suisse International							
CMBX NA BB.7 Index	B+/P	2,541	19,000	7,391	1/17/47	500 bp— Monthly	(4,831)
CMBX NA BBB–.6 Index	BB/P	300,774	3,201,000	854,667	5/11/63	300 bp— Monthly	(552,026)
Deutsche Bank AG							
CMBX NA BBB–.6 Index	BB/P	53,946	506,000	135,102	5/11/63	300 bp— Monthly	(80,861)
Goldman Sachs International							
CMBX NAA.6 Index	A/P	870	6,000	452	5/11/63	200 bp— Monthly	421
CMBX NAA.6 Index	A/P	1,279	11,000	828	5/11/63	200 bp— Monthly	455
CMBX NAA.6 Index	A/P	10,925	92,000	6,928	5/11/63	200 bp— Monthly	4,033
CMBX NAA.7 Index	A–/P	(54)	37,000	3,101	1/17/47	200 bp— Monthly	(3,140)
CMBX NA BB.6 Index	B/P	5,563	40,000	16,972	5/11/63	500 bp— Monthly	(11,371)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 12/31/20 cont.

Swap counterparty/ Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Value	Termination date	Payments received by fund	Unrealized appreciation/ (depreciation)
Goldman Sachs International cont.							
CMBX NA BBB-.13 Index	BBB-/P	\$1,567	\$10,000	\$618	12/16/72	300 bp— Monthly	\$955
CMBX NA BBB-.13 Index	BBB-/P	1,741	11,000	680	12/16/72	300 bp— Monthly	1,068
CMBX NA BBB-.13 Index	BBB-/P	3,216	19,000	1,174	12/16/72	300 bp— Monthly	2,053
CMBX NA BBB-.13 Index	BBB-/P	3,252	19,000	1,174	12/16/72	300 bp— Monthly	2,089
CMBX NA BBB-.6 Index	BB/P	142	1,000	267	5/11/63	300 bp— Monthly	(124)
CMBX NA BBB-.6 Index	BB/P	717	14,000	3,738	5/11/63	300 bp— Monthly	(3,013)
CMBX NA BBB-.6 Index	BB/P	1,416	16,000	4,272	5/11/63	300 bp— Monthly	(2,847)
CMBX NA BBB-.6 Index	BB/P	1,416	16,000	4,272	5/11/63	300 bp— Monthly	(2,847)
CMBX NA BBB-.6 Index	BB/P	2,017	24,000	6,408	5/11/63	300 bp— Monthly	(4,377)
CMBX NA BBB-.6 Index	BB/P	4,881	42,000	11,214	5/11/63	300 bp— Monthly	(6,308)
CMBX NA BBB-.6 Index	BB/P	2,486	49,000	13,083	5/11/63	300 bp— Monthly	(10,568)
CMBX NA BBB-.6 Index	BB/P	6,787	51,000	13,617	5/11/63	300 bp— Monthly	(6,800)
CMBX NA BBB-.6 Index	BB/P	3,030	60,000	16,020	5/11/63	300 bp— Monthly	(12,955)
CMBX NA BBB-.6 Index	BB/P	24,037	208,000	55,536	5/11/63	300 bp— Monthly	(31,378)
CMBX NA BBB-.6 Index	BB/P	31,021	309,000	82,503	5/11/63	300 bp— Monthly	(51,302)
CMBX NA BBB-.6 Index	BB/P	50,168	470,000	125,490	5/11/63	300 bp— Monthly	(75,048)
JPMorgan Securities LLC							
CMBX NAA.13 Index	A-/P	726	9,000	273	12/16/72	200 bp— Monthly	456
CMBX NAA.6 Index	A/P	700	5,000	377	5/11/63	200 bp— Monthly	325
CMBX NAA.6 Index	A/P	2,553	19,000	1,431	5/11/63	200 bp— Monthly	1,130
CMBX NA BB.10 Index	BB-/P	2,006	25,000	8,678	5/11/63	500 bp— Monthly	(6,647)
CMBX NA BB.7 Index	B+/P	30,848	63,000	24,507	1/17/47	500 bp— Monthly	6,403
CMBX NA BBB-.13 Index	BBB-/P	1,416	9,000	556	12/16/72	300 bp— Monthly	865
CMBX NA BBB-.13 Index	BBB-/P	3,423	17,000	1,051	12/16/72	300 bp— Monthly	2,382
CMBX NA BBB-.13 Index	BBB-/P	5,004	25,000	1,545	12/16/72	300 bp— Monthly	3,473
CMBX NA BBB-.13 Index	BBB-/P	4,917	27,000	1,669	12/16/72	300 bp— Monthly	3,265
CMBX NA BBB-.13 Index	BBB-/P	6,512	39,000	2,410	12/16/72	300 bp— Monthly	4,125
CMBX NA BBB-.6 Index	BB/P	89,517	280,000	74,760	5/11/63	300 bp— Monthly	14,920

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION SOLD at 12/31/20 cont.

Swap counterparty/ Referenced debt*	Rating***	Upfront premium received (paid)**	Notional amount	Value	Termination date	Payments received by fund	Unrealized appreciation/ (depreciation)
Merrill Lynch International							
CMBX NA BB.6 Index	B/P	\$335	\$3,000	\$1,273	5/11/63	500 bp — Monthly	\$(935)
CMBX NA BB.7 Index	B+/P	1,452	12,000	4,668	1/17/47	500 bp — Monthly	(3,204)
CMBX NA BBB-.6 Index	BB/P	359	5,000	1,335	5/11/63	300 bp — Monthly	(973)
CMBX NA BBB-.6 Index	BB/P	1,409	16,000	4,272	5/11/63	300 bp — Monthly	(2,854)
CMBX NA BBB-.6 Index	BB/P	1,754	23,000	6,141	5/11/63	300 bp — Monthly	(4,373)
CMBX NA BBB-.6 Index	BB/P	3,438	38,000	10,146	5/11/63	300 bp — Monthly	(6,686)
CMBX NA BBB-.6 Index	BB/P	4,114	64,000	17,088	5/11/63	300 bp — Monthly	(12,937)
CMBX NA BBB-.6 Index	BB/P	84,380	945,000	252,315	5/11/63	300 bp — Monthly	(167,384)
Morgan Stanley & Co. International PLC							
CMBX NAA.7 Index	A-/P	(2)	2,000	168	1/17/47	200 bp — Monthly	(169)
CMBX NAA.7 Index	A-/P	(5)	11,000	922	1/17/47	200 bp — Monthly	(923)
CMBX NAA.7 Index	A-/P	656	135,000	11,313	1/17/47	200 bp — Monthly	(10,605)
CMBX NA BBB-.13 Index	BBB-/P	1,625	8,000	494	12/16/72	300 bp — Monthly	1,135
CMBX NA BBB-.13 Index	BBB-/P	1,574	10,000	618	12/16/72	300 bp — Monthly	961
CMBX NA BBB-.13 Index	BBB-/P	2,289	14,000	865	12/16/72	300 bp — Monthly	1,432
CMBX NA BBB-.13 Index	BBB-/P	3,384	18,000	1,112	12/16/72	300 bp — Monthly	2,282
CMBX NA BBB-.13 Index	BBB-/P	3,622	23,000	1,421	12/16/72	300 bp — Monthly	2,214
CMBX NA BBB-.13 Index	BBB-/P	5,393	59,000	3,646	12/16/72	300 bp — Monthly	1,781
CMBX NA BBB-.13 Index	BBB-/P	20,094	102,000	6,304	12/16/72	300 bp — Monthly	13,850
CMBX NA BBB-.6 Index	BB/P	752	9,000	2,403	5/11/63	300 bp — Monthly	(1,646)
CMBX NA BBB-.6 Index	BB/P	2,377	36,000	9,612	5/11/63	300 bp — Monthly	(7,214)
CMBX NA BBB-.6 Index	BB/P	2,364	36,000	9,612	5/11/63	300 bp — Monthly	(7,227)
CMBX NA BBB-.6 Index	BB/P	4,206	43,000	11,481	5/11/63	300 bp — Monthly	(7,250)
CMBX NA BBB-.6 Index	BB/P	584,124	8,817,000	2,354,139	5/11/63	300 bp — Monthly	(1,764,872)
CMBX NA BBB-.7 Index	BB+/P	74	1,000	199	1/17/47	300 bp — Monthly	(124)
CMBX NA BBB-.7 Index	BB+/P	23,003	338,000	67,194	1/17/47	300 bp — Monthly	(43,995)
Upfront premium received		1,852,256					121,329
Upfront premium (paid)		(61)					(3,928,264)
Total		\$1,852,195					\$(3,806,935)

