UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended: June 30, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 001-34506

TWO HARBORS INVESTMENT CORP.

(Exact Name of Registrant as Specified in Its Charter)

Maryland	**27-0312904**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
601 Carlson Parkway, Suite 1400 **Minnetonka, Minnesota**	**55305**
(Address of Principal Executive Offices)	(Zip Code)

(612) 453-4100
(Registrant's Telephone Number, Including Area Code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class:	Trading Symbol(s)	Name of Exchange on Which Registered:
Common Stock, par value $0.01 per share	TWO	New York Stock Exchange
8.125% Series A Cumulative Redeemable Preferred Stock	TWO PRA	New York Stock Exchange
7.625% Series B Cumulative Redeemable Preferred Stock	TWO PRB	New York Stock Exchange
7.25% Series C Cumulative Redeemable Preferred Stock	TWO PRC	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of August 3, 2021, there were 313,883,161 shares of outstanding common stock, par value $0.01 per share, issued and outstanding.

TWO HARBORS INVESTMENT CORP.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	June 30, 2021	December 31, 2020
ASSETS	(unaudited)	
Available-for-sale securities, at fair value (amortized cost $7,547,709 and $14,043,175, respectively; allowance for credit losses $17,765 and $22,528, respectively)	$ 7,840,046	$ 14,650,922
Mortgage servicing rights, at fair value	2,020,106	1,596,153
Cash and cash equivalents	1,281,230	1,384,764
Restricted cash	866,547	1,261,667
Accrued interest receivable	31,571	47,174
Due from counterparties	85,177	146,433
Derivative assets, at fair value	60,376	95,937
Reverse repurchase agreements	70,000	91,525
Other assets	247,059	241,346
Total Assets (1)	$ 12,502,112	$ 19,515,921
LIABILITIES AND STOCKHOLDERS' EQUITY		
Liabilities:		
Repurchase agreements	$ 8,350,622	$ 15,143,898
Revolving credit facilities	533,519	283,830
Term notes payable	396,183	395,609
Convertible senior notes	423,742	286,183
Derivative liabilities, at fair value	14,208	11,058
Due to counterparties	119,472	135,838
Dividends payable	60,507	65,480
Accrued interest payable	17,956	21,666
Commitments and contingencies (see Note 15)	—	—
Other liabilities	101,848	83,433
Total Liabilities (1)	10,018,057	16,426,995
Stockholders' Equity:		
Preferred stock, par value $0.01 per share; 100,000,000 shares authorized and 29,050,000 and 40,050,000 shares issued and outstanding, respectively ($726,250 and $1,001,250 liquidation preference, respectively)	702,550	977,501
Common stock, par value $0.01 per share; 700,000,000 shares authorized and 273,718,311 and 273,703,882 shares issued and outstanding, respectively	2,737	2,737
Additional paid-in capital	5,170,387	5,163,794
Accumulated other comprehensive income	307,249	641,601
Cumulative earnings	1,147,953	1,025,756
Cumulative distributions to stockholders	(4,846,821)	(4,722,463)
Total Stockholders' Equity	2,484,055	3,088,926
Total Liabilities and Stockholders' Equity	$ 12,502,112	$ 19,515,921

(1) The condensed consolidated balance sheets include assets and liabilities of consolidated variable interest entities, or VIEs. At June 30, 2021 and December 31, 2020, assets of the VIEs totaled $448,077 and $496,810, and liabilities of the VIEs totaled $441,435 and $477,270, respectively. See Note 3 - *Variable Interest Entities* for additional information.

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME (unaudited)
(in thousands, except share data)

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Interest income:				
Available-for-sale securities	$ 43,092	$ 105,730	$ 98,744	$ 354,414
Other	351	1,597	808	8,420
Total interest income	43,443	107,327	99,552	362,834
Interest expense:				
Repurchase agreements	6,981	50,811	15,451	203,416
Revolving credit facilities	7,075	2,826	11,770	6,357
Term notes payable	3,225	3,553	6,436	8,357
Convertible senior notes	7,126	4,769	13,476	9,545
Federal Home Loan Bank advances	—	155	—	1,747
Total interest expense	24,407	62,114	47,133	229,422
Net interest income	19,036	45,213	52,419	133,412
Other (loss) income:				
(Loss) gain on investment securities	(41,519)	53,492	91,349	(1,028,115)
Servicing income	112,816	112,891	219,935	243,688
(Loss) gain on servicing asset	(268,051)	(238,791)	59,387	(825,456)
Gain (loss) on interest rate swap and swaption agreements	24,648	(46,922)	9,049	(297,518)
Gain (loss) on other derivative instruments	51,312	76,606	(224,699)	(56,862)
Other income (loss)	41	66	(5,701)	864
Total other (loss) income	(120,753)	(42,658)	149,320	(1,963,399)
Expenses:				
Management fees	—	11,429	—	25,979
Servicing expenses	18,680	23,947	43,627	43,852
Compensation and benefits	11,259	8,127	19,447	16,404
Other operating expenses	7,218	5,711	14,705	12,512
Restructuring charges	—	145,069	—	145,788
Total expenses	37,157	194,283	77,779	244,535
(Loss) income before income taxes	(138,874)	(191,728)	123,960	(2,074,522)
(Benefit from) provision for income taxes	(20,914)	(18,164)	1,763	(31,302)
Net (loss) income	(117,960)	(173,564)	122,197	(2,043,220)
Dividends on preferred stock	13,747	18,951	30,963	37,901
Net (loss) income attributable to common stockholders	$ (131,707)	$ (192,515)	$ 91,234	$ (2,081,121)
Basic (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.33	$ (7.61)
Diluted (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.32	$ (7.61)
Dividends declared per common share	$ 0.17	$ 0.19	$ 0.34	$ 0.19
Weighted average number of shares of common stock:				
Basic	273,718,561	273,604,079	273,714,684	273,498,347
Diluted	273,718,561	273,604,079	305,999,203	273,498,347

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME (unaudited), continued
(in thousands, except share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Comprehensive (loss) income:				
Net (loss) income	$ (117,960)	$ (173,564)	$ 122,197	$ (2,043,220)
Other comprehensive (loss) income, net of tax:				
Unrealized (loss) gain on available-for-sale securities	(62,899)	192,794	(334,352)	(5,276)
Other comprehensive (loss) income	(62,899)	192,794	(334,352)	(5,276)
Comprehensive (loss) income	(180,859)	19,230	(212,155)	(2,048,496)
Dividends on preferred stock	13,747	18,951	30,963	37,901
Comprehensive (loss) income attributable to common stockholders	$ (194,606)	$ 279	$ (243,118)	$ (2,086,397)

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (unaudited)
(in thousands)

	Preferred Stock	Common Stock Par Value	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Cumulative Earnings	Cumulative Distributions to Stockholders	Total Stockholders' Equity
Balance, December 31, 2019	$ 977,501	$ 2,729	$ 5,154,764	$ 689,400	$ 2,655,891	$ (4,509,819)	$ 4,970,466
Net loss	—	—	—	—	(1,869,656)	—	(1,869,656)
Other comprehensive income before reclassifications, net of tax	—	—	—	234,926	—	—	234,926
Amounts reclassified from accumulated other comprehensive income, net of tax	—	—	—	(432,996)	—	—	(432,996)
Other comprehensive loss, net of tax	—	—	—	(198,070)	—	—	(198,070)
Issuance of common stock, net of offering costs	—	—	142	—	—	—	142
Repurchase of common stock	—	(1)	(1,063)	—	—	—	(1,064)
Preferred dividends declared	—	—	—	—	—	—	—
Common dividends declared	—	—	—	—	—	—	—
Non-cash equity award compensation	—	7	2,308	—	—	—	2,315
Balance, March 31, 2020	977,501	2,735	5,156,151	491,330	786,235	(4,509,819)	2,904,133
Net loss	—	—	—	—	(173,564)	—	(173,564)
Other comprehensive income before reclassifications, net of tax	—	—	—	231,099	—	—	231,099
Amounts reclassified from accumulated other comprehensive income, net of tax	—	—	—	(38,305)	—	—	(38,305)
Other comprehensive income, net of tax	—	—	—	192,794	—	—	192,794
Issuance of common stock, net of offering costs	—	—	95	—	—	—	95
Preferred dividends declared	—	—	—	—	—	(37,901)	(37,901)
Common dividends declared	—	—	—	—	—	(51,936)	(51,936)
Non-cash equity award compensation	—	2	2,313	—	—	—	2,315
Balance, June 30, 2020	$ 977,501	$ 2,737	$ 5,158,559	$ 684,124	$ 612,671	$ (4,599,656)	$ 2,835,936
Balance, December 31, 2020	$ 977,501	$ 2,737	$ 5,163,794	$ 641,601	$ 1,025,756	$ (4,722,463)	$ 3,088,926
Net income	—	—	—	—	240,157	—	240,157
Other comprehensive loss before reclassifications, net of tax	—	—	—	(202,888)	—	—	(202,888)
Amounts reclassified from accumulated other comprehensive income, net of tax	—	—	—	(68,565)	—	—	(68,565)
Other comprehensive loss, net of tax	—	—	—	(271,453)	—	—	(271,453)
Redemption of preferred stock	(274,951)	—	—	—	—	—	(274,951)
Issuance of common stock, net of offering costs	—	—	99	—	—	—	99
Preferred dividends declared	—	—	—	—	—	(17,216)	(17,216)
Common dividends declared	—	—	—	—	—	(46,636)	(46,636)
Non-cash equity award compensation	—	—	1,790	—	—	—	1,790
Balance, March 31, 2021	702,550	2,737	5,165,683	370,148	1,265,913	(4,786,315)	2,720,716
Net loss	—	—	—	—	(117,960)	—	(117,960)
Other comprehensive loss before reclassifications, net of tax	—	—	—	(57,799)	—	—	(57,799)
Amounts reclassified from accumulated other comprehensive income, net of tax	—	—	—	(5,100)	—	—	(5,100)
Other comprehensive loss, net of tax	—	—	—	(62,899)	—	—	(62,899)
Issuance of common stock, net of offering costs	—	—	93	—	—	—	93
Preferred dividends declared	—	—	—	—	—	(13,747)	(13,747)
Common dividends declared	—	—	—	—	—	(46,759)	(46,759)
Non-cash equity award compensation	—	—	4,611	—	—	—	4,611
Balance, June 30, 2021	$ 702,550	$ 2,737	$ 5,170,387	$ 307,249	$ 1,147,953	$ (4,846,821)	$ 2,484,055

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited)
(in thousands)

	Six Months Ended June 30,	
	2021	**2020**
Cash Flows From Operating Activities:		
Net income (loss)	$ 122,197	$ (2,043,220)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Amortization of premiums and discounts on investment securities, net	134,581	102,562
Amortization of deferred debt issuance costs on term notes payable and convertible senior notes	1,321	1,107
Provision for credit losses on investment securities	6,257	46,831
Realized and unrealized (gains) losses on investment securities	(97,606)	981,284
(Gain) loss on servicing asset	(59,387)	825,456
Realized and unrealized (gain) loss on interest rate swaps and swaptions	(5,001)	228,571
Unrealized loss (gain) on other derivative instruments	27,063	(43,542)
Equity based compensation	6,401	4,630
Net change in assets and liabilities:		
Decrease in accrued interest receivable	15,603	39,154
Decrease (increase) in deferred income taxes, net	3,534	(50,265)
Decrease in accrued interest payable	(3,710)	(112,916)
Change in other operating assets and liabilities, net	(832)	172,721
Net cash provided by operating activities	150,421	152,373
Cash Flows From Investing Activities:		
Purchases of available-for-sale securities	(152,743)	(6,433,561)
Proceeds from sales of available-for-sale securities	4,600,545	16,969,870
Principal payments on available-for-sale securities	1,985,490	2,059,816
Purchases of trading securities	—	(1,052,500)
Proceeds from sales of trading securities	—	1,053,477
Purchases of mortgage servicing rights, net of purchase price adjustments	(364,566)	(193,393)
(Payments for) proceeds from sales of mortgage servicing rights, net	—	(1,814)
(Purchases) short sales of derivative instruments, net	(1,232)	(19,042)
Proceeds from sales and settlement (payments for termination and settlement) of derivative instruments, net	17,881	(93,905)
Payments for reverse repurchase agreements	(480,344)	(1,802,388)
Proceeds from reverse repurchase agreements	501,869	1,945,972
Increase in due to counterparties, net	44,890	406,598
Change in other investing assets and liabilities, net	10,000	2,508
Net cash provided by investing activities	$ 6,161,790	$ 12,841,638

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited), continued
(in thousands)

	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Cash Flows From Financing Activities:		
Proceeds from repurchase agreements	$ 19,730,790	$ 58,261,313
Principal payments on repurchase agreements	(26,524,066)	(70,417,528)
Proceeds from revolving credit facilities	261,500	83,000
Principal payments on revolving credit facilities	(11,811)	(115,819)
Proceeds from convertible senior notes	279,930	—
Repurchase of convertible senior notes	(143,118)	—
Proceeds from Federal Home Loan Bank advances	—	585,000
Principal payments on Federal Home Loan Bank advances	—	(795,000)
Redemption of preferred stock	(274,951)	—
Proceeds from issuance of common stock, net of offering costs	192	237
Repurchase of common stock	—	(1,064)
Dividends paid on preferred stock	(36,165)	(37,901)
Dividends paid on common stock	(93,166)	(122,792)
Net cash used in financing activities	(6,810,865)	(12,560,554)
Net (decrease) increase in cash, cash equivalents and restricted cash	(498,654)	433,457
Cash, cash equivalents and restricted cash at beginning of period	2,646,431	1,616,826
Cash, cash equivalents and restricted cash at end of period	$ 2,147,777	$ 2,050,283
Supplemental Disclosure of Cash Flow Information:		
Cash paid for interest	$ 46,068	$ 339,717
Cash paid for taxes, net	$ 47	$ 661
Noncash Activities:		
Dividends declared but not paid at end of period	$ 60,507	$ 57,269

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

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

Note 1. Organization and Operations

Two Harbors Investment Corp. is a Maryland corporation that, through its wholly owned subsidiaries (collectively, the Company), invests in and manages Agency residential mortgage-backed securities, or Agency RMBS, mortgage servicing rights, or MSR, and other financial assets. The investment portfolio is managed as a whole and resources are allocated and financial performance is assessed on a consolidated basis. The Company's common stock is listed on the NYSE under the symbol "TWO".

The Company has elected to be treated as a real estate investment trust, or REIT, as defined under the Internal Revenue Code of 1986, as amended, or the Code, for U.S. federal income tax purposes. As long as the Company continues to comply with a number of requirements under federal tax law and maintains its qualification as a REIT, the Company generally will not be subject to U.S. federal income taxes to the extent that the Company distributes its taxable income to its stockholders on an annual basis and does not engage in prohibited transactions. However, certain activities that the Company may perform may cause it to earn income which will not be qualifying income for REIT purposes. The Company has designated certain of its subsidiaries as taxable REIT subsidiaries, or TRSs, as defined in the Code, to engage in such activities.

In the first quarter of 2020, the Company experienced unprecedented market conditions as a result of the global COVID-19 pandemic, including unusually significant spread widening in both Agency RMBS and non-Agency securities. In response, the Company focused its efforts on raising excess liquidity and de-risking its portfolio. On March 25, 2020, the Company sold substantially all of its non-Agency securities in order to eliminate the risks posed by continued margin calls and ongoing funding concerns associated with the significant spread widening on these assets. The Company also sold approximately one-third of its Agency RMBS in order to reduce risk and raise cash to establish a strong defensive liquidity position to weather potential ongoing economic and market instability. Since then, the Company has focused on the composition of its Agency RMBS and MSR portfolio, deploying risk as the market entered a period of stabilization and asset price recovery. Going forward, management expects the Company's capital to be fully allocated to its strategy of pairing Agency RMBS and MSR.

Through August 14, 2020, the Company was externally managed and advised by PRCM Advisers LLC, a subsidiary of Pine River Capital Management L.P., under the terms of a Management Agreement between the Company and PRCM Advisers. The Company terminated the Management Agreement effective August 14, 2020 for "cause" in accordance with Section 15(a) thereof. On August 15, 2020, the Company completed its transition to self-management and directly hired the senior management team and other personnel who had historically provided services to the Company.

Note 2. Basis of Presentation and Significant Accounting Policies

Consolidation and Basis of Presentation

The interim unaudited condensed consolidated financial statements of the Company have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission, or SEC. Certain information and note disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP, have been condensed or omitted according to such SEC rules and regulations. However, management believes that the disclosures included in these interim condensed consolidated financial statements are adequate to make the information presented not misleading.

The condensed consolidated financial statements of the Company include the accounts of all subsidiaries; inter-company accounts and transactions have been eliminated. All trust entities in which the Company holds investments that are considered variable interest entities, or VIEs, for financial reporting purposes were reviewed for consolidation under the applicable consolidation guidance. Whenever the Company has both the power to direct the activities of a trust that most significantly impact the entities' performance, and the obligation to absorb losses or the right to receive benefits of the entities that could be significant, the Company consolidates the trust. Certain prior period amounts have been reclassified to conform to the current period presentation. The accompanying condensed consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2020. In the opinion of management, all normal and recurring adjustments necessary to present fairly the financial condition of the Company at June 30, 2021 and results of operations for all periods presented have been made. The results of operations for the three and six months ended June 30, 2021 should not be construed as indicative of the results to be expected for future periods or the full year.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make a number of significant estimates. These include estimates of fair value of certain assets and liabilities, amount and timing of credit losses, prepayment rates, and other estimates that affect the reported amounts of certain assets and liabilities as of the date of the condensed consolidated financial statements and the reported amounts of certain revenues and expenses during the reported period. It is likely that changes in these estimates (*e.g.*, valuation changes due to supply and demand in the market, credit performance, prepayments, interest rates, or other reasons) will occur in the near term. The Company's estimates are inherently subjective in nature and actual results could differ from its estimates and the differences may be material.

Significant Accounting Policies

Included in Note 2 to the Consolidated Financial Statements of the Company's 2020 Annual Report on Form 10-K is a summary of the Company's significant accounting policies. Provided below is a summary of additional accounting policies that are significant to the Company's consolidated financial condition and results of operations for the six months ended June 30, 2021.

Equity Incentive Plans

The Company's Second Restated 2009 Equity Incentive Plan, or the 2009 Plan, and the Company's 2021 Equity Incentive Plan, or the 2021 Plan, or collectively, the Equity Incentive Plans, provide incentive compensation to attract and retain qualified directors, officers, personnel and other parties who may provide significant services to the Company. The Equity Incentive Plans are administered by the compensation committee of the Company's board of directors. The Equity Incentive Plans permit the grants of restricted common stock, restricted stock units, or RSUs, performance-based awards (including performance share units, or PSUs), phantom shares, dividend equivalent rights and other equity-based awards. See Note 17 - *Equity Incentive Plans* for further details regarding the Equity Incentive Plans.

Equity-based compensation costs are initially measured at the estimated fair value of the awards on the grant date. Valuation methods used and subsequent expense recognition is dependent upon each award's service and performance conditions. The Company has elected not to estimate forfeitures when valuing equity-based awards and adjusts compensation costs as actual forfeitures occur. Compensation costs for equity-based awards subject only to service conditions are measured at the closing stock price on the grant date and are recognized as expense on a straight-line basis over the requisite service periods for the awards, adjusted for any forfeitures. Compensation costs for equity-based awards subject to market-based performance metrics are measured at the grant date using Monte Carlo simulations which incorporate assumptions for stock return volatility, dividend yield and risk-free interest rates. These initial valuation amounts are recognized as expense over the requisite performance periods, subject to adjustments only for actual forfeitures. Amortization of equity-based awards (non-cash equity compensation expense) is included within compensation and benefits on the condensed consolidated statements of comprehensive (loss) income.

Recently Issued and/or Adopted Accounting Standards

Measurement of Credit Losses on Financial Instruments

On January 1, 2020, the Company adopted ASU No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which changed the impairment model for most financial assets and certain other instruments. Allowances for credit losses on AFS debt securities are recognized, rather than direct reductions in the amortized cost of the investments, regardless of whether the impairment is considered to be other-than-temporary. The new model also requires the estimation of lifetime expected credit losses and corresponding recognition of allowance for losses on trade and other receivables, held-to-maturity debt securities, loans, and other instruments held at amortized cost. The ASU requires certain recurring disclosures.

The Company uses a discounted cash flow method to estimate and recognize an allowance for credit losses on AFS securities. The estimated allowance for credit losses is equal to the difference between the prepayment adjusted contractual cash flows with no credit losses and the prepayment adjusted expected cash flows with credit losses, discounted at the effective interest rate on the AFS security that was in effect upon adoption of the standard. The contractual cash flows and expected cash flows are based on management's best estimate and take into consideration current prepayment assumptions, lifetime expected losses based on past loss experience, current market conditions, and reasonable and supportable forecasts of future conditions. The allowance for credit losses causes an increase in the AFS security amortized cost and recognizes an allowance for credit losses in the same amount. The allowance for credit losses recognized in connection with adopting the guidance in Topic 326 on January 1, 2020 was equal to the present value of the credit reserve in place on December 31, 2019. As a result, no cumulative effect adjustment to opening cumulative earnings was required.

The adoption of this ASU impacts the Company's accounting for the purchase of certain beneficial interests with purchased credit deterioration or when there is a "significant" difference between contractual cash flows and expected cash flows. For these securities, the Company records an allowance for credit losses with an increase in amortized cost above the purchase price of the same amount. Subsequent adverse or favorable changes in expected cash flows are recognized immediately in earnings as a provision for or reversal of provision for credit losses, respectively. Adverse changes are reflected as an increase to the allowance for credit losses and favorable changes are reflected as a decrease to the allowance for credit losses. The allowance for credit losses is limited to the difference between the beneficial interest's fair value and its amortized cost, and any remaining adverse changes in these circumstances are reflected as a prospective adjustment to accretable yield. If the allowance for credit losses has been reduced to zero, the remaining favorable changes are reflected as a prospective adjustment to accretable yield. The Company does not adjust the effective interest rate in subsequent periods for prepayment assumption changes or variable-rate changes. Any changes in the allowance for credit losses due to the time-value-of-money are accounted for in the condensed consolidated statements of comprehensive (loss) income as provision for credit losses rather than a reduction to interest income. Any portion of the AFS securities that is deemed uncollectible results in a write-off of the uncollectible amortized cost with a corresponding reduction to the allowance for credit losses. Recoveries of amounts previously written off results in an increase to the allowance for credit losses.

The standard applies to Agency and non-Agency securities that are accounted for as beneficial interests under Accounting Standards Codification (ASC) 325-40, *Investments-Other: Beneficial Interests in Securitized Financial Assets*, and ASC 310-30, *Receivables: Loans and Debt Securities Acquired with Deteriorated Credit Quality*, or ASC 310-30. Only beneficial interests that were previously accounted for as purchased credit impaired under ASC 310-30 were accounted for as purchased credit deteriorated under Topic 326 on the transition date.

Upon adoption of this ASU, the Company established an allowance for credit losses on AFS securities accounted for as purchased credit-impaired assets under ASC 310-30 in an unrealized loss position and with no other-than-temporary impairments, or OTTI, recognized in periods prior to transition. The effective interest rates on these debt securities remained unchanged. On January 1, 2020, the $30.7 billion net amortized cost basis of AFS securities was inclusive of a $244.9 million allowance for credit loss.

The Company used a prospective transition approach for debt securities for which OTTI had been recognized prior to January 1, 2020. As a result, the amortized cost basis remained the same before and after the effective date. The effective interest rate on these debt securities also remained unchanged. Amounts previously recognized in accumulated other comprehensive income as of January 1, 2020 relating to improvements in cash flows expected to be collected are accreted into income over the remaining life of the asset. Recoveries of amounts previously written off relating to improvements in cash flows after January 1, 2020 are recorded in earnings when received.

Facilitation of the Effects of Reference Rate Reform on Financial Reporting

In March 2020, the FASB issued ASU No. 2020-04, which provides temporary optional expedients and exceptions on accounting for contract modifications and hedging relationships in anticipation of the replacement of the London Interbank Offered Rate, or LIBOR, with another reference rate. The guidance also provides a one-time election to sell held-to-maturity debt securities or to transfer such securities to the available-for-sale or trading category. The ASU was effective immediately for all entities and expires after December 31, 2022. The Company's adoption of this ASU did not have an impact on the Company's financial condition, results of operations or financial statement disclosures.

Issuer's Accounting for Debt and Equity Instruments

In August 2020, the FASB issued ASU No. 2020-06 to simplify an issuer's accounting for convertible instruments and its application of the derivatives scope exception for contracts in its own equity. Under the new guidance, only conversion features associated with a convertible debt instrument issued at a substantial premium and those that are considered embedded derivatives in accordance with derivatives guidance will be accounted for separate from the convertible instrument. Additionally, for contracts in an entity's own equity, the new guidance eliminates some of the requirements for equity classification. The guidance also addresses how convertible instruments are accounted for in the diluted earnings per share calculation and requires enhanced disclosures about the terms of convertible instruments and contracts in an entity's own equity. The ASU is effective for annual periods, and interim periods within those annual periods, beginning on or after December 15, 2021, with early adoption permitted. The early adoption of the ASU's guidance results in the Company accounting for a convertible debt instrument without separately presenting in stockholders' equity an embedded conversion feature. The Company accounts for a convertible debt instrument wholly as debt unless (1) a convertible instrument contains features that require bifurcation as a derivative under ASC 815, *Derivatives and Hedging*, or ASC 815, or (2) a convertible debt instrument was issued at a substantial premium. The Company's early adoption of this ASU did not have an impact on the Company's financial condition, results of operations or financial statement disclosures.