* 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 December 31, 2020. 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 12/31/20

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.						
CMBX NA BB.10 Index	\$(1,252)	\$12,000	\$4,165	11/17/59	(500 bp) — Monthly	\$2,901
CMBX NA BB.10 Index	(987)	9,000	3,124	11/17/59	(500 bp) — Monthly	2,128
CMBX NA BB.11 Index	(3,610)	50,000	11,730	11/18/54	(500 bp) — Monthly	8,071
CMBX NA BB.11 Index	(4,535)	35,000	8,211	11/18/54	(500 bp) — Monthly	3,642
CMBX NA BB.11 Index	(1,031)	15,000	3,519	11/18/54	(500 bp) — Monthly	2,473
CMBX NA BB.11 Index	(1,131)	12,000	2,815	11/18/54	(500 bp) — Monthly	1,672
CMBX NA BB.11 Index	(363)	7,000	1,642	11/18/54	(500 bp) — Monthly	1,272
CMBX NA BB.11 Index	(357)	7,000	1,642	11/18/54	(500 bp) — Monthly	1,278
CMBX NA BB.12 Index	(4,894)	15,000	3,162	8/17/61	(500 bp) — Monthly	(1,746)
CMBX NA BB.12 Index	(429)	5,000	1,054	8/17/61	(500 bp) — Monthly	620
CMBX NA BB.7 Index	(9,339)	183,000	71,187	1/17/47	(500 bp) — Monthly	61,670
CMBX NA BB.7 Index	(1,077)	16,000	6,224	1/17/47	(500 bp) — Monthly	5,132
CMBX NA BB.8 Index	(2,980)	24,000	9,538	10/17/57	(500 bp) — Monthly	6,534
CMBX NA BBB-.10 Index	(56,223)	327,000	40,417	11/17/59	(300 bp) — Monthly	(15,997)
CMBX NA BBB-.10 Index	(17,178)	74,000	9,146	11/17/59	(300 bp) — Monthly	(8,074)
CMBX NA BBB-.10 Index	(12,167)	51,000	6,304	11/17/59	(300 bp) — Monthly	(5,893)
CMBX NA BBB-.10 Index	(8,077)	37,000	4,573	11/17/59	(300 bp) — Monthly	(3,525)
CMBX NA BBB-.10 Index	(7,182)	33,000	4,079	11/17/59	(300 bp) — Monthly	(3,122)
CMBX NA BBB-.10 Index	(5,906)	24,000	2,966	11/17/59	(300 bp) — Monthly	(2,953)
CMBX NA BBB-.12 Index	(8,800)	39,000	3,081	8/17/61	(300 bp) — Monthly	(5,742)
CMBX NA BBB-.12 Index	(3,874)	19,000	1,501	8/17/61	(300 bp) — Monthly	(2,384)
CMBX NA BBB-.12 Index	(1,427)	7,000	553	8/17/61	(300 bp) — Monthly	(878)
CMBX NA BBB-.10 Index	(28,899)	97,000	11,989	11/17/59	(300 bp) — Monthly	(16,966)
CMBX NA BBB-.11 Index	(19,232)	60,000	4,572	11/18/54	(300 bp) — Monthly	(14,695)
CMBX NA BBB-.11 Index	(16,644)	52,000	3,962	11/18/54	(300 bp) — Monthly	(12,712)
CMBX NA BBB-.11 Index	(15,418)	47,000	3,581	11/18/54	(300 bp) — Monthly	(11,864)
CMBX NA BBB-.11 Index	(3,680)	25,000	1,905	11/18/54	(300 bp) — Monthly	(1,789)
CMBX NA BBB-.11 Index	(7,842)	24,000	1,829	11/18/54	(300 bp) — Monthly	(6,027)
CMBX NA BBB-.11 Index	(2,155)	15,000	1,143	11/18/54	(300 bp) — Monthly	(1,021)
CMBX NA BBB-.11 Index	(1,609)	8,000	610	11/18/54	(300 bp) — Monthly	(1,004)
CMBX NA BBB-.12 Index	(46,049)	146,000	11,534	8/17/61	(300 bp) — Monthly	(34,601)
CMBX NA BBB-.12 Index	(37,356)	106,000	8,374	8/17/61	(300 bp) — Monthly	(29,044)
CMBX NA BBB-.12 Index	(24,256)	71,000	5,609	8/17/61	(300 bp) — Monthly	(18,688)
CMBX NA BBB-.12 Index	(24,957)	71,000	5,609	8/17/61	(300 bp) — Monthly	(19,389)
CMBX NA BBB-.12 Index	(23,381)	70,000	5,530	8/17/61	(300 bp) — Monthly	(17,892)
CMBX NA BBB-.12 Index	(18,075)	52,000	4,108	8/17/61	(300 bp) — Monthly	(13,997)
CMBX NA BBB-.12 Index	(16,707)	50,000	3,950	8/17/61	(300 bp) — Monthly	(12,786)
CMBX NA BBB-.12 Index	(2,664)	14,000	1,106	8/17/61	(300 bp) — Monthly	(1,566)
CMBX NA BBB-.7 Index	(4,375)	20,000	3,976	1/17/47	(300 bp) — Monthly	(411)
CMBX NA BBB-.9 Index	(11,593)	49,000	5,826	9/17/58	(300 bp) — Monthly	(5,795)
Credit Suisse International						
CMBX NA BB.10 Index	(2,854)	24,000	8,330	11/17/59	(500 bp) — Monthly	5,453
CMBX NA BB.10 Index	(3,202)	24,000	8,330	11/17/59	(500 bp) — Monthly	5,105
CMBX NA BB.10 Index	(1,616)	13,000	4,512	11/17/59	(500 bp) — Monthly	2,884
Goldman Sachs International						
CMBX NA BB.12 Index	(5,858)	16,000	3,373	8/17/61	(500 bp) — Monthly	(2,501)
CMBX NA BB.8 Index	(906)	8,000	3,179	10/17/57	(500 bp) — Monthly	2,265
CMBX NA BB.9 Index	(9,424)	59,000	19,942	9/17/58	(500 bp) — Monthly	10,461
CMBX NA BB.9 Index	(660)	17,000	5,746	9/17/58	(500 bp) — Monthly	5,069
CMBX NA BBB-.10 Index	(3,500)	16,000	1,978	11/17/59	(300 bp) — Monthly	(1,531)
CMBX NA BBB-.12 Index	(3,119)	16,000	1,264	8/17/61	(300 bp) — Monthly	(1,865)
CMBX NA BBB-.12 Index	(13,171)	39,000	3,081	8/17/61	(300 bp) — Monthly	(10,113)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 12/31/20 cont.