Note 3. Variable Interest Entities

During the year ended December 31, 2019, the Company formed a trust entity, or the MSR Issuer Trust, for the purpose of financing MSR through securitization, pursuant to which, through two of the Company's wholly owned subsidiaries, MSR is pledged to the MSR Issuer Trust and in return, the MSR Issuer Trust issues term notes to qualified institutional buyers and a variable funding note, or VFN, to one of the subsidiaries, in each case secured on a pari passu basis. In connection with the transaction, the Company also entered into a repurchase facility that is secured by the VFN issued in connection with the MSR securitization transaction, which is collateralized by the Company's MSR.

During the year ended December 31, 2020, the Company formed a trust entity, or the Servicing Advance Receivables Issuer Trust, for the purpose of financing servicing advances through a revolving credit facility, pursuant to which the Servicing Advance Receivables Issuer Trust issued a VFN backed by servicing advances pledged to the financing counterparty.

Both the MSR Issuer Trust and the Servicing Advance Receivables Issuer Trust are considered VIEs for financial reporting purposes and, thus, were reviewed for consolidation under the applicable consolidation guidance. As the Company has both the power to direct the activities of the trusts that most significantly impact the entities' performance, and the obligation to absorb losses or the right to receive benefits of the entities that could be significant, the Company consolidates the trusts. Additionally, in accordance with arrangements entered into in connection with the securitization transaction and the servicing advance revolving credit facility, the Company has direct financial obligations payable to both the MSR Issuer Trust and the Servicing Advance Receivables Issuer Trust, which, in turn, support the MSR Issuer Trust's obligations to noteholders under the securitization transaction and the Servicing Advance Receivables Issuer Trust's obligations to the financing counterparty.

The following table presents a summary of the assets and liabilities of all consolidated trusts as reported on the condensed consolidated balance sheets as of June 30, 2021 and December 31, 2020:

(in thousands)	June 30, 2021	December 31, 2020
Note receivable [1]	$ 396,183	$ 395,609
Restricted cash	22,559	72,530
Accrued interest receivable [1]	193	131
Other assets	29,142	28,540
Total Assets	$ 448,077	$ 496,810
Term notes payable	$ 396,183	$ 395,609
Revolving credit facilities	22,500	9,000
Accrued interest payable	254	156
Other liabilities	22,498	72,505
Total Liabilities	$ 441,435	$ 477,270

(1) Receivables due from a wholly owned subsidiary of the Company to the trusts are eliminated in consolidation in accordance with U.S. GAAP.

Note 4. Available-for-Sale Securities, at Fair Value

The Company holds both Agency and non-Agency AFS investment securities which are carried at fair value on the condensed consolidated balance sheets. In the first quarter of 2020, the Company experienced unprecedented market conditions as a result of the global COVID-19 pandemic, including unusually significant spread widening in both Agency RMBS and non-Agency securities. In response, the Company focused its efforts on raising excess liquidity and de-risking its portfolio. On March 25, 2020, the Company sold substantially all of its non-Agency securities in order to eliminate the risks posed by continued margin calls and ongoing funding concerns associated with the significant spread widening on these assets. The Company also sold approximately one-third of its Agency RMBS in order to reduce risk and raise cash to establish a strong defensive liquidity position to weather potential ongoing economic and market instability. Since then, the Company has focused on the composition of its Agency RMBS portfolio, deploying risk as the market entered a period of stabilization and asset price recovery.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

The following table presents the Company's AFS investment securities by collateral type as of June 30, 2021 and December 31, 2020:

(in thousands)	June 30, 2021	December 31, 2020
Agency:		
Federal National Mortgage Association	$ 6,190,275	$ 11,486,658
Federal Home Loan Mortgage Corporation	1,390,345	2,837,103
Government National Mortgage Association	253,867	314,130
Non-Agency	5,559	13,031
Total available-for-sale securities	$ 7,840,046	$ 14,650,922

At June 30, 2021 and December 31, 2020, the Company pledged AFS securities with a carrying value of $7.8 billion and $14.6 billion, respectively, as collateral for repurchase agreements. See Note 11 - *Repurchase Agreements*.

At June 30, 2021 and December 31, 2020, the Company did not have any securities purchased from and financed with the same counterparty that did not meet the conditions of ASC 860, *Transfers and Servicing*, to be considered linked transactions and, therefore, classified as derivatives.

The Company is not required to consolidate variable interest entities, or VIEs, for which it has concluded it does not have both the power to direct the activities of the VIEs that most significantly impact the entities' performance, and the obligation to absorb losses or the right to receive benefits of the entities that could be significant. The Company's investments in these unconsolidated VIEs include all non-Agency securities, which are classified within available-for-sale securities, at fair value on the condensed consolidated balance sheets. As of June 30, 2021 and December 31, 2020, the carrying value, which also represents the maximum exposure to loss, of all non-Agency securities in unconsolidated VIEs was $5.6 million and $13.0 million, respectively.

The following tables present the amortized cost and carrying value of AFS securities by collateral type as of June 30, 2021 and December 31, 2020:

	June 30, 2021							
(in thousands)	Principal/ Current Face	Un-amortized Premium	Accretable Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	$ 6,812,303	$ 305,809	$ (13)	$ 7,118,099	$ —	$ 291,473	$ (341)	$ 7,409,231
Interest-only	4,274,783	419,475	—	419,475	(15,154)	30,561	(9,626)	425,256
Total Agency	11,087,086	725,284	(13)	7,537,574	(15,154)	322,034	(9,967)	7,834,487
Non-Agency	1,236,217	8,794	(32)	10,135	(2,611)	51	(2,016)	5,559
Total	$ 12,323,303	$ 734,078	$ (45)	$ 7,547,709	$ (17,765)	$ 322,085	$ (11,983)	$ 7,840,046

	December 31, 2020							
(in thousands)	Principal/ Current Face	Un-amortized Premium	Accretable Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	$ 13,103,355	$ 605,253	$ (14)	$ 13,708,594	$ —	$ 629,079	$ (420)	$ 14,337,253
Interest-only	3,649,556	315,876	—	315,876	(17,889)	15,680	(13,029)	300,638
Total Agency	16,752,911	921,129	(14)	14,024,470	$ (17,889)	644,759	(13,449)	14,637,891
Non-Agency	2,095,365	16,408	(36)	18,705	(4,639)	109	(1,144)	13,031
Total	$ 18,848,276	$ 937,537	$ (50)	$ 14,043,175	(22,528)	$ 644,868	$ (14,593)	$ 14,650,922

The following table presents the Company’s AFS securities according to their estimated weighted average life classifications as of June 30, 2021:

	June 30, 2021		
(in thousands)	Agency	Non-Agency	Total
< 1 year	$ 4,839	$ —	$ 4,839
≥ 1 and < 3 years	117,835	5,559	123,394
≥ 3 and < 5 years	4,710,108	—	4,710,108
≥ 5 and < 10 years	3,000,643	—	3,000,643
≥ 10 years	1,062	—	1,062
Total	$ 7,834,487	$ 5,559	$ 7,840,046

Measurement of Allowances for Credit Losses on AFS Securities (Subsequent to the Adoption of Topic 326)

Following the adoption of Topic 326 on January 1, 2020, the Company uses a discounted cash flow method to estimate and recognize an allowance for credit losses on both Agency and non-Agency AFS securities that are not accounted for under the fair value option, as detailed in Note 2 - *Basis of Presentation and Significant Accounting Policies*.

The following tables present the changes for the three and six months ended June 30, 2021 and 2020 in the allowance for credit losses on Agency and non-Agency AFS securities:

	Three Months Ended June 30, 2021			Six Months Ended June 30, 2021		
(in thousands)	Agency	Non-Agency	Total	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	$ (16,699)	$ (1,471)	$ (18,170)	$ (17,889)	$ (4,639)	$ (22,528)
Additions on securities for which credit losses were not previously recorded	(11)	(3,850)	(3,861)	(31)	(3,850)	(3,881)
Decrease (increase) on securities with previously recorded credit losses	(297)	(3,234)	(3,531)	(2,137)	(239)	(2,376)
Write-offs	1,853	5,944	7,797	4,903	6,117	11,020
Allowance for credit losses at end of period	$ (15,154)	$ (2,611)	$ (17,765)	$ (15,154)	$ (2,611)	$ (17,765)

	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020		
(in thousands)	Agency	Non-Agency	Total	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	$ (32,786)	$ (8,604)	$ (41,390)	$ —	$ (244,876)	$ (244,876)
Additions on securities for which credit losses were not previously recorded	(10)	(295)	(305)	(32,796)	(11,404)	(44,200)
Reductions for securities sold	—	—	—	—	246,792	246,792
Decrease (increase) on securities with previously recorded credit losses	2,162	(3,050)	(888)	2,162	(4,793)	(2,631)
Write-offs	—	—	—	—	4,867	4,867
Recoveries of amounts previously written off	—	—	—	—	(2,535)	(2,535)
Allowance for credit losses at end of period	$ (30,634)	$ (11,949)	$ (42,583)	$ (30,634)	$ (11,949)	$ (42,583)

The following tables present the components comprising the carrying value of AFS securities for which an allowance for credit losses has not been recorded by length of time that the securities had an unrealized loss position as of June 30, 2021 and December 31, 2020 (subsequent to the adoption of Topic 326). At June 30, 2021 and December 31, 2020, the Company held 792 and 823 AFS securities, respectively; of the securities for which an allowance for credit losses has not been recorded, 21 and 13 were in an unrealized loss position for less than twelve consecutive months and 0 and 13 were in an unrealized loss position for more than twelve consecutive months, respectively.

	June 30, 2021					
	Less than 12 Months		Unrealized Loss Position for 12 Months or More		Total	
(in thousands)	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Agency	$ 78,403	$ (4,655)	$ —	$ —	$ 78,403	$ (4,655)
Non-Agency	—	—	—	—	—	—
Total	$ 78,403	$ (4,655)	$ —	$ —	$ 78,403	$ (4,655)

	December 31, 2020					
	Less than 12 Months		Unrealized Loss Position for 12 Months or More		Total	
(in thousands)	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Agency	$ 367,660	$ (1,705)	$ 24,006	$ (4,454)	$ 391,666	$ (6,159)
Non-Agency	—	—	—	—	—	—
Total	$ 367,660	$ (1,705)	$ 24,006	$ (4,454)	$ 391,666	$ (6,159)

Evaluating AFS Securities for Other-Than-Temporary Impairments (Prior to the Adoption of Topic 326)

In evaluating AFS securities for OTTI prior to the adoption of Topic 326, the Company determined whether there had been a significant adverse quarterly change in the cash flow expectations for a security. The Company compared the amortized cost of each security in an unrealized loss position against the present value of expected future cash flows of the security. The Company also considered whether there had been a significant adverse change in the regulatory and/or economic environment as part of this analysis. If the amortized cost of the security was greater than the present value of expected future cash flows using the original yield as the discount rate, an other-than-temporary credit impairment had occurred. If the Company did not intend to sell and would not be more likely than not required to sell the security, the credit loss was recognized in earnings and the balance of the unrealized loss was recognized in either other comprehensive (loss) income, net of tax, or (loss) gain on investment securities, depending on the accounting treatment. If the Company intended to sell the security or would be more likely than not required to sell the security, the full unrealized loss was recognized in earnings.

Cumulative credit losses related to OTTI are reduced for securities sold as well as for securities that mature, are paid down, or are prepaid such that the outstanding principal balance is reduced to zero. Additionally, increases in cash flows expected to be collected over the remaining life of the security cause a reduction in the cumulative credit loss. As of December 31, 2019, the Company's cumulative credit losses related to OTTI totaled $17.0 million. During the three months ended March 31, 2020, the Company sold all securities for which OTTI had been recognized prior to January 1, 2020, reducing the Company's cumulative credit losses related to OTTI to zero. As of December 31, 2020, the Company no longer held any of the securities for which OTTI had been recognized prior to January 1, 2020.

Gross Realized Gains and Losses

Gains and losses from the sale of AFS securities are recorded as realized gains (losses) within (loss) gain on investment securities in the Company's condensed consolidated statements of comprehensive (loss) income. The following table presents details around sales of AFS securities during the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Proceeds from sales of available-for-sale securities	$ 2,549,602	$ 1,383,118	$ 4,600,545	$ 16,969,870
Amortized cost of available-for-sale securities sold	(2,532,087)	(1,326,218)	(4,516,832)	(17,947,686)
Total realized gains (losses) on sales, net	$ 17,515	$ 56,900	$ 83,713	$ (977,816)
Gross realized gains	$ 46,768	$ 57,414	$ 112,985	$ 280,885
Gross realized losses	(29,253)	(514)	(29,272)	(1,258,701)
Total realized gains (losses) on sales, net	$ 17,515	$ 56,900	$ 83,713	$ (977,816)

Note 5. Servicing Activities

Mortgage Servicing Rights, at Fair Value

A wholly owned subsidiary of the Company has approvals from Fannie Mae and Freddie Mac to own and manage MSR, which represent the right to control the servicing of residential mortgage loans. The Company and its subsidiaries do not originate or directly service mortgage loans, and instead contract with appropriately licensed subservicers to handle substantially all servicing functions in the name of the subservicer for the loans underlying the Company's MSR.