Swap counterparty/ Referenced debt*	Upfront premium received (paid)**	Notional amount	Value	Termi- nation date	Payments (paid) by fund	Unrealized appreciation/ (depreciation)
JPMorgan Securities LLC						
CMBX NA BB.11 Index	\$(63,810)	\$117,000	\$27,448	11/18/54	(500 bp) — Monthly	\$(36,476)
CMBX NA BB.11 Index	(5,148)	10,000	4,243	5/11/63	(500 bp) — Monthly	(915)
CMBX NA BB.12 Index	(18,124)	33,000	6,956	8/17/61	(500 bp) — Monthly	(11,200)
CMBX NA BB.8 Index	(16,356)	33,000	13,114	10/17/57	(500 bp) — Monthly	(3,274)
CMBX NA BBB-.10 Index	(3,793)	23,000	2,843	11/17/59	(300 bp) — Monthly	(964)
CMBX NA BBB-.12 Index	(5,333)	23,000	1,817	8/17/61	(300 bp) — Monthly	(3,530)
CMBX NA BBB-.12 Index	(3,466)	17,000	1,343	8/17/61	(300 bp) — Monthly	(2,133)
CMBX NA BBB-.10 Index	(11,268)	40,000	4,944	11/17/59	(300 bp) — Monthly	(6,348)
CMBX NA BBB-.10 Index	(9,534)	32,000	3,955	11/17/59	(300 bp) — Monthly	(5,597)
CMBX NA BBB-.11 Index	(6,854)	34,000	2,591	11/18/54	(300 bp) — Monthly	(4,283)
CMBX NA BBB-.11 Index	(7,229)	23,000	1,753	11/18/54	(300 bp) — Monthly	(5,490)
CMBX NA BBB-.11 Index	(4,715)	15,000	1,143	11/18/54	(300 bp) — Monthly	(3,580)
CMBX NA BBB-.11 Index	(4,191)	13,000	991	11/18/54	(300 bp) — Monthly	(3,208)
CMBX NA BBB-.12 Index	(10,286)	31,000	2,449	8/17/61	(300 bp) — Monthly	(7,855)
CMBX NA BBB-.12 Index	(5,588)	16,000	1,264	8/17/61	(300 bp) — Monthly	(4,333)
CMBX NA BBB-.7 Index	(56,108)	239,000	47,513	1/17/47	(300 bp) — Monthly	(8,735)
Merrill Lynch International						
CMBX NA BB.10 Index	(1,366)	24,000	8,330	11/17/59	(500 bp) — Monthly	6,941
CMBX NA BB.9 Index	(24,582)	631,000	213,278	9/17/58	(500 bp) — Monthly	188,083
CMBX NA BBB-.10 Index	(6,933)	32,000	3,955	11/17/59	(300 bp) — Monthly	(2,997)
Morgan Stanley & Co. International PLC						
CMBX NA BB.10 Index	(1,259)	12,000	4,165	11/17/59	(500 bp) — Monthly	2,895
CMBX NA BB.11 Index	(2,382)	25,000	5,865	11/18/54	(500 bp) — Monthly	3,458
CMBX NA BB.12 Index	(1,901)	36,000	7,589	8/17/61	(500 bp) — Monthly	5,653
CMBX NA BB.12 Index	(10,200)	17,000	3,584	8/17/61	(500 bp) — Monthly	(6,633)
CMBX NA BB.12 Index	(1,215)	17,000	3,584	8/17/61	(500 bp) — Monthly	2,352
CMBX NA BB.12 Index	(917)	13,000	2,740	8/17/61	(500 bp) — Monthly	1,811
CMBX NA BB.12 Index	(803)	11,000	2,319	8/17/61	(500 bp) — Monthly	1,505
CMBX NA BB.12 Index	(408)	5,000	1,054	9/17/58	(500 bp) — Monthly	641
CMBX NA BB.8 Index	(9,393)	19,000	7,551	10/17/57	(500 bp) — Monthly	(1,861)
CMBX NA BB.9 Index	(23,827)	179,000	60,502	9/17/58	(500 bp) — Monthly	36,501
CMBX NA BB.9 Index	(24,315)	179,000	60,502	9/17/58	(500 bp) — Monthly	36,012
CMBX NA BB.9 Index	(22,969)	168,000	56,784	9/17/58	(500 bp) — Monthly	33,651
CMBX NA BB.9 Index	(22,860)	152,000	51,376	9/17/58	(500 bp) — Monthly	28,368
CMBX NA BB.9 Index	(20,671)	137,000	46,306	9/17/58	(500 bp) — Monthly	25,502
CMBX NA BB.9 Index	(20,232)	130,000	43,940	9/17/58	(500 bp) — Monthly	23,582
CMBX NA BB.9 Index	(12,260)	81,000	27,378	9/17/58	(500 bp) — Monthly	15,039
CMBX NA BB.9 Index	(11,669)	81,000	27,378	9/17/58	(500 bp) — Monthly	15,630
CMBX NA BB.9 Index	(2,855)	38,000	12,844	9/17/58	(500 bp) — Monthly	9,952
CMBX NA BB.9 Index	(1,270)	36,000	12,168	9/17/58	(500 bp) — Monthly	10,863
CMBX NA BB.9 Index	(2,309)	27,000	9,126	9/17/58	(500 bp) — Monthly	6,791
CMBX NA BB.9 Index	(3,633)	24,000	8,112	9/17/58	(500 bp) — Monthly	4,456
CMBX NA BB.9 Index	(1,415)	23,000	7,774	9/17/58	(500 bp) — Monthly	6,337
CMBX NA BBB-.10 Index	(9,946)	59,000	7,292	11/17/59	(300 bp) — Monthly	(2,688)
CMBX NA BBB-.10 Index	(8,751)	37,000	4,573	11/17/59	(300 bp) — Monthly	(4,199)
CMBX NA BBB-.10 Index	(7,801)	32,000	3,955	11/17/59	(300 bp) — Monthly	(3,865)
CMBX NA BBB-.10 Index	(4,005)	23,000	2,843	11/17/59	(300 bp) — Monthly	(1,176)
CMBX NA BBB-.10 Index	(4,362)	19,000	2,348	11/17/59	(300 bp) — Monthly	(2,025)
CMBX NA BBB-.10 Index	(3,929)	18,000	2,225	11/17/59	(300 bp) — Monthly	(1,715)
CMBX NA BBB-.10 Index	(2,168)	10,000	1,236	11/17/59	(300 bp) — Monthly	(938)
CMBX NA BBB-.10 Index	(1,946)	9,000	1,112	11/17/59	(300 bp) — Monthly	(839)
CMBX NA BBB-.12 Index	(15,678)	69,000	5,451	8/17/61	(300 bp) — Monthly	(10,267)
CMBX NA BBB-.12 Index	(5,797)	28,000	2,212	8/17/61	(300 bp) — Monthly	(3,601)

OTC CREDIT DEFAULT CONTRACTS OUTSTANDING — PROTECTION PURCHASED at 12/31/20 *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 <i>cont.</i>						
CMBX NA BBB-.12 Index	\$(2,921)	\$14,000	\$1,106	8/17/61	(300 bp) — Monthly	\$(1,824)
CMBX NA BBB-.12 Index	(2,921)	14,000	1,106	8/17/61	(300 bp) — Monthly	(1,824)
CMBX NA BBB-.11 Index	(11,647)	74,000	5,639	11/18/54	(300 bp) — Monthly	(6,052)
CMBX NA BBB-.11 Index	(16,004)	50,000	3,810	11/18/54	(300 bp) — Monthly	(12,223)
CMBX NA BBB-.11 Index	(1,005)	5,000	381	11/18/54	(300 bp) — Monthly	(627)
CMBX NA BBB-.11 Index	(312)	1,000	76	11/18/54	(300 bp) — Monthly	(236)
CMBX NA BBB-.12 Index	(2,265)	11,000	869	8/17/61	(300 bp) — Monthly	(1,403)
CMBX NA BBB-.12 Index	(1,506)	8,000	632	8/17/61	(300 bp) — Monthly	(878)
CMBX NA BBB-.12 Index	(1,237)	4,000	316	8/17/61	(300 bp) — Monthly	(923)
CMBX NA BBB-.7 Index	(4,069)	64,000	12,723	1/17/47	(300 bp) — Monthly	8,636
Upfront premium received	—					Unrealized appreciation 603,289
Upfront premium (paid)	(1,073,738)					Unrealized (depreciation) (463,286)
Total	\$(1,073,738)					Total \$140,003

* 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	\$—	\$1,309,797	\$—
Mortgage-backed securities	—	36,630,587	—
Purchased options outstanding	—	441,765	—
Purchased swap options outstanding	—	3,104,965	—
U.S. government and agency mortgage obligations	—	17,568,855	—
Short-term investments	—	9,499,584	—
Totals by level	\$—	\$68,555,553	\$—

	Valuation inputs		
Other financial instruments:	Level 1	Level 2	Level 3
Futures contracts	\$(91,735)	\$—	\$—
Written options outstanding	—	(76,456)	—
Written swap options outstanding	—	(3,787,456)	—
Forward premium swap option contracts	—	30,868	—
TBA sale commitments	—	(7,216,250)	—
Interest rate swap contracts	—	(320,953)	—
Total return swap contracts	—	(6,562)	—
Credit default contracts	—	(4,445,389)	—
Totals by level	\$(91,735)	\$(15,822,198)	\$—

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

Statement of assets and liabilities

12/31/20

Assets

Investment in securities, at value (Notes 1 and 7):	
Unaffiliated issuers (identified cost \$68,230,481)	\$68,555,553
Interest and other receivables	381,387
Receivable for shares of the fund sold	35,460
Receivable for sales of TBA securities (Note 1)	6,186,692
Receivable from Manager (Note 2)	20,176
Receivable for variation margin on futures contracts (Note 1)	1,500
Receivable for variation margin on centrally cleared swap contracts (Note 1)	42,163
Unrealized appreciation on forward premium swap option contracts (Note 1)	786,490
Unrealized appreciation on OTC swap contracts (Note 1)	735,406
Premium paid on OTC swap contracts (Note 1)	1,073,799
Total assets	77,818,626

Liabilities

Payable to custodian	177
Payable for investments purchased	29,359
Payable for purchases of TBA securities (Note 1)	12,634,665
Payable for shares of the fund repurchased	72,113
Payable for custodian fees (Note 2)	52,937
Payable for investor servicing fees (Note 2)	5,458
Payable for Trustee compensation and expenses (Note 2)	63,135
Payable for administrative services (Note 2)	524
Payable for distribution fees (Note 2)	4,374
Payable for variation margin on futures contracts (Note 1)	9,310
Payable for variation margin on centrally cleared swap contracts (Note 1)	33,893
Unrealized depreciation on OTC swap contracts (Note 1)	4,408,900
Premium received on OTC swap contracts (Note 1)	1,852,256
Unrealized depreciation on forward premium swap option contracts (Note 1)	755,622
Written options outstanding, at value (premiums \$3,130,467) (Note 1)	3,863,912
TBA sale commitments, at value (proceeds receivable \$7,190,039) (Note 1)	7,216,250
Other accrued expenses	68,512
Total liabilities	31,071,397
Net assets	\$46,747,229

Represented by

Paid-in capital (Unlimited shares authorized) (Notes 1 and 4)	\$62,921,723
Total distributable earnings (Note 1)	(16,174,494)
Total — Representing net assets applicable to capital shares outstanding	\$46,747,229

Computation of net asset value Class IA

Net assets	\$26,268,799
Number of shares outstanding	2,903,128
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$9.05

Computation of net asset value Class IB

Net assets	\$20,478,430
Number of shares outstanding	2,269,104
Net asset value, offering price and redemption price per share (net assets divided by number of shares outstanding)	\$9.02

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

Statement of operations

Year ended 12/31/20

Investment income

Interest	\$2,205,441
Total investment income	\$2,205,441

Expenses

Compensation of Manager (Note 2)	194,882
Investor servicing fees (Note 2)	35,209
Custodian fees (Note 2)	55,206
Trustee compensation and expenses (Note 2)	2,362
Distribution fees (Note 2)	56,645
Administrative services (Note 2)	1,405
Auditing and tax fees	58,232
Other	26,424
Fees waived and reimbursed by Manager (Note 2)	(122,212)
Total expenses	308,153
Expense reduction (Note 2)	(458)
Net expenses	307,695
Net investment income	1,897,746

Realized and unrealized gain (loss)

Net realized gain (loss) on:

Securities from unaffiliated issuers (Notes 1 and 3)	2,888,075
Futures contracts (Note 1)	(15,759)
Swap contracts (Note 1)	(1,922,292)
Written options (Note 1)	1,637,137
Total net realized gain	2,587,161

Change in net unrealized appreciation (depreciation) on:

Securities from unaffiliated issuers and TBA sale commitments	296,490
Futures contracts	(84,259)
Swap contracts	(5,127,034)
Written options	(884,960)
Total change in net unrealized depreciation	(5,799,763)
Net loss on investments	(3,212,602)
Net decrease in net assets resulting from operations	\$(1,314,856)

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

Statement of changes in net assets

	Year ended 12/31/20	Year ended 12/31/19
Increase (decrease) in net assets		
Operations:		
Net investment income	\$1,897,746	\$2,015,089
Net realized gain on investments	2,587,161	2,217,030
Change in net unrealized appreciation (depreciation) of investments	(5,799,763)	2,757,955
Net increase (decrease) in net assets resulting from operations	(1,314,856)	6,990,074
Distributions to shareholders (Note 1):		
From ordinary income		
Net investment income		
Class IA	(2,587,503)	(785,112)
Class IB	(2,096,557)	(529,481)
Net realized short-term gain on investments		
Class IA	(64,947)	—
Class IB	(53,689)	—
From return of capital		
Class IA	(71,902)	—
Class IB	(58,260)	—
Decrease from capital share transactions (Note 4)	(5,791,898)	(1,370,316)
Total increase (decrease) in net assets	(12,039,612)	4,305,165
Net assets:		
Beginning of year	58,786,841	54,481,676
End of year	\$46,747,229	\$58,786,841