The following table summarizes activity related to MSR for the three and six months ended June 30, 2021 and 2020.

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Balance at beginning of period	$ 2,091,761	$ 1,505,163	$ 1,596,153	$ 1,909,444
Purchases of mortgage servicing rights	198,526	21,551	373,749	205,334
Sales of mortgage servicing rights	—	381	—	1,814
Changes in fair value due to:				
Changes in valuation inputs or assumptions used in the valuation model (1)	(72,910)	(111,013)	428,783	(611,776)
Other changes in fair value (2)	(195,141)	(127,778)	(369,396)	(213,680)
Other changes (3)	(2,130)	(9,109)	(9,183)	(11,941)
Balance at end of period (4)	$ 2,020,106	$ 1,279,195	$ 2,020,106	$ 1,279,195

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(1) Includes the impact of acquiring MSR at a cost different from fair value.
(2) Primarily represents changes due to the realization of expected cash flows.
(3) Includes purchase price adjustments, contractual prepayment protection, and changes due to the Company's purchase of the underlying collateral.
(4) Based on the principal balance of the loans underlying the MSR reported by servicers on a month lag, adjusted for current month purchases.

At June 30, 2021 and December 31, 2020, the Company pledged MSR with a carrying value of $1.8 billion and $1.1 billion, respectively, as collateral for repurchase agreements, revolving credit facilities and term notes payable. See Note 11 - *Repurchase Agreements*, Note 12 - *Revolving Credit Facilities* and Note 13 - *Term Notes Payable*.

As of June 30, 2021 and December 31, 2020, the key economic assumptions and sensitivity of the fair value of MSR to immediate 10% and 20% adverse changes in these assumptions were as follows:

(dollars in thousands, except per loan data)	June 30, 2021	December 31, 2020
Weighted average prepayment speed:	13.4 %	19.4 %
Impact on fair value of 10% adverse change	$ (112,850)	$ (121,973)
Impact on fair value of 20% adverse change	$ (216,017)	$ (229,676)
Weighted average delinquency:	1.5 %	2.2 %
Impact on fair value of 10% adverse change	$ (3,030)	$ (2,038)
Impact on fair value of 20% adverse change	$ (4,855)	$ (4,161)
Weighted average option-adjusted spread:	4.7 %	4.8 %
Impact on fair value of 10% adverse change	$ (38,638)	$ (28,678)
Impact on fair value of 20% adverse change	$ (75,936)	$ (56,211)
Weighted average per loan annual cost to service:	$ 67.20	$ 68.27
Impact on fair value of 10% adverse change	$ (24,652)	$ (21,708)
Impact on fair value of 20% adverse change	$ (50,105)	$ (43,527)

These assumptions and sensitivities are hypothetical and should be considered with caution. Changes in fair value based on 10% and 20% variations in assumptions generally cannot be extrapolated because the relationship of the change in assumptions to the change in fair value may not be linear. Also, the effect of a variation in a particular assumption on the fair value of MSR is calculated without changing any other assumptions. In reality, changes in one factor may result in changes in another (*e.g.*, increased market interest rates may result in lower prepayments and increased credit losses) that could magnify or counteract the sensitivities. Further, these sensitivities show only the change in the asset balances and do not show any expected change in the fair value of the instruments used to manage the interest rates and prepayment risks associated with these assets.

Risk Mitigation Activities

The primary risk associated with the Company's MSR is interest rate risk and the resulting impact on prepayments. A significant decline in interest rates could lead to higher-than-expected prepayments that could reduce the value of the MSR. The Company economically hedges the impact of these risks primarily with its Agency RMBS portfolio.

Mortgage Servicing Income

The following table presents the components of servicing income recorded on the Company's condensed consolidated statements of comprehensive (loss) income for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2021	2020	2021	2020
Servicing fee income	$ 111,083	$ 104,463	$ 216,248	$ 222,354
Ancillary and other fee income	622	476	1,238	997
Float income	1,111	7,952	2,449	20,337
Total	$ 112,816	$ 112,891	$ 219,935	$ 243,688

Mortgage Servicing Advances

As the servicer of record for the MSR assets, the Company may be required to advance principal and interest payments to security holders, and intermittent tax and insurance payments to local authorities and insurance companies on mortgage loans that are in forbearance, delinquency or default. The Company is responsible for funding these advances, potentially for an extended period of time, before receiving reimbursement from Fannie Mae and Freddie Mac. Servicing advances are priority cash flows in the event of a loan principal reduction or foreclosure and ultimate liquidation of the real estate-owned property, thus making their collection reasonably assured. These servicing advances totaled $99.5 million and $80.9 million and were included in other assets on the condensed consolidated balance sheets as of June 30, 2021 and December 31, 2020, respectively. At June 30, 2021 and December 31, 2020, mortgage loans in 60+ day delinquent status (whether or not subject to forbearance) accounted for approximately 2.2% and 3.2%, respectively, of the aggregate principal balance of loans for which the Company had servicing advance funding obligations.

During the year ended December 31, 2020, the Company entered into a new revolving credit facility to finance its servicing advance obligations. At June 30, 2021 and December 31, 2020, the Company had pledged servicing advances with a carrying value of $29.1 million and $28.5 million, respectively, as collateral for this revolving credit facility. See Note 12 - *Revolving Credit Facilities*.

Serviced Mortgage Assets

The Company's total serviced mortgage assets consist of residential mortgage loans underlying its MSR assets, off-balance sheet residential mortgage loans owned by other entities for which the Company acts as servicing administrator and other assets. The following table presents the number of loans and unpaid principal balance of the mortgage assets for which the Company manages the servicing as of June 30, 2021 and December 31, 2020:

	June 30, 2021		December 31, 2020	
(dollars in thousands)	**Number of Loans**	**Unpaid Principal Balance**	**Number of Loans**	**Unpaid Principal Balance**
Mortgage servicing rights	784,334	$ 185,209,738	781,905	$ 177,861,483
Residential mortgage loans	1,106	681,799	1,674	1,067,500
Other assets	2	46	—	—
Total serviced mortgage assets	785,442	$ 185,891,583	783,579	$ 178,928,983

Note 6. Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include cash held in bank accounts and cash held in money market funds on an overnight basis.

The Company is required to maintain certain cash balances with counterparties for securities and derivatives trading activity, servicing activities and collateral for the Company's borrowings in restricted accounts. The Company has also placed cash in a restricted account pursuant to a letter of credit on an office space lease.

The following table presents the Company's restricted cash balances as of June 30, 2021 and December 31, 2020:

(in thousands)	**June 30, 2021**	**December 31, 2020**
Restricted cash balances held by trading counterparties:		
For securities trading activity	$ 23,900	$ 44,800
For derivatives trading activity	137,860	70,600
For servicing activities	25,248	19,768
As restricted collateral for borrowings	679,479	1,126,439
Total restricted cash balances held by trading counterparties	866,487	1,261,607
Restricted cash balance pursuant to letter of credit on office lease	60	60
Total	$ 866,547	$ 1,261,667

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported on the Company's condensed consolidated balance sheets as of June 30, 2021 and December 31, 2020 that sum to the total of the same such amounts shown in the statements of cash flows:

(in thousands)	June 30, 2021	December 31, 2020
Cash and cash equivalents	$ 1,281,230	$ 1,384,764
Restricted cash	866,547	1,261,667
Total cash, cash equivalents and restricted cash	$ 2,147,777	$ 2,646,431

Note 7. Derivative Instruments and Hedging Activities

The Company enters into a variety of derivative and non-derivative instruments in connection with its risk management activities. The primary objective for executing these derivative and non-derivative instruments is to mitigate the Company's economic exposure to future events that are outside its control, principally cash flow volatility associated with interest rate risk (including associated prepayment risk). Specifically, the Company enters into derivative and non-derivative instruments to economically hedge interest rate risk or "duration mismatch (or gap)" by adjusting the duration of its floating-rate borrowings into fixed-rate borrowings to more closely match the duration of its assets. This particularly applies to floating-rate borrowing agreements with maturities or interest rate resets of less than six months. Typically, the interest receivable terms (*e.g.*, LIBOR or the overnight index swap, or OIS, rate) of certain derivatives match the terms of the underlying debt, resulting in an effective conversion of the rate of the related borrowing agreement from floating to fixed. The objective is to manage the cash flows associated with current and anticipated interest payments on borrowings, as well as the ability to roll or refinance borrowings at the desired amount by adjusting the duration.

To help manage the adverse impact of interest rate changes on the value of the Company's portfolio as well as its cash flows, the Company may, at times, enter into various forward contracts, including short securities, Agency to-be-announced securities, or TBAs, options, futures, swaps, caps and total return swaps. In executing on the Company's current risk management strategy, the Company has entered into TBAs, interest rate swap and swaption agreements and U.S. Treasury and Eurodollar futures. The Company has also entered into a number of non-derivative instruments to manage interest rate risk, principally MSR and Agency interest-only securities (see discussion below).

The following summarizes the Company's significant asset and liability classes, the risk exposure for these classes, and the Company's risk management activities used to mitigate these risks. The discussion includes both derivative and non-derivative instruments used as part of these risk management activities. Any of the Company's derivative and non-derivative instruments may be entered into in conjunction with one another in order to mitigate risks. As a result, the following discussions of each type of instrument should be read as a collective representation of the Company's risk mitigation efforts and should not be considered independent of one another. While the Company uses derivative and non-derivative instruments to achieve the Company's risk management activities, it is possible that these instruments will not effectively mitigate all or a substantial portion of the Company's market rate risk. In addition, the Company might elect, at times, not to enter into certain hedging arrangements in order to maintain compliance with REIT requirements.

Balance Sheet Presentation

In accordance with ASC 815, the Company records derivative financial instruments on its condensed consolidated balance sheets as assets or liabilities at fair value. Changes in fair value are accounted for depending on the use of the derivative instruments and whether they are designated or qualifying as hedge instruments. Due to the volatility of the interest rate and credit markets and difficulty in effectively matching pricing or cash flows, the Company has not designated any current derivatives as hedging instruments.

The following tables present the gross fair value and notional amounts of the Company’s derivative financial instruments treated as trading derivatives as of June 30, 2021 and December 31, 2020:

	June 30, 2021			
	Derivative Assets		Derivative Liabilities	
(in thousands)	Fair Value	Notional	Fair Value	Notional
Inverse interest-only securities	$ 50,985	$ 281,473	$ —	$ —
Interest rate swap agreements	—	—	—	15,646,953
Swaptions, net	—	—	(5,888)	(201,000)
TBAs	9,384	4,495,000	(5,814)	2,359,000
U.S. Treasury and Eurodollar futures, net	7	(59,200)	(2,506)	572,700
Total	$ 60,376	$ 4,717,273	$ (14,208)	$ 18,377,653

	December 31, 2020			
	Derivative Assets		Derivative Liabilities	
(in thousands)	Fair Value	Notional	Fair Value	Notional
Inverse interest-only securities	$ 62,200	$ 318,162	$ —	$ —
Interest rate swap agreements	—	—	—	12,646,341
Swaptions, net	—	—	(596)	3,750,000
TBAs	30,062	7,700,000	(10,462)	(2,503,000)
U.S. Treasury futures, net	3,675	2,021,100	—	—
Total	$ 95,937	$ 10,039,262	$ (11,058)	$ 13,893,341

Comprehensive (Loss) Income Statement Presentation

The Company has not applied hedge accounting to its current derivative portfolio held to mitigate interest rate risk and credit risk. As a result, the Company is subject to volatility in its earnings due to movement in the unrealized gains and losses associated with its derivative instruments.