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

Financial highlights (For a common share outstanding throughout the period)

INVESTMENT OPERATIONS:					LESS DISTRIBUTIONS:				RATIOS AND SUPPLEMENTAL DATA:					
Period ended	Net asset value, beginning of period	Net investment income (loss) ^a	Net realized and unrealized gain (loss) on investments	Total from investment operations	From net investment income	From net realized gain on investments	From return of capital	Total distributions	Net asset value, end of period	Total return at net asset value (%) ^{b,c}	Net assets, end of period (in thousands)	Ratio of expenses to average net assets (%) ^{b,d}	Ratio of net investment income (loss) to average net assets (%)	Portfolio turnover (%) ^e
Class IA														
12/31/20	\$10.18	.35	(.57)	(.22)	(.87)	(.02)	(.02)	(.91)	\$9.05	(1.29)	\$26,269	.50 ^f	3.89 ^f	895
12/31/19	9.21	.36	.85	1.21	(.24)	—	—	(.24)	10.18	13.36	31,822	.50 ^f	3.68 ^f	1,171
12/31/18	9.55	.35	(.41)	(.06)	(.28)	—	—	(.28)	9.21	(.62)	31,249	.56 ^f	3.80 ^f	1,142
12/31/17	9.59	.27	(.06)	.21	(.25)	—	—	(.25)	9.55	2.27	35,852	.66	2.85	1,188
12/31/16	9.76	.24	(.20)	.04	(.21)	—	—	(.21)	9.59	.36	40,362	.64 ^g	2.43 ^g	1,028
Class IB														
12/31/20	\$10.16	.33	(.58)	(.25)	(.85)	(.02)	(.02)	(.89)	\$9.02	(1.68)	\$20,478	.75 ^f	3.64 ^f	895
12/31/19	9.18	.33	.86	1.19	(.21)	—	—	(.21)	10.16	13.20	26,965	.75 ^f	3.44 ^f	1,171
12/31/18	9.52	.33	(.41)	(.08)	(.26)	—	—	(.26)	9.18	(.90)	23,232	.81 ^f	3.54 ^f	1,142
12/31/17	9.56	.25	(.07)	.18	(.22)	—	—	(.22)	9.52	1.96	27,524	.91	2.60	1,188
12/31/16	9.72	.21	(.19)	.02	(.18)	—	—	(.18)	9.56	.20	33,301	.89 ^g	2.18 ^g	1,028

Before April 30, 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.

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

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

^c Total return assumes dividend reinvestment.

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

^e Portfolio turnover includes TBA purchase and sale commitments.

^f Reflects an involuntary contractual expense limitation in effect during the period. As a result of such limitation, the expenses of each class reflect the following reductions as a percentage of average net assets.

	% of average net assets
December 31, 2020	0.24%
December 31, 2019	0.22
December 31, 2018	0.25

^g Reflects a voluntary waiver of certain fund expenses in effect during the period. As a result of such waiver, the expenses of each class reflect a reduction of less than 0.01% as a percentage of average net assets.

Within the following Notes to financial statements, references to “State Street” represent State Street Bank and Trust Company, references to “the SEC” represent the Securities and Exchange Commission, references to “Putnam Management” represent Putnam Investment Management, LLC, the fund’s manager, an indirect wholly-owned subsidiary of Putnam Investments, LLC and references to “OTC”, if any, represent over-the-counter. Unless otherwise noted, the “reporting period” represents the period from January 1, 2020 through December 31, 2020.

Putnam VT Mortgage Securities Fund (the fund) is a diversified series of Putnam Variable Trust (the Trust), a Massachusetts business trust registered under the Investment Company Act of 1940, as amended, as an open-end management investment company. The goal of the fund is to seek as high a 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. 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 interest rate swaps, swaptions, forward delivery contracts, total return swaps, and options 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 class IA and class IB shares of beneficial interest. Class IA shares are offered at net asset value and are not subject to a distribution fee. Class IB shares are offered at net asset value and pay an ongoing distribution fee, which is identified in Note 2.

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

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

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

Note 1 — Significant accounting policies

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

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

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

Investments, 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.

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.

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

Repurchase agreements The fund, or any joint trading account, through its custodian, receives delivery of the underlying securities, the fair value of which at the time of purchase is required to be in an amount at least equal to the resale price, including accrued interest. Collateral for certain tri-party repurchase agreements, which totaled \$4,080,032 at the end of the reporting period, is held at the counterparty’s custodian in a segregated account for the benefit of the fund and the counterparty. Putnam Management is responsible for determining that the value of these underlying securities is at all times at least equal to the resale price,

including accrued interest. In the event of default or bankruptcy by the other party to the agreement, retention of the collateral may be subject to legal proceedings.

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

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

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.

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

To the extent that the total return of the security, index or other financial measure underlying the transaction exceeds or falls short of the offsetting interest rate obligation, the fund will receive a payment from or make a payment to the counterparty. OTC and/or centrally cleared total return swap contracts are marked to market daily based upon quotations from an independent pricing service or market maker. Any change is recorded as an unrealized gain or loss on OTC total return swaps. Daily fluctuations in the value of centrally cleared total return 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 received or made are recorded as realized gains or losses. Certain OTC and/or centrally cleared total return swap contracts may include extended effective dates. Payments related to these swap contracts are accrued based on the terms of the contract. The fund could be exposed to credit or market risk due to unfavorable changes in the fluctuation of interest rates or in the price of the underlying security or index, the possibility that there is no liquid market for these agreements or that the counterparty may default on its obligation to perform. The fund's maximum risk of loss from counterparty risk or central clearing risk is the fair value of the contract. This risk may be mitigated for OTC total return swap contracts by having a master netting arrangement between the fund and the counterparty and for centrally cleared total return swap contracts through the daily exchange of variation margin. There is minimal counterparty risk with respect to centrally cleared total return 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/or centrally cleared total return swap contracts outstanding, including their respective notional amounts at period end, if any, are listed after the fund's portfolio.

Credit default contracts The fund entered into OTC and/or centrally cleared credit default contracts to hedge credit risk, 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 \$4,792,550 on open derivative contracts subject to the Master Agreements. Collateral pledged by the fund at period end for these agreements totaled \$4,905,458 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 \$317.5 million unsecured committed line of credit and a \$235.5 million unsecured uncommitted line of credit, both provided by State Street. Borrowings may be made for temporary or emergency purposes, including the funding of shareholder redemption requests and trade settlements. Interest is charged to the fund based on the fund's borrowing at a rate equal to 1.25% plus the higher of (1) the Federal Funds rate and (2) the Overnight Bank Funding Rate (overnight LIBOR prior to October 16, 2020) 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 (1.30% prior to October 16, 2020) for the uncommitted line of credit. A closing fee equal to 0.04% of the committed line of credit and 0.04% of the uncommitted line of credit has been paid by the participating funds. In addition, a commitment fee of 0.21% per annum on any unutilized portion of the committed line of credit is allocated to the participating funds based on their relative net assets and paid quarterly. During the reporting period, the fund had no borrowings against these arrangements.