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The following table summarizes the location and amount of gains and losses on derivative instruments reported in the condensed consolidated statements of comprehensive (loss) income:

Derivative Instruments	Location of Gain (Loss) Recognized in Income	Amount of Gain (Loss) Recognized in Income		Amount of Gain (Loss) Recognized in Income	
		Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)		2021	2020	2021	2020
Interest rate risk management:					
TBAs	Gain (loss) on other derivative instruments	$ 31,817	$ 75,680	$ (156,129)	$ (90,378)
U.S. Treasury and Eurodollar futures	Gain (loss) on other derivative instruments	18,264	(3,464)	(66,877)	22,508
Interest rate swaps - Payers	Gain (loss) on interest rate swap and swaption agreements	(23,019)	(122,053)	57,294	(1,159,388)
Interest rate swaps - Receivers	Gain (loss) on interest rate swap and swaption agreements	54,229	12,418	(52,144)	912,371
Swaptions	Gain (loss) on interest rate swap and swaption agreements	(6,562)	62,713	3,899	(50,501)
Markit IOS total return swaps	Gain (loss) on other derivative instruments	—	—	—	(2,430)
Non-risk management:					
Inverse interest-only securities	Gain (loss) on other derivative instruments	1,231	4,390	(1,693)	13,438
Total		$ 75,960	$ 29,684	$ (215,650)	$ (354,380)

For the three and six months ended June 30, 2021, the Company recognized income of $2.4 million and $4.0 million, respectively, for the accrual and/or settlement of the net interest expense associated with its interest rate swaps. The income results from receiving either a floating interest rate (LIBOR or the OIS rate) or a fixed interest rate and paying either a fixed interest rate or a floating interest rate (LIBOR or the OIS rate) on an average $15.2 billion and $14.3 billion notional, respectively. For the three and six months ended June 30, 2020, the Company recognized $56.3 million and $68.9 million, respectively, of expense for the accrual and/or settlement of the net interest expense associated with its interest rate swaps. The expense results from paying either a fixed interest rate or a floating interest rate (LIBOR or the OIS rate) and receiving either a floating interest rate (LIBOR or the OIS rate) or a fixed interest rate on an average $45.8 billion and $44.3 billion notional, respectively.

The following tables present information with respect to the volume of activity in the Company's derivative instruments during the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30, 2021					
(in thousands)	Beginning of Period Notional Amount	Additions	Settlement, Termination, Expiration or Exercise	End of Period Notional Amount	Average Notional Amount	Realized Gain (Loss), net [(1)]
Inverse interest-only securities	$ 300,597	$ —	$ (19,124)	$ 281,473	$ 291,985	$ (25
Interest rate swap agreements	15,221,597	1,080,356	(655,000)	15,646,953	15,198,601	8,64
Swaptions, net	—	(201,000)	—	(201,000)	(65,934)	—
TBAs, net	4,800,000	20,912,000	(18,858,000)	6,854,000	6,251,516	23,42
U.S. Treasury and Eurodollar futures	(1,185,100)	6,952,500	(5,253,900)	513,500	(94,869)	10,17
Total	$ 19,137,094	$ 28,743,856	$ (24,786,024)	$ 23,094,926	$ 21,581,299	$ 42,21

	Three Months Ended June 30, 2020					
(in thousands)	**Beginning of Period Notional Amount**	**Additions**	**Settlement, Termination, Expiration or Exercise**	**End of Period Notional Amount**	**Average Notional Amount**	**Realized Gai (Loss), net (1)**
Inverse interest-only securities	$ 379,239	$ —	$ (17,306)	$ 361,933	$ 371,585	$ —
Interest rate swap agreements	56,158,068	24,104,324	(75,783,392)	4,479,000	45,825,536	(742,55
Swaptions, net	1,376,000	587,000	(1,963,000)	—	582,429	(4,50
TBAs, net	1,761,000	7,582,000	(6,107,000)	3,236,000	1,717,868	(26,68
U.S. Treasury and Eurodollar futures	875,000	—	(875,000)	—	104,385	(7,49
Total	$ 60,549,307	$ 32,273,324	$ (84,745,698)	$ 8,076,933	$ 48,601,803	$ (781,23

	Six Months Ended June 30, 2021					
(in thousands)	**Beginning of Period Notional Amount**	**Additions**	**Settlement, Termination, Expiration or Exercise**	**End of Period Notional Amount**	**Average Notional Amount**	**Realized Gai (Loss), net (1)**
Inverse interest-only securities	$ 318,162	$ —	$ (36,689)	$ 281,473	$ 301,143	$ 3
Interest rate swap agreements	12,646,341	4,192,863	(1,192,251)	15,646,953	14,342,217	4
Swaptions, net	3,750,000	(201,000)	(3,750,000)	(201,000)	127,072	2,24
TBAs, net	5,197,000	41,714,000	(40,057,000)	6,854,000	5,780,657	(140,09
U.S. Treasury and Eurodollar futures	2,021,100	7,922,800	(9,430,400)	513,500	138,038	(60,72
Total	$ 23,932,603	$ 53,628,663	$ (54,466,340)	$ 23,094,926	$ 20,689,127	$ (198,49

	Six Months Ended June 30, 2020					
(in thousands)	**Beginning of Period Notional Amount**	**Additions**	**Settlement, Termination, Expiration or Exercise**	**End of Period Notional Amount**	**Average Notional Amount**	**Realized Gain (Loss), net (1)**
Inverse interest-only securities	$ 397,137	$ —	$ (35,204)	$ 361,933	$ 380,238	$ —
Interest rate swap agreements	39,702,470	48,487,435	(83,710,905)	4,479,000	44,346,426	(334,502)
Swaptions, net	1,257,000	1,017,000	(2,274,000)	—	1,318,956	(50,700)
TBAs, net	7,427,000	20,073,000	(24,264,000)	3,236,000	3,328,819	(125,483)
U.S. Treasury futures	(380,000)	8,230,000	(7,850,000)	—	527,170	23,004
Markit IOS total return swaps	41,890	—	(41,890)	—	20,394	(2,077)
Total	$ 48,445,497	$ 77,807,435	$ (118,175,999)	$ 8,076,933	$ 49,922,003	$ (489,758)

(1) Excludes net interest paid or received in full settlement of the net interest spread liability.

Cash flow activity related to derivative instruments is reflected within the operating activities and investing activities sections of the condensed consolidated statements of cash flows. Realized gains and losses and derivative fair value adjustments are reflected within the realized and unrealized (gain) loss on interest rate swaps and swaptions and unrealized loss (gain) on other derivative instruments line items within the operating activities section of the condensed consolidated statements of cash flows. The remaining cash flow activity related to derivative instruments is reflected within the (purchases) short sales of other derivative instruments, (payments for termination and settlement) proceeds from sales and settlements of derivative instruments, net and increase in due to counterparties, net line items within the investing activities section of the condensed consolidated statements of cash flows.

Interest Rate Sensitive Assets/Liabilities

The Company's Agency RMBS portfolio is generally subject to change in value when interest rates decline or increase, depending on the type of investment. Rising interest rates generally result in a decline in the value of the Company's fixed-rate Agency principal and interest (P&I) RMBS. To mitigate the impact of this risk on the Company's fixed-rate Agency P&I RMBS portfolio, the Company maintains a portfolio of fixed-rate interest-only securities and MSR, which increase in value when interest rates increase. As of June 30, 2021 and December 31, 2020, the Company had $377.0 million and $245.9 million, respectively, of interest-only securities, and $2.0 billion and $1.6 billion, respectively, of MSR in place to primarily hedge its Agency RMBS. Interest-only securities are included in AFS securities, at fair value, in the condensed consolidated balance sheets.

The Company monitors its borrowings under repurchase agreements and revolving credit facilities, which are generally floating-rate debt, in relation to the rate profile of its portfolio. In connection with its risk management activities, the Company enters into a variety of derivative and non-derivative instruments to economically hedge interest rate risk or duration mismatch (or gap) by adjusting the duration of its floating-rate borrowings into fixed-rate borrowings to more closely match the duration of its assets. This particularly applies to borrowing agreements with maturities or interest rate resets of less than six months. Typically, the interest receivable terms (*e.g.*, LIBOR or the OIS rate) of certain derivatives match the terms of the underlying debt, resulting in an effective conversion of the rate of the related borrowing agreement from floating to fixed. The objective is to manage the cash flows associated with current and anticipated interest payments on borrowings, as well as the ability to roll or refinance borrowings at the desired amount by adjusting the duration. To help manage the adverse impact of interest rate changes on the value of the Company's portfolio as well as its cash flows, the Company may, at times, enter into various forward contracts, including short securities, TBAs, options, futures, swaps, caps, credit default swaps and total return swaps. In executing on the Company's current interest rate risk management strategy, the Company has entered into TBAs, interest rate swap and swaption agreements and U.S. Treasury and Eurodollar futures.

TBAs. At times, the Company may use TBAs as a means of deploying capital until targeted investments are available or to take advantage of temporary displacements, funding advantages or valuation differentials in the marketplace. Additionally, the Company may use TBAs independently, or in conjunction with other derivative and non-derivative instruments, in order to mitigate risks. TBAs are forward contracts for the purchase (long notional positions) or sale (short notional positions) of Agency RMBS. The issuer, coupon and stated maturity of the Agency RMBS are predetermined as well as the trade price, face amount and future settle date (published each month by the Securities Industry and Financial Markets Association). However, the specific Agency RMBS to be delivered upon settlement is not known at the time of the TBA transaction. As a result, and because physical delivery of the Agency RMBS upon settlement cannot be assured, the Company accounts for TBAs as derivative instruments.

The Company may hold both long and short notional TBA positions, which are disclosed on a gross basis according to the unrealized gain or loss position of each TBA contract regardless of long or short notional position. The following tables present the notional amount, cost basis, market value and carrying value (which approximates fair value) of the Company's TBA positions as of June 30, 2021 and December 31, 2020:

	June 30, 2021				
				Net Carrying Value (4)	
(in thousands)	Notional Amount (1)	Cost Basis (2)	Market Value (3)	Derivative Assets	Derivative Liabilities
Purchase contracts	$ 6,854,000	$ 7,161,265	$ 7,164,835	$ 9,384	$ (5,814)
Sale contracts	—	—	—	—	—
TBAs, net	$ 6,854,000	$ 7,161,265	$ 7,164,835	$ 9,384	$ (5,814)

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	December 31, 2020				
				Net Carrying Value (4)	
(in thousands)	Notional Amount (1)	Cost Basis (2)	Market Value (3)	Derivative Assets	Derivative Liabilities
Purchase contracts	$ 7,700,000	$ 8,102,344	$ 8,132,406	$ 30,062	$ —
Sale contracts	(2,503,000)	(2,640,465)	(2,650,927)	—	(10,462)
TBAs, net	$ 5,197,000	$ 5,461,879	$ 5,481,479	$ 30,062	$ (10,462)

(1) Notional amount represents the face amount of the underlying Agency RMBS.
(2) Cost basis represents the forward price to be paid (received) for the underlying Agency RMBS.
(3) Market value represents the current market value of the TBA (or of the underlying Agency RMBS) as of period-end.
(4) Net carrying value represents the difference between the market value of the TBA as of period-end and its cost basis, and is reported in derivative assets / (liabilities), at fair value, in the condensed consolidated balance sheets.

U.S. Treasury and Eurodollar Futures. The Company may use U.S. Treasury and Eurodollar futures independently, or in conjunction with other derivative and non-derivative instruments, in order to mitigate risks. The Company had a net long position in U.S. Treasury and Eurodollar futures with a notional amount of $513.5 million and a fair market value of $7 thousand included in derivative assets, at fair value, and $2.5 million included in derivative liabilities, at fair value, on the condensed consolidated balance sheet as of June 30, 2021. The Company had a net long position in U.S. Treasury futures with a notional amount of $2.0 billion and a fair market value of $3.7 million included in derivative assets, at fair value, on the condensed consolidated balance sheet as of December 31, 2020.