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

The fund is subject to the provisions of Accounting Standards Codification 740 *Income Taxes* (ASC 740). ASC 740 sets forth a minimum threshold for financial statement recognition of the benefit of a tax position taken or expected to be taken

in a tax return. The fund did not have a liability to record for any unrecognized tax benefits in the accompanying financial statements. No provision has been made for federal taxes on income, capital gains or unrealized appreciation on securities held nor for excise tax on income and capital gains. Each of the fund's federal tax returns for the prior three fiscal years remains subject to examination by the Internal Revenue Service.

Under the Regulated Investment Company Modernization Act of 2010, the fund will be permitted to carry forward capital losses incurred for an unlimited period and the carry forwards will retain their character as either short-term or long-term capital losses. At December 31, 2020, 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
\$12,488,621	—	\$12,488,621

Distributions to shareholders Distributions to shareholders from net investment income are recorded by the fund on the ex-dividend date. Distributions from capital gains, if any, are recorded on the ex-dividend date and paid at least annually. The amount and character of income and gains to be distributed are determined in accordance with income tax regulations, which may differ from generally accepted accounting principles. These differences include temporary and/or permanent differences from unrealized gains and losses on certain futures contracts, from net operating loss, from income on swap contracts, from interest-only securities, from a redesignation of taxable distributions and from ISDA Fix Anti-Trust Settlement. Reclassifications are made to the fund's capital accounts to reflect income and gains available for distribution (or available capital loss carryovers) under income tax regulations. At the close of the reporting period, the fund reclassified \$2,832,522 to increase undistributed net investment income, \$1,595,174 to decrease paid-in capital and \$1,237,348 to increase accumulated net realized loss.

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

Unrealized appreciation	\$7,507,173
Unrealized depreciation	(11,193,046)
Net unrealized depreciation	(3,685,873)
Capital loss carryforward	(12,488,621)
Cost for federal income tax purposes	\$56,327,493

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

Beneficial interest At the close of the reporting period, insurance companies or their separate accounts were record owners of all but a de minimis number of the shares of the fund. Approximately 35.7% of the fund is owned by accounts of one insurance company.

Note 2 — Management fee, administrative services and other transactions

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

0.550%	of the first \$5 billion,
0.500%	of the next \$5 billion,
0.450%	of the next \$10 billion,
0.400%	of the next \$10 billion,
0.350%	of the next \$50 billion,
0.330%	of the next \$50 billion,
0.320%	of the next \$100 billion and
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 0.388% of the fund's average net assets.

Putnam Management has contractually agreed to waive fees (and, to the extent necessary, bear other expenses) of the fund through April 30, 2022, to the extent that total expenses of the fund (excluding brokerage, interest, taxes, investment-related expenses, payments under distribution plans, extraordinary expenses and acquired fund fees and expenses) would exceed an annual rate of 0.50% of the fund's average net assets. During the reporting period, the fund's expenses were reduced by \$79,509 as a result of this limit.

Putnam Management has also contractually agreed, through April 30, 2022, 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 reduced by \$42,703 as a result of this limit.

Putnam Investments Limited (PIL), an affiliate of Putnam Management, is authorized by the Trustees to manage a separate portion of the assets of the fund as determined by Putnam Management from time to time. PIL did not manage any portion of the assets of the fund during the reporting period. If Putnam Management were to engage the services of PIL, Putnam Management would pay a quarterly sub-management fee to PIL for its services at an annual rate of 0.25% of the average net assets of the portion of the fund managed by PIL.

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

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

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

Class IA	\$19,339
Class IB	15,870
Total	\$35,209

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 \$458 under the expense offset arrangements.

Each Independent Trustee of the fund receives an annual Trustee fee, of which \$32, as a quarterly retainer, has been allocated to the fund, and an additional fee for each Trustees meeting attended. Trustees also are reimbursed for expenses they incur relating to their services as Trustees.

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

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

The fund has adopted a distribution plan (the Plan) with respect to its class IB shares pursuant to Rule 12b-1 under the Investment Company Act of 1940. The purpose of the Plan is to compensate Putnam Retail Management Limited

Partnership, an indirect wholly-owned subsidiary of Putnam Investments, LLC, for services provided and expenses incurred in distributing shares of the fund. The Plan provides for payment by the fund to Putnam Retail Management Limited Partnership at an annual rate of up to 0.35% of the average net assets attributable to the fund's class IB shares. The Trustees have approved payment by the fund at an annual rate of 0.25% of the average net assets attributable to the fund's class IB shares. The expenses related to distribution fees during the reporting period are included in Distribution fees in the Statement of operations.

Note 3 — Purchases and sales of securities

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

	Cost of purchases	Proceeds from sales
Investments in securities, including TBA commitments (Long-term)	\$524,080,337	\$541,369,321
U.S. government securities (Long-term)	—	—
Total	\$524,080,337	\$541,369,321

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

Note 4 — Capital shares

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

	Class IA shares				Class IB shares			
	Year ended 12/31/20		Year ended 12/31/19		Year ended 12/31/20		Year ended 12/31/19	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Shares sold	86,929	\$799,049	94,432	\$913,300	916,814	\$8,823,591	606,756	\$5,914,288
Shares issued in connection with reinvestment of distributions	327,053	2,724,352	84,330	785,112	265,445	2,208,506	56,933	529,481
	413,982	3,523,401	178,762	1,698,412	1,182,259	11,032,097	663,689	6,443,769
Shares repurchased	(636,247)	(5,720,755)	(446,132)	(4,310,787)	(1,568,265)	(14,626,641)	(537,961)	(5,201,710)
Net increase (decrease)	(222,265)	\$(2,197,354)	(267,370)	\$(2,612,375)	(386,006)	\$(3,594,544)	125,728	\$1,242,059

Note 5 — Market, credit and other risks

In the normal course of business, the fund trades financial instruments and enters into financial transactions where risk of potential loss exists due to changes in the market (market risk) or failure of the contracting party to the transaction to perform (credit risk). The fund may be exposed to additional credit risk that an institution or other entity with which the fund has unsettled or open transactions will default. 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 a desire to phase out the use of LIBOR by the end of 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. The transition process might lead to increased volatility and illiquidity in markets that currently 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 new hedges placed against existing LIBOR-based investments. 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 prior to the end of 2021.

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

Note 6 — 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)	\$93,700,000
Purchased swap option contracts (contract amount)	\$137,700,000
Written TBA commitment option contracts (contract amount)	\$94,200,000
Written swap option contracts (contract amount)	\$90,100,000
Futures contracts (number of contracts)	300
OTC interest rate swap contracts (notional)	\$—*
Centrally cleared interest rate swap contracts (notional)	\$184,000,000
OTC total return swap contracts (notional)	\$8,800,000
OTC credit default contracts (notional)	\$29,000,000

*For the reporting period there were no holdings at the end of each fiscal quarter and the transactions were considered minimal.