Interest Rate Swap Agreements. The Company may use interest rate swaps independently, or in conjunction with other derivative and non-derivative instruments, in order to mitigate risks. As of June 30, 2021 and December 31, 2020, the Company held the following interest rate swaps that were utilized as economic hedges of interest rate exposure (or duration) whereby the Company receives interest at a floating interest rate (LIBOR or the OIS rate):

(notional in thousands)

June 30, 2021				
Swaps Maturities	Notional Amount	Weighted Average Fixed Pay Rate	Weighted Average Receive Rate	Weighted Average Maturity (Years)
2021	$ —	— %	— %	0.00
2022	7,415,818	0.042 %	0.080 %	1.16
2023	2,281,500	0.023 %	0.080 %	1.98
2024	—	— %	— %	0.00
2025 and Thereafter	1,497,500	0.257 %	0.080 %	5.99
Total	$ 11,194,818	0.067 %	0.080 %	1.97

(notional in thousands)

December 31, 2020				
Swaps Maturities	Notional Amount	Weighted Average Fixed Pay Rate	Weighted Average Receive Rate	Weighted Average Maturity (Years)
2021	$ —	— %	— %	0.00
2022	7,415,818	0.042 %	0.090 %	1.66
2023	2,281,500	0.023 %	0.090 %	2.48
2024	—	— %	— %	0.00
2025 and Thereafter	1,497,500	0.257 %	0.090 %	6.49
Total	$ 11,194,818	0.067 %	0.090 %	2.47

Additionally, as of June 30, 2021 and December 31, 2020, the Company held the following interest rate swaps in order to mitigate mortgage interest rate exposure (or duration) risk whereby the Company pays interest at a floating interest rate (LIBOR or the OIS rate):

(notional in thousands)

	June 30, 2021			
Swaps Maturities	**Notional Amounts**	**Weighted Average Pay Rate**	**Weighted Average Fixed Receive Rate**	**Weighted Average Maturity (Years)**
2021	$ —	— %	— %	0.00
2022	—	— %	— %	0.00
2023	2,221,658	0.080 %	0.118 %	1.69
2024	—	— %	— %	0.00
2025 and Thereafter	2,230,477	0.086 %	0.817 %	9.34
Total	$ 4,452,135	0.083 %	0.468 %	5.53

(notional in thousands)

	December 31, 2020			
Swaps Maturities	**Notional Amounts**	**Weighted Average Pay Rate**	**Weighted Average Fixed Receive Rate**	**Weighted Average Maturity (Years)**
2021	$ —	— %	— %	0.00
2022	—	— %	— %	0.00
2023	—	— %	— %	0.00
2024	—	— %	— %	0.00
2025 and Thereafter	1,451,523	0.090 %	0.468 %	9.49
Total	$ 1,451,523	0.090 %	0.468 %	9.49

Interest Rate Swaptions. The Company may use interest rate swaptions (which provide the option to enter into interest rate swap agreements for a predetermined notional amount, stated term and pay and receive interest rates in the future) independently, or in conjunction with other derivative and non-derivative instruments, in order to mitigate risks. As of June 30, 2021 and December 31, 2020, the Company had the following outstanding interest rate swaptions:

(notional and dollars in thousands)	June 30, 2021							
	Option				Underlying Swap			
Swaption	**Expiration**	**Cost Basis**	**Fair Value**	**Average Months to Expiration**	**Notional Amount**	**Average Pay Rate**	**Average Receive Rate**	**Averag Term (Years)**
Purchase contracts:								
Payer	≥ 6 Months	$ 11,314	$ 6,902	11.29	$ 886,000	2.26 %	3M LIBOR	10
Sale contracts:								
Receiver	≥ 6 Months	$ (10,640)	$ (12,790)	11.11	$ (1,087,000)	3M LIBOR	1.26 %	10

(notional and dollars in thousands)	December 31, 2020							
	Option				Underlying Swap			
Swaption	Expiration	Cost	Fair Value	Average Months to Expiration	Notional Amount	Average Pay Rate	Average Receive Rate	Averag Term (Years)
Purchase contracts:								
Payer	< 6 Months	$ 7,210	$ 2,448	4.23	$ 2,800,000	1.32 %	3M LIBOR	10
Receiver	< 6 Months	$ 3,010	$ —	0.97	$ 2,000,000	3M LIBOR	0.23 %	10
Sale contracts:								
Receiver	< 6 Months	$ (2,600)	$ (3,044)	5.13	$ (1,050,000)	3M LIBOR	0.55 %	10

Credit Risk

The Company’s exposure to credit losses on its Agency RMBS portfolio is limited due to implicit or explicit backing from the GSEs. The payment of principal and interest on the Freddie Mac and Fannie Mae mortgage-backed securities are guaranteed by those respective agencies, and the payment of principal and interest on the Ginnie Mae mortgage-backed securities are backed by the full faith and credit of the U.S. government.

In future periods, the Company could enhance its credit risk protection, enter into further paired derivative positions, including both long and short credit default swaps, and/or seek opportunistic trades in the event of a market disruption (see discussion under “*Non-Risk Management Activities*” below). The Company also has processes and controls in place to monitor, analyze, manage and mitigate its credit risk with respect to non-Agency securities.

Derivative financial instruments contain an element of credit risk if counterparties are unable to meet the terms of the agreements. Credit risk associated with derivative financial instruments is measured as the net replacement cost should the counterparties that owe the Company under such contracts completely fail to perform under the terms of these contracts, assuming there are no recoveries of underlying collateral, as measured by the market value of the derivative financial instruments. As of June 30, 2021, the fair value of derivative financial instruments as an asset and liability position was $60.4 million and $14.2 million, respectively.

The Company attempts to mitigate its credit risk exposure on derivative financial instruments by limiting its counterparties to banks and financial institutions that meet established internal credit guidelines. The Company also seeks to spread its credit risk exposure across multiple counterparties in order to reduce its exposure to any single counterparty. Additionally, the Company reduces credit risk on the majority of its derivative instruments by entering into agreements that permit the closeout and netting of transactions with the same counterparty or clearing agency, in the case of centrally cleared interest rate swaps, upon the occurrence of certain events. To further mitigate the risk of counterparty default, the Company maintains collateral agreements with certain of its counterparties and clearing agencies, which require both parties to maintain cash deposits in the event the fair values of the derivative financial instruments exceed established thresholds. The Company’s centrally cleared interest rate swaps require that the Company posts an “initial margin” amount determined by the clearing exchange, which is generally intended to be set at a level sufficient to protect the exchange from the interest rate swap’s maximum estimated single-day price movement. The Company also exchanges “variation margin” based upon daily changes in fair value, as measured by the exchange. The exchange of variation margin is considered a settlement of the interest rate swap, as opposed to pledged collateral. Accordingly, the Company accounts for the receipt or payment of variation margin as a direct reduction to the carrying value of the interest rate swap asset or liability.

Note 8. Reverse Repurchase Agreements

As of June 30, 2021 and December 31, 2020, the Company had $66.9 million and $89.5 million in amounts due to counterparties as collateral for reverse repurchase agreements that could be pledged, delivered or otherwise used, with a fair value of $70.0 million and $91.5 million, respectively.

Note 9. Offsetting Assets and Liabilities

Certain of the Company's repurchase agreements are governed by underlying agreements that provide for a right of setoff in the event of default by either party to the agreement. The Company also has netting arrangements in place with all derivative counterparties pursuant to standard documentation developed by the International Swap and Derivatives Association, or ISDA, or central clearing exchange agreements, in the case of centrally cleared interest rate swaps. The Company and the counterparty or clearing agency are required to post cash collateral based upon the net underlying market value of the Company's open positions with the counterparty. Additionally, the Company's centrally cleared interest rate swaps require that the Company posts an initial margin amount determined by the clearing exchange, which is generally intended to be set at a level sufficient to protect the exchange from the interest rate swap's maximum estimated single-day price movement. The Company also exchanges variation margin based upon daily changes in fair value, as measured by the exchange.

Under U.S. GAAP, if the Company has a valid right of setoff, it may offset the related asset and liability and report the net amount. Based on rules governing certain central clearing activities, the exchange of variation margin is considered a settlement of the interest rate swap, as opposed to pledged collateral. Accordingly, the Company accounts for the receipt or payment of variation margin on Chicago Mercantile Exchange, or CME, and London Clearing House, or LCH, cleared positions as a direct reduction to the carrying value of the interest rate swap asset or liability. The receipt or payment of initial margin is accounted for separate from the interest rate swap asset or liability.

Reverse repurchase agreements and repurchase agreements with the same counterparty and the same maturity are presented net in the Company's condensed consolidated balance sheets when the terms of the agreements meet the criteria to permit netting. The Company reports cash flows on repurchase agreements as financing activities and cash flows on reverse repurchase agreements as investing activities in the condensed consolidated statements of cash flows. The Company presents derivative assets and liabilities (other than centrally cleared interest rate swaps) subject to master netting arrangements or similar agreements on a net basis, based on derivative type and counterparty, in its condensed consolidated balance sheets. Separately, the Company presents cash collateral subject to such arrangements (other than variation margin on centrally cleared interest rate swaps) on a net basis, based on counterparty, in its condensed consolidated balance sheets. However, the Company does not offset repurchase agreements, reverse repurchase agreements or derivative assets and liabilities (other than centrally cleared interest rate swaps) with the associated cash collateral on its condensed consolidated balance sheets.

The following tables present information about the Company's assets and liabilities that are subject to master netting arrangements or similar agreements and can potentially be offset on the Company's condensed consolidated balance sheets as of June 30, 2021 and December 31, 2020:

	June 30, 2021					
				Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets [(1)]		
(in thousands)	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Balance Sheets	Net Amounts of Assets (Liabilities) Presented in the Balance Sheets	Financial Instruments	Cash Collateral (Received) Pledged	Net Amount
Assets						
Derivative assets	$ 150,891	$ (90,515)	$ 60,376	$ (14,208)	$ —	$ 46,168
Reverse repurchase agreements	70,000	—	70,000	—	(66,893)	3,107
Total Assets	$ 220,891	$ (90,515)	$ 130,376	$ (14,208)	$ (66,893)	$ 49,275
Liabilities						
Repurchase agreements	$ (8,350,622)	$ —	$ (8,350,622)	$ 8,350,622	$ —	$ —
Derivative liabilities	(104,723)	90,515	(14,208)	14,208	—	—
Total Liabilities	$ (8,455,345)	$ 90,515	$ (8,364,830)	$ 8,364,830	$ —	$ —

	December 31, 2020					
				Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets (1)		
(in thousands)	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Balance Sheets	Net Amounts of Assets (Liabilities) Presented in the Balance Sheets	Financial Instruments	Cash Collateral (Received) Pledged	Net Amount
Assets						
Derivative assets	$ 124,023	$ (28,086)	$ 95,937	$ (11,058)	$ —	$ 84,879
Reverse repurchase agreements	91,525	—	91,525	—	(89,469)	2,056
Total Assets	$ 215,548	$ (28,086)	$ 187,462	$ (11,058)	$ (89,469)	$ 86,935
Liabilities						
Repurchase agreements	$ (15,143,898)	$ —	$ (15,143,898)	$ 15,143,898	$ —	$ —
Derivative liabilities	(39,144)	28,086	(11,058)	11,058	—	—
Total Liabilities	$ (15,183,042)	$ 28,086	$ (15,154,956)	$ 15,154,956	$ —	$ —

(1) Amounts presented are limited in total to the net amount of assets or liabilities presented in the condensed consolidated balance sheets by instrument. Excess cash collateral or financial assets that are pledged to counterparties may exceed the financial liabilities subject to a master netting arrangement or similar agreement, or counterparties may have pledged excess cash collateral to the Company that exceed the corresponding financial assets. These excess amounts are excluded from the table above, although separately reported within restricted cash, due from counterparties, or due to counterparties in the Company's condensed consolidated balance sheets.

Note 10. Fair Value

Fair Value Measurements

ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 clarifies that fair value should be based on the assumptions market participants would use when pricing an asset or liability and establishes a fair value hierarchy that prioritizes the information used to develop those assumptions. The fair value hierarchy gives the highest priority to quoted prices available in active markets (*i.e.*, observable inputs) and the lowest priority to data lacking transparency (*i.e.*, unobservable inputs). Additionally, ASC 820 requires an entity to consider all aspects of nonperformance risk, including the entity's own credit standing, when measuring fair value of a liability.

ASC 820 establishes a three-level hierarchy to be used when measuring and disclosing fair value. An instrument's categorization within the fair value hierarchy is based on the lowest level of significant input to its valuation. Following is a description of the three levels:

Level 1 Inputs are quoted prices in active markets for identical assets or liabilities as of the measurement date under current market conditions. Additionally, the entity must have the ability to access the active market and the quoted prices cannot be adjusted by the entity.

Level 2 Inputs include quoted prices in active markets for similar assets or liabilities; quoted prices in inactive markets for identical or similar assets or liabilities; or inputs that are observable or can be corroborated by observable market data by correlation or other means for substantially the full-term of the assets or liabilities.

Level 3 Unobservable inputs are supported by little or no market activity. The unobservable inputs represent the assumptions that market participants would use to price the assets and liabilities, including risk. Generally, Level 3 assets and liabilities are valued using pricing models, discounted cash flow methodologies, or similar techniques that require significant judgment or estimation.

The following are descriptions of the valuation methodologies used to measure material assets and liabilities at fair value and details of the valuation models, key inputs to those models and significant assumptions utilized.

Available-for-sale securities. The Company holds a portfolio of AFS securities that are carried at fair value in the condensed consolidated balance sheets and primarily comprised of Agency RMBS and non-Agency securities. The Company determines the fair value of its Agency RMBS based upon prices obtained from third-party brokers and pricing vendors received using bid price, which are deemed indicative of market activity. The third-party pricing vendors use pricing models that generally incorporate such factors as coupons, primary and secondary mortgage rates, rate reset period, issuer, prepayment speeds, credit enhancements and expected life of the security. In determining the fair value of its non-Agency securities, management judgment may be used to arrive at fair value that considers prices obtained from third-party pricing vendors and other applicable market data. If observable market prices are not available or insufficient to determine fair value due principally to illiquidity in the marketplace, then fair value is based upon models that are primarily based on observable market-based inputs but also include unobservable market data inputs (including prepayment speeds, delinquency levels, and credit losses).

The Company classified 99.9% and 0.1% of its AFS securities as Level 2 and Level 3 fair value assets, respectively, at June 30, 2021. AFS securities account for 79.0% of all assets reported at fair value at June 30, 2021.