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	\$1,213,741	Payables	\$5,659,130
Interest rate contracts	Investments, Receivables, Net assets — Unrealized appreciation	5,036,748*	Payables, Net assets — Unrealized depreciation	5,742,312*
Total		\$6,250,489		\$11,401,442

*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 (see 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	\$—	\$—	\$486,968	\$486,968
Interest rate contracts	5,389,225	(15,759)	(2,409,260)	\$2,964,206
Total	\$5,389,225	\$(15,759)	\$(1,922,292)	\$3,451,174

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	\$—	\$—	\$(4,723,688)	\$(4,723,688)
Interest rate contracts	621,253	(84,259)	(403,346)	\$133,648
Total	\$621,253	\$(84,259)	\$(5,127,034)	\$(4,590,040)

Note 7 — 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	Deutsche Bank AG	Goldman Sachs International
Assets:								
Centrally cleared interest rate swap contracts [§]	\$—	\$—	\$42,163	\$—	\$—	\$—	\$—	\$—
OTC Total return swap contracts ^{**}	—	7,759	—	76	—	173	—	866
OTC Credit default contracts — protection sold ^{**}	—	—	—	—	—	—	—	—
OTC Credit default contracts — protection purchased ^{**}	—	—	—	—	284,543	21,114	—	38,423
Futures contracts [§]	—	—	—	—	—	—	—	—
Forward premium swap option contracts [#]	160,141	—	—	62,042	—	—	—	38,754
Purchased swap options ^{**#}	761,164	24,977	—	157,879	—	—	—	12,413
Purchased options ^{**#}	—	—	—	—	—	—	—	—
Repurchase agreements ^{**}	—	—	—	—	—	—	—	—
Total Assets	\$921,305	\$32,736	\$42,163	\$219,997	\$284,543	\$21,287	\$—	\$90,456
Liabilities:								
Centrally cleared interest rate swap contracts [§]	—	—	33,893	—	—	—	—	—
OTC Total return swap contracts ^{**}	288	10,146	—	—	—	798	—	5,749
OTC Credit default contracts — protection sold ^{**}	—	—	—	—	1,407,258	860,172	134,807	367,481
OTC Credit default contracts — protection purchased ^{**}	—	—	—	—	—	—	—	—
Futures contracts [§]	—	—	—	—	—	—	—	—
Forward premium swap option contracts [#]	200,922	—	—	63,011	—	—	—	36,376
Written swap options [#]	878,778	14,272	—	236,425	—	—	—	331,104
Written options [#]	—	—	—	—	—	—	—	—
Total Liabilities	\$1,079,988	\$24,418	\$33,893	\$299,436	\$1,407,258	\$860,970	\$134,807	\$740,710
Total Financial and Derivative Net Assets	\$(158,683)	\$8,318	\$8,270	\$(79,439)	\$(1,122,715)	\$(839,683)	\$(134,807)	\$(650,254)
Total collateral received (pledged) ^{†##}	\$(119,988)	\$—	\$—	\$—	\$(1,122,715)	\$(839,683)	\$(111,000)	\$(650,254)
Net amount	\$(38,695)	\$8,318	\$8,270	\$(79,439)	\$—	\$—	\$(23,807)	\$—
<i>Controlled collateral received (including TBA commitments)**</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
<i>Uncontrolled collateral received</i>	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
<i>Collateral (pledged) (including TBA commitments)**</i>	\$(119,988)	\$—	\$—	\$—	\$(1,225,870)	\$(926,890)	\$(111,000)	\$(706,901)

*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 \$162,984 and \$364,946, respectively.

HSBC Securities (USA), Inc.	JPMorgan Chase Bank N.A.	JPMorgan Securities LLC	Merrill Lynch International	Morgan Stanley & Co. International PLC	Toronto-Dominion Bank	UBS AG	Wells Fargo Bank, N.A.	Total
\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$42,163
—	41	1,873	—	—	—	—	—	10,788
—	—	—	—	—	—	—	—	—
—	—	123,882	224,908	520,871	—	—	—	1,213,741
—	—	1,500	—	—	—	—	—	1,500
—	337,847	—	—	50,424	—	100,047	37,235	786,490
—	206,599	—	—	1,921,316	20,617	—	—	3,104,965
—	441,765	—	—	—	—	—	—	441,765
4,000,000	—	—	—	—	—	—	—	4,000,000
\$4,000,000	\$986,252	\$127,255	\$224,908	\$2,492,611	\$20,617	\$100,047	\$37,235	\$9,601,412
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	33,893
—	151	218	—	—	—	—	—	17,350
—	—	116,925	296,587	2,475,900	—	—	—	5,659,130
—	—	—	—	—	—	—	—	—
—	—	9,310	—	—	—	—	—	9,310
—	224,206	—	—	94,787	—	119,458	16,862	755,622
—	668,457	—	—	1,532,734	32,157	93,529	—	3,787,456
—	76,456	—	—	—	—	—	—	76,456
\$—	\$969,270	\$126,453	\$296,587	\$4,103,421	\$32,157	\$212,987	\$16,862	\$10,339,217
\$4,000,000	\$16,982	\$802	\$(71,679)	\$(1,610,810)	\$(11,540)	\$(112,940)	\$20,373	\$(737,805)
\$4,000,000	\$—	\$—	\$—	\$(1,610,810)	\$—	\$(112,940)	\$—	
\$—	\$16,982	\$802	\$(71,679)	\$—	\$(11,540)	\$—	\$20,373	
\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
\$4,080,032	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$4,080,032
\$—	\$—	\$—	\$—	\$(1,693,818)	\$—	\$(120,991)	\$—	\$(4,905,458)

Note 8 — New accounting pronouncements

In March 2020, the Financial Accounting Standards Board FASB issued Accounting Standards Update (ASU) ASU 2020-04, Reference Rate Reform (Topic 848) — *Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. The amendments in ASU 2020-04 provide optional temporary financial reporting relief from the effect of certain types of contract modifications due to the planned discontinuation of LIBOR and other interbank-offered based reference rates as of the end of 2021. ASU 2020-04 is effective for certain reference rate-related contract modifications that occur during the period March 12, 2020 through December 31, 2022. Management is currently evaluating the impact, if any, of applying this provision.

Federal tax information (Unaudited)

For the reporting period, a portion of the fund's distribution represents a return of capital and is therefore not taxable to shareholders.

About the Trustees

Name Year of birth Position held	Principal occupations during past five years	Other directorships
Independent Trustees		
Liaquat Ahamed Born 1952 Trustee since 2012	Author; won Pulitzer Prize for <i>Lords of Finance: The Bankers Who Broke the World</i> .	Chairman of the Sun Valley Writers Conference, a literary not-for-profit organization, and a Trustee of the Journal of Philosophy.
Ravi Akhoury Born 1947 Trustee since 2009	Private investor	Director of English Helper, Inc., a private software company; Trustee of the Rubin Museum, serving on the Investment Committee; and previously a Director of RAGE Frameworks, Inc.
Barbara M. Baumann Born 1955 Trustee since 2010	President of Cross Creek Energy Corporation, a strategic consultant to domestic energy firms and direct investor in energy projects.	Director of Devon Energy Corporation, a publicly traded independent natural gas and oil exploration and production company; Director of National Fuel Gas Company, a publicly traded energy company that engages in the production, gathering, transportation, distribution, and marketing of natural gas; Senior Advisor to the energy private equity firm First Reserve; Director of Ascent Resources, LLC, a private exploration and production company established to acquire, explore for, develop, and produce natural gas, oil, and natural gas liquids reserves in the Appalachian Basin; Director of Texas American Resources Company II, a private, independent oil and gas exploration and production company; member of the Finance Committee of the Children's Hospital of Colorado; member of the Investment Committee of the Board of The Denver Foundation; and previously a Director of publicly traded companies Buckeye Partners LP, UNS Energy Corporation, CVR Energy Company, and SM Energy Corporation.
Katinka Domotorffy Born 1975 Trustee since 2012	Voting member of the Investment Committees of the Anne Ray Foundation and Margaret A. Cargill Foundation, part of the Margaret A. Cargill Philanthropies.	Director of the Great Lakes Science Center and of College Now Greater Cleveland.
Catharine Bond Hill Born 1954 Trustee since 2017	Managing Director of Ithaca S+R, a not-for-profit service that helps the academic community navigate economic and technological change. From 2006 to 2016, the 10th president of Vassar College.	Director of Yale-NUS College and Trustee of Yale University.
Paul L. Joskow Born 1947 Trustee since 1997	The Elizabeth and James Killian Professor of Economics, Emeritus at the Massachusetts Institute of Technology (MIT). From 2008 to 2017, the President of the Alfred P. Sloan Foundation, a philanthropic institution focused primarily on research and education on issues related to science, technology, and economic performance.	Trustee of Yale University; a Director of Exelon Corporation, an energy company focused on power services; and a member Emeritus of the Board of Advisors of the Boston Symphony Orchestra.
Kenneth R. Leibler Born 1949 Trustee since 2006 Vice Chair from 2016 to 2018, and Chair since 2018	Vice Chairman Emeritus of the Board of Trustees of Beth Israel Deaconess Hospital in Boston. Member of the Investment Committee of the Boston Arts Academy Foundation.	Director of Eversource Corporation, which operates New England's largest energy delivery system; previously the Chairman of the Boston Options Exchange, an electronic market place for the trading of listed derivatives securities; previously the Chairman and Chief Executive Officer of the Boston Stock Exchange; and previously the President and Chief Operating Officer of the American Stock Exchange.
George Putnam, III Born 1951 Trustee since 1984	Chairman of New Generation Research, Inc., a publisher of financial advisory and other research services, and President of New Generation Advisors, LLC, a registered investment adviser to private funds.	Director of The Boston Family Office, LLC, a registered investment advisor; a Trustee of the Gloucester Marine Genomics Institute; previously a Trustee of the Marine Biological Laboratory; and previously a Trustee of Epiphany School.



Name Year of birth Position held	Principal occupations during past five years	Other directorships	
Manoj P. Singh Born 1952 Trustee since 2017	Until 2015, Chief Operating Officer and Global Managing Director at Deloitte Touche Tohmatsu, Ltd., a global professional services organization, serving on the Deloitte U.S. Board of Directors and the boards of Deloitte member firms in China, Mexico, and Southeast Asia.	Director of Abt Associates, a global research firm working in the fields of health, social and environmental policy, and international development; Trustee of Carnegie Mellon University; Director of Pratham USA, an organization dedicated to children's education in India; member of the advisory board of Altimetrik, a business transformation and technology solutions firm; and Director of DXC Technology, a global IT services and consulting company.	
Mona K. Sutphen Born 1967 Trustee since 2020	Senior Advisor at The Vistria Group, a private investment firm focused on middle-market companies in the healthcare, education, and financial services industries. From 2014 to 2018, Partner at Macro Advisory Partners, a global consulting firm.	Director of Unitek Learning, a private nursing and medical services education provider in the United States; previous Director of Pattern Energy, a publicly traded renewable energy company; Board Member, International Rescue Committee; Co-Chair of the Board of Human Rights First; Trustee of Mount Holyoke College; and member of the Advisory Board for the Center on Global Energy Policy at Columbia University's School of International and Public Affairs.	
Interested Trustee			
Robert L. Reynolds* Born 1952 Trustee since 2008 and President and Chief Executive Officer of Putnam Investments since 2008	President and Chief Executive Officer of Putnam Investments; President and Chief Executive Officer of Great-West Financial, a financial services company that provides retirement savings plans, life insurance, and annuity and executive benefits products; President and Chief Executive Officer of Great-West Lifeco U.S. Inc., a holding company that owns Putnam Investments and Great-West Financial; and member of Putnam Investments' and Great-West Financial's Board of Directors.	Director of West Virginia University Foundation; director of the Concord Museum; director of Dana-Farber Cancer Institute; Chairman of Massachusetts Competitive Partnership; director of Boston Chamber of Commerce; member of the Chief Executives Club of Boston; member of the National Innovation Initiative; member of the Massachusetts General Hospital President's Council; member of the Council on Competitiveness; and previously the President of the Commercial Club of Boston.	

*Mr. Reynolds is an "interested person" (as defined in the Investment Company Act of 1940) of the fund and Putnam Investments. He is President and Chief Executive Officer of Putnam Investments, as well as the President of your fund and each of the other Putnam funds.

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

As of December 31, 2020, there were 97 Putnam funds. All Trustees serve as Trustees of all Putnam funds.

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

Officers

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

Robert T. Burns (Born 1961)
Vice President and Chief Legal Officer
Since 2011
General Counsel, Putnam Investments, Putnam Management, and Putnam Retail Management

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

Nancy E. Florek (Born 1957)
Vice President, Director of Proxy Voting and Corporate Governance, Assistant Clerk, and Assistant Treasurer
Since 2000

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

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

Richard T. Kircher (Born 1962)
Vice President and BSA Compliance Officer
Since 2019
Assistant Director, Operational Compliance, Putnam Investments and Putnam Retail Management

Susan G. Malloy (Born 1957)
Vice President and Assistant Treasurer
Since 2007
Head of Accounting and Middle Office Services, Putnam Investments and Putnam Management

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

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

Mark C. Trenchard (Born 1962)
Vice President
Since 2002
Director of Operational Compliance, Putnam Investments and Putnam Retail Management

The principal occupations of the officers for the past five years have been with the employers as shown above, although in some cases they have held different positions with such employers. The address of each officer is 100 Federal Street, Boston, MA 02110.

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Other important information

Proxy voting

Putnam is committed to managing our mutual funds in the best interests of our shareholders. The Putnam funds' proxy voting guidelines and procedures, as well as information regarding how your fund voted proxies relating to portfolio securities during the 12-month period ended June 30, 2020, are available in the Individual Investors section of putnam.com and on the Securities and Exchange Commission's (SEC) website at www.sec.gov. If you have questions about finding forms on the SEC's website, you may call the SEC at 1-800-SEC-0330. You may also obtain the Putnam funds' proxy voting guidelines and procedures at no charge by calling Putnam's Shareholder Services at 1-800-225-1581.

Fund portfolio holdings

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

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

Fund information

Investment Manager

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

Investment Sub-Advisor

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

Marketing Services

Putnam Retail Management
100 Federal Street
Boston, MA 02110

Investor Servicing Agent

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

Custodian

State Street Bank and Trust Company

Legal Counsel

Ropes & Gray LLP

Independent Registered Public Accounting Firm

PricewaterhouseCoopers LLP

Trustees

Kenneth R. Leibler, *Chair*
Liaquat Ahamed
Ravi Akhoury
Barbara M. Baumann
Katinka Domotorffy
Catharine Bond Hill
Paul L. Joskow
George Putnam, III
Robert L. Reynolds
Manoj P. Singh
Mona K. Sutphen

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