Mortgage servicing rights. The Company holds a portfolio of MSR that are carried at fair value on the condensed consolidated balance sheets. The Company determines fair value of its MSR based on prices obtained from third-party pricing vendors. Although MSR transactions may be observable in the marketplace, the details of those transactions are not necessarily reflective of the value of the Company's MSR portfolio. Third-party vendors use both observable market data and unobservable market data (including forecasted prepayment speeds; delinquency levels; option-adjusted spread, or OAS, which represents the incremental spread added to the risk-free rate to reflect the effects of any embedded options and other risk inherent in MSR; and cost to service) as inputs into models, which help to inform their best estimates of fair value market price. As a result, the Company classified 100% of its MSR as Level 3 fair value assets at June 30, 2021.

Derivative instruments. The Company may enter into a variety of derivative financial instruments as part of its hedging strategies. The Company principally executes over-the-counter, or OTC, derivative contracts, such as interest rate swaps, swaptions and Markit IOS total return swaps. The Company utilizes third-party brokers to value its financial derivative instruments. The Company classified 100% of the interest rate swaps reported at fair value as Level 2 at June 30, 2021. The Company did not hold any swaptions or Markit IOS total return swaps at June 30, 2021.

The Company may also enter into certain other derivative financial instruments, such as TBAs, short U.S. Treasuries, U.S. Treasury and Eurodollar futures and inverse interest-only securities. These instruments are similar in form to the Company's AFS securities and the Company utilizes third-party vendors to value TBAs, short U.S. Treasuries, U.S. Treasury and Eurodollar futures and inverse interest-only securities. The Company classified 100% of its inverse interest-only securities at fair value as Level 2 at June 30, 2021. The Company reported 100% of its TBAs and U.S. Treasury and Eurodollar futures as Level 1 as of June 30, 2021. The Company did not hold any short U.S. Treasuries at June 30, 2021.

The Company's policy is to minimize credit exposure related to financial derivatives used for hedging by limiting the hedge counterparties to major banks, financial institutions, exchanges, and private investors who meet established capital and credit guidelines as well as by limiting the amount of exposure to any individual counterparty.

The Company has netting arrangements in place with all derivative counterparties pursuant to standard documentation developed by ISDA, or central clearing exchange agreements, in the case of centrally cleared interest rate swaps. Additionally, both the Company and the counterparty or clearing agency are required to post cash collateral based upon the net underlying market value of the Company's open positions with the counterparty. Posting of cash collateral typically occurs daily, subject to certain dollar thresholds. Due to the existence of netting arrangements, as well as frequent cash collateral posting at low posting thresholds, credit exposure to the Company and/or to the counterparty or clearing agency is considered materially mitigated. Based on the Company's assessment, there is no requirement for any additional adjustment to derivative valuations specifically for credit.

The following tables display the Company’s assets and liabilities measured at fair value on a recurring basis. The Company often economically hedges the fair value change of its assets or liabilities with derivatives and other financial instruments. The tables below display the hedges separately from the hedged items, and therefore do not directly display the impact of the Company’s risk management activities:

	Recurring Fair Value Measurements June 30, 2021			
(in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Available-for-sale securities	$ —	$ 7,834,487	$ 5,559	$ 7,840,046
Mortgage servicing rights	—	—	2,020,106	2,020,106
Derivative assets	9,391	50,985	—	60,376
Total assets	$ 9,391	$ 7,885,472	$ 2,025,665	$ 9,920,528
Liabilities:				
Derivative liabilities	$ 8,320	$ 5,888	$ —	$ 14,208
Total liabilities	$ 8,320	$ 5,888	$ —	$ 14,208

	Recurring Fair Value Measurements December 31, 2020			
(in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Available-for-sale securities	$ —	$ 14,637,891	$ 13,031	$ 14,650,922
Mortgage servicing rights	—	—	1,596,153	1,596,153
Derivative assets	33,737	62,200	—	95,937
Total assets	$ 33,737	$ 14,700,091	$ 1,609,184	$ 16,343,012
Liabilities:				
Derivative liabilities	$ 10,462	$ 596	$ —	$ 11,058
Total liabilities	$ 10,462	$ 596	$ —	$ 11,058

The Company may be required to measure certain assets or liabilities at fair value from time to time. These periodic fair value measures typically result from application of certain impairment measures under U.S. GAAP. These items would constitute nonrecurring fair value measures under ASC 820. As of June 30, 2021, the Company did not have any assets or liabilities measured at fair value on a nonrecurring basis in the periods presented.

The valuation of Level 3 instruments requires significant judgment by the third-party pricing vendors and/or management. The third-party pricing vendors and/or management rely on inputs such as market price quotations from market makers (either market or indicative levels), original transaction price, recent transactions in the same or similar instruments, and changes in financial ratios or cash flows to determine fair value. Level 3 instruments may also be discounted to reflect illiquidity and/or non-transferability, with the amount of such discount estimated by the third-party pricing vendors in the absence of market information. Assumptions used by the third-party pricing vendors due to lack of observable inputs may significantly impact the resulting fair value and therefore the Company’s condensed consolidated financial statements.

The Company’s valuation committee reviews all valuations that are based on pricing information received from third-party pricing vendors. As part of this review, prices are compared against other pricing or input data points in the marketplace, along with internal valuation expertise, to ensure the pricing is reasonable. In addition, the Company performs back-testing of pricing information to validate price information and identify any pricing trends of a third-party pricing vendors.

In determining fair value, third-party pricing vendors use various valuation approaches, including market and income approaches. Inputs that are used in determining fair value of an instrument may include pricing information, credit data, volatility statistics, and other factors. In addition, inputs can be either observable or unobservable.

The availability of observable inputs can vary by instrument and is affected by a wide variety of factors, including the type of instrument, whether the instrument is new and not yet established in the marketplace and other characteristics particular to the instrument. The third-party pricing vendor uses prices and inputs that are current as of the measurement date, including during periods of market dislocations. In periods of market dislocation, the availability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be reclassified to or from various levels within the fair value hierarchy.

Securities that are priced using third-party broker quotations are valued at the bid price (in the case of long positions) or the ask price (in the case of short positions) at the close of trading on the date as of which value is determined. Exchange-traded securities for which no bid or ask price is available are valued at the last traded price. OTC derivative contracts, including interest rate swap and swaption agreements, put and call options for TBAs and U.S. Treasuries, U.S. Treasury and Eurodollar futures and Markit IOS total return swaps, are valued by the Company using observable inputs, specifically quotations received from third-party brokers.

The following tables present the reconciliation for the Company's Level 3 assets measured at fair value on a recurring basis:

	Three Months Ended June 30, 2021		Six Months Ended June 30, 2021	
(in thousands)	**Available-For-Sale Securities**	**Mortgage Servicing Rights**	**Available-For-Sale Securities**	**Mortgage Servicing Rights**
Beginning of period level 3 fair value	$ 9,219	$ 2,091,761	$ 13,031	$ 1,596,153
Gains (losses) included in net (loss) income:				
Realized	(5,361)	(195,141)	(6,992)	(369,396)
Unrealized	—	(72,910) (1)	—	428,783 (1)
Reversal of provision for credit losses	4,803	—	7,798	—
Net gains (losses) included in net (loss) income	(558)	(268,051)	806	59,387
Other comprehensive (loss) income	(1,525)	—	(6,701)	—
Purchases	—	198,526	—	373,749
Sales	(1,577)	—	(1,577)	—
Settlements	—	(2,130)	—	(9,183)
Gross transfers into level 3	—	—	—	—
Gross transfers out of level 3	—	—	—	—
End of period level 3 fair value	$ 5,559	$ 2,020,106	$ 5,559	$ 2,020,106
Change in unrealized gains or losses for the period included in earnings for assets held at the end of the reporting period	$ —	$ (68,379) (2)	$ —	$ 381,029 (2)
Change in unrealized gains or losses for the period included in other comprehensive (loss) income for assets held at the end of the reporting period	$ (145)	$ —	$ (6,702)	$ —

(1) The change in unrealized gains or losses on MSR was recorded in (loss) gain on servicing asset on the condensed consolidated statements of comprehensive (loss) income.
(2) The change in unrealized gains or losses on MSR that were held at the end of the reporting period was recorded in (loss) gain on servicing asset on the condensed consolidated statements of comprehensive (loss) income.

No AFS securities transfers between Level 1, Level 2 or Level 3 were made during the six months ended June 30, 2021. Transfers between Levels are deemed to take place on the first day of the reporting period in which the transfer has taken place.

The Company used multiple third-party pricing vendors in the fair value measurement of its Level 3 AFS securities. The significant unobservable inputs used by the third-party pricing vendors included expected default, severity and discount rate. Significant increases (decreases) in any of the inputs in isolation may result in significantly lower (higher) fair value measurement.

The Company also used multiple third-party pricing vendors in the fair value measurement of its Level 3 MSR. The tables below present information about the significant unobservable market data used by the third-party pricing vendors as inputs into models utilized to inform their best estimates of the fair value measurement of the Company's MSR classified as Level 3 fair value assets at June 30, 2021 and December 31, 2020:

June 30, 2021					
Valuation Technique	Unobservable Input	Range			Weighted Average (1)
Discounted cash flow	Constant prepayment speed	10.1%	-	18.5%	13.4%
	Delinquency	1.0%	-	2.1%	1.5%
	Option-adjusted spread	4.5%	-	9.2%	4.7%
	Per loan annual cost to service	$66.11	-	$84.94	$67.20

December 31, 2020					
Valuation Technique	Unobservable Input	Range			Weighted Average (1)
Discounted cash flow	Constant prepayment speed	14.1%	-	23.5%	19.4%
	Delinquency	1.5%	-	2.6%	2.2%
	Option-adjusted spread	4.7%	-	9.7%	4.8%
	Per loan annual cost to service	$64.56	-	$79.43	$68.27

(1) Calculated by averaging the weighted average significant unobservable inputs used by the multiple third-party pricing vendors in the fair value measurement of MSR.

Fair Value of Financial Instruments

In accordance with ASC 820, the Company is required to disclose the fair value of financial instruments, both assets and liabilities recognized and not recognized in the condensed consolidated balance sheets, for which fair value can be estimated.

The following describes the Company's methods for estimating the fair value for financial instruments.

- AFS securities, MSR, and derivative assets and liabilities are recurring fair value measurements; carrying value equals fair value. See discussion of valuation methods and assumptions within the *Fair Value Measurements* section of this Note 10.
- Cash and cash equivalents and restricted cash have a carrying value which approximates fair value because of the short maturities of these instruments. The Company categorizes the fair value measurement of these assets as Level 1.
- Reverse repurchase agreements have a carrying value which approximates fair value due to their short-term nature. The Company categorizes the fair value measurement of these assets as Level 2.
- The carrying value of repurchase agreements and revolving credit facilities that mature in less than one year generally approximates fair value due to the short maturities. As of June 30, 2021, the Company had outstanding borrowings of $144.8 million under revolving credit facilities that are considered long-term. The Company's long-term revolving credit facilities have floating rates based on an index plus a spread and the credit spread is typically consistent with those demanded in the market. Accordingly, the interest rates on these borrowings are at market and thus carrying value approximates fair value. The Company categorizes the fair value measurement of these liabilities as Level 2.
- Term notes payable are recorded at outstanding principal balance, net of any unamortized deferred debt issuance costs. In determining the fair value of term notes payable, management judgment may be used to arrive at fair value that considers prices obtained from third-party pricing vendors, broker quotes received and other applicable market data. If observable market prices are not available or insufficient to determine fair value due principally to illiquidity in the marketplace, then fair value is based upon internally developed models that are primarily based on observable market-based inputs but also include unobservable market data inputs (including prepayment speeds, delinquency levels, and credit losses). The Company categorizes the fair value measurement of these liabilities as Level 2.
- Convertible senior notes are carried at their unpaid principal balance, net of any unamortized deferred issuance costs. The Company estimates the fair value of its convertible senior notes using the market transaction price nearest to June 30, 2021. The Company categorizes the fair value measurement of these assets as Level 2.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

The following table presents the carrying values and estimated fair values of assets and liabilities that are required to be recorded or disclosed at fair value at June 30, 2021 and December 31, 2020:

(in thousands)	June 30, 2021 Carrying Value	June 30, 2021 Fair Value	December 31, 2020 Carrying Value	December 31, 2020 Fair Value
Assets:				
Available-for-sale securities	$ 7,840,046	$ 7,840,046	$ 14,650,922	$ 14,650,922
Mortgage servicing rights	$ 2,020,106	$ 2,020,106	$ 1,596,153	$ 1,596,153
Cash and cash equivalents	$ 1,281,230	$ 1,281,230	$ 1,384,764	$ 1,384,764
Restricted cash	$ 866,547	$ 866,547	$ 1,261,667	$ 1,261,667
Derivative assets	$ 60,376	$ 60,376	$ 95,937	$ 95,937
Reverse repurchase agreements	$ 70,000	$ 70,000	$ 91,525	$ 91,525
Other assets	$ 3,338	$ 3,338	$ 13,292	$ 13,292
Liabilities:				
Repurchase agreements	$ 8,350,622	$ 8,350,622	$ 15,143,898	$ 15,143,898
Revolving credit facilities	$ 533,519	$ 533,519	$ 283,830	$ 283,830
Term notes payable	$ 396,183	$ 394,211	$ 395,609	$ 380,000
Convertible senior notes	$ 423,742	$ 457,549	$ 286,183	$ 291,376
Derivative liabilities	$ 14,208	$ 14,208	$ 11,058	$ 11,058

Note 11. Repurchase Agreements

As of June 30, 2021 and December 31, 2020, the Company had outstanding $8.4 billion and $15.1 billion, respectively, of repurchase agreements. Excluding the effect of the Company's interest rate swaps, the repurchase agreements had a weighted average borrowing rate of 0.28% and 0.28% and weighted average remaining maturities of 78 and 58 days as of June 30, 2021 and December 31, 2020, respectively.

At June 30, 2021 and December 31, 2020, the repurchase agreement balances were as follows:

(in thousands)	June 30, 2021	December 31, 2020
Short-term	$ 8,350,622	$ 15,143,898
Long-term	—	—
Total	$ 8,350,622	$ 15,143,898

At June 30, 2021 and December 31, 2020, the repurchase agreements had the following characteristics and remaining maturities:

	June 30, 2021				
	Collateral Type				
(in thousands)	Agency RMBS	Non-Agency Securities	Agency Derivatives	Mortgage Servicing Rights	Total Amount Outstanding
Within 30 days	$ 2,086,324	$ 833	$ 11,453	$ —	$ 2,098,610
30 to 59 days	1,298,004	—	20,322	—	1,318,326
60 to 89 days	2,317,399	363	1,238	—	2,319,000
90 to 119 days	1,346,855	—	9,768	—	1,356,623
120 to 364 days	1,133,063	—	—	125,000	1,258,063
Total	$ 8,181,645	$ 1,196	$ 42,781	$ 125,000	$ 8,350,622
Weighted average borrowing rate	0.22 %	1.85 %	0.79 %	4.00 %	0.28 %

	December 31, 2020				
	Collateral Type				
(in thousands)	Agency RMBS	Non-Agency Securities	Agency Derivatives	Mortgage Servicing Rights	Total Amount Outstanding
Within 30 days	$ 5,330,627	$ 1,271	$ 38,608	$ —	$ 5,370,506
30 to 59 days	4,292,861	—	—	—	4,292,861
60 to 89 days	2,060,087	628	1,519	—	2,062,234
90 to 119 days	1,598,052	—	12,146	—	1,610,198
120 to 364 days	1,808,099	—	—	—	1,808,099
Total	$ 15,089,726	$ 1,899	$ 52,273	$ —	$ 15,143,898
Weighted average borrowing rate	0.28 %	2.33 %	0.89 %	— %	0.28 %

The following table summarizes assets at carrying values that are pledged or restricted as collateral for the future payment obligations of repurchase agreements:

(in thousands)	June 30, 2021	December 31, 2020
Available-for-sale securities, at fair value	$ 7,830,079	$ 14,633,217
Mortgage servicing rights, at fair value	295,112	—
Restricted cash	679,279	1,071,239
Due from counterparties	6,606	21,312
Derivative assets, at fair value	50,416	61,557
Total	$ 8,861,492	$ 15,787,325

Although the transactions under repurchase agreements represent committed borrowings until maturity, the respective lender retains the right to mark the underlying collateral to fair value. A reduction in the value of pledged assets would require the Company to provide additional collateral or fund margin calls.

As of both June 30, 2021 and December 31, 2020, the net carrying value of assets sold under agreements to repurchase, including accrued interest plus any cash or assets on deposit to secure the repurchase obligation, less the amount of the repurchase liability, including accrued interest, with any individual counterparty or group of related counterparties did not exceed 10% of total stockholders' equity. The Company does not anticipate any defaults by its repurchase agreement counterparties. There can be no assurance, however, that any such default or defaults will not occur.

Note 12. Revolving Credit Facilities

To finance MSR assets and related servicing advance obligations, the Company has entered into revolving credit facilities collateralized by the value of the MSR and/or servicing advances pledged. As of June 30, 2021 and December 31, 2020, the Company had outstanding short- and long-term borrowings under revolving credit facilities of $533.5 million and $283.8 million with a weighted average borrowing rate of 3.68% and 2.95% and weighted average remaining maturities of 1.2 and 1.1 years, respectively.

At June 30, 2021 and December 31, 2020, borrowings under revolving credit facilities had the following remaining maturities:

(in thousands)	June 30, 2021	December 31, 2020
Within 30 days	$ —	$ —
30 to 59 days	—	—
60 to 89 days	—	—
90 to 119 days	—	—
120 to 364 days	388,726	60,000
One year and over	144,793	223,830
Total	$ 533,519	$ 283,830

Although the transactions under revolving credit facilities represent committed borrowings from the time of funding until maturity, the respective lender retains the right to mark the underlying collateral to fair value. A reduction in the value of pledged assets below a designated threshold would require the Company to provide additional collateral or pay down the facility. As of June 30, 2021 and December 31, 2020, MSR with a carrying value of $904.4 million and $608.8 million, respectively, was pledged as collateral for the Company's future payment obligations under its MSR revolving credit facilities. As of June 30, 2021 and December 31, 2020, servicing advances with a carrying value of $29.1 million and $28.5 million, were pledged as collateral for the Company's future payment obligations under its servicing advance revolving credit facility, respectively. The Company does not anticipate any defaults by its revolving credit facility counterparties, although there can be no assurance that any such default or defaults will not occur.

Note 13. Term Notes Payable

The debt issued in connection with the Company's on-balance sheet securitization is classified as term notes payable and carried at outstanding principal balance, which was $400.0 million as of both June 30, 2021 and December 31, 2020, net of any unamortized deferred debt issuance costs, on the Company's condensed consolidated balance sheets. As of June 30, 2021 and December 31, 2020, the outstanding amount due on term notes payable was $396.2 million and $395.6 million, net of deferred debt issuance costs, with a weighted average interest rate of 2.89% and 2.95% and weighted average remaining maturities of 3.0 years and 3.5 years. At June 30, 2021 and December 31, 2020, the Company pledged MSR with a carrying value of $603.7 million and $537.9 million and weighted average underlying loan coupon of 3.53% and 4.03%, respectively, as collateral for term notes payable. Additionally, as of June 30, 2021 and December 31, 2020, $0.2 million and $55.2 million of cash was held in restricted accounts as collateral for the future payment obligations of outstanding term notes payable, respectively.

Note 14. Convertible Senior Notes

In January 2017, the Company closed an underwritten public offering of $287.5 million aggregate principal amount of convertible senior notes due 2022 ("2022 notes"). The net proceeds from the offering were approximately $282.2 million after deducting underwriting discounts and estimated offering expenses payable by the Company. The 2022 notes are unsecured, pay interest semiannually at a rate of 6.25% per annum and are convertible at the option of the holder into shares of the Company's common stock. As of June 30, 2021 and December 31, 2020, the 2022 notes had a conversion rate of 63.2040 and 63.2040 shares of common stock per $1,000 principal amount of the notes, respectively. The 2022 notes will mature in January 2022, unless earlier converted or repurchased in accordance with their terms.

On February 1, 2021, the Company closed an underwritten public offering of $287.5 million aggregate principal amount of convertible senior notes due 2026 ("2026 notes"), which included $37.5 million aggregate principal amount sold by the Company to the underwriters of the offering pursuant to an overallotment option. The net proceeds from the offering were approximately $279.9 million after deducting underwriting discounts and estimated offering expenses payable by the Company. The 2026 notes are unsecured, pay interest semiannually at a rate of 6.25% per annum and are convertible at the option of the holder into shares of the Company's common stock. As of June 30, 2021, the 2026 notes had a conversion rate of 135.5014 shares of common stock per $1,000 principal amount of the notes. The 2026 notes will mature in January 2026, unless earlier converted or repurchased in accordance with their terms.

The Company used a portion of the net proceeds from the 2026 notes offering to fund the repurchase via privately negotiated transactions of $143.7 million principal amount of its 2022 notes. As of June 30, 2021, $143.8 million principal amount of the 2022 notes remained outstanding.

The Company does not have the right to redeem either the 2022 notes or the 2026 notes prior to maturity, but may repurchase the notes in open market or privately negotiated transactions at the same or differing price without giving prior notice to or obtaining any consent of the holders. The Company may also be required to repurchase the notes from holders under certain circumstances. The aggregate outstanding amount due on the 2022 notes and 2026 notes as of June 30, 2021 and December 31, 2020 was $423.7 million and $286.2 million, respectively, net of deferred issuance costs.

Note 15. Commitments and Contingencies

The following represent the material commitments and contingencies of the Company as of June 30, 2021:

Legal and regulatory. From time to time, the Company may be subject to liability under laws and government regulations and various claims and legal actions arising in the ordinary course of business. Under ASC 450, *Contingencies*, or ASC 450, liabilities are established for legal claims when payments associated with the claims become probable and the costs can be reasonably estimated. The actual costs of resolving legal claims may be substantially higher or lower than the amounts established or the range of reasonably possible loss disclosed for those claims.

As previously disclosed, on April 13, 2020, the Company announced that it had elected not to renew the Management Agreement with PRCM Advisers. Subsequently, on July 15, 2020, the Company provided PRCM Advisers with a notice of termination of the Management Agreement for "cause" in accordance with Section 15(a) of the Management Agreement. The Company terminated the Management Agreement for "cause" on the basis of certain material breaches and certain events of gross negligence on the part of PRCM Advisers in the performance of its duties under the Management Agreement.

On July 21, 2020, PRCM Advisers filed a complaint against the Company in the United States District Court for the Southern District of New York, or the Court. Subsequently, PRCM Advisers filed an amended complaint, or the Federal Complaint, on September 4, 2020. The Federal Complaint alleges, among other things, the misappropriation of trade secrets in violation of both the Defend Trade Secrets Act and New York common law, breach of contract, breach of the implied covenant of good faith and fair dealing, unfair competition and business practices, unjust enrichment, conversion, and tortious interference with contract. The Federal Complaint seeks, among other things, an order enjoining the Company from making any use of or disclosing PRCM Advisers' trade secret, proprietary, or confidential information; damages in an amount to be determined at a hearing and/or trial; disgorgement of the Company's wrongfully obtained profits; and fees and costs incurred by PRCM Advisers in pursuing the action. On September 25, 2020, the Company filed a motion to dismiss the Federal Complaint. PRCM Advisers thereafter filed an opposition to the motion to dismiss on October 16, 2020, and on October 26, 2020, the Company filed its reply.

On June 23, 2021, the Court granted in part and denied in part the Company's motion to dismiss. The Court dismissed PRCM Advisers' claims challenging the termination of the Management Agreement, including PRCM Advisers' claims for breach of contract with respect to Sections 13(a) and 15 of the Management Agreement and for breach of the implied covenant of good faith and fair dealing, as well as certain of PRCM Advisers' other claims. The Company's board of directors believes the Federal Complaint is without merit and that the Company has fully complied with the terms of the Management Agreement.

Separately, the staff of the SEC is conducting a non-public investigation in connection with the Company's decisions not to renew its Management Agreement with PRCM Advisers on the basis of unfair compensation payable to PRCM Advisers in accordance with Section 13(a)(ii) of the Management Agreement and to terminate its Management Agreement with PRCM Advisers for "cause" in accordance with Section 15 of the Management Agreement. The Company is cooperating with the SEC. The Company cannot predict the duration or outcome of the SEC investigation or the extent of any impact it may have on the Company.

As of June 30, 2021, the Company’s condensed consolidated financial statements do not recognize a contingency liability or disclose a range of reasonably possible loss under ASC 450 because management does not believe that a loss or expense related to the Federal Complaint or the SEC investigation is probable or reasonably estimable. The specific factors that limit the Company’s ability to reasonably estimate a loss or expense related to the Federal Complaint or the SEC investigation include that both matters are in early stages and no amount of damages has been specified. If and when management believes losses associated with the Federal Complaint or the SEC investigation are a probable future event that may result in a loss or expense to the Company and the loss or expense is reasonably estimable, the Company will recognize a contingency liability and resulting loss in such period.

Based on information currently available, management is not aware of any other legal or regulatory claims that would have a material effect on the Company’s condensed consolidated financial statements and therefore no accrual is required as of June 30, 2021.

Note 16. Stockholders’ Equity

Redeemable Preferred Stock

The following is a summary of the Company’s series of cumulative redeemable preferred stock issued and outstanding as of June 30, 2021. In the event of a voluntary or involuntary liquidation, dissolution or winding up of the Company, each series of preferred stock will rank on parity with one another and rank senior to the Company's common stock with respect to the payment of the dividends and the distribution of assets.

(dollars in thousands)

Class of Stock	Issuance Date	Shares Issued and Outstanding	Carrying Value	Contractual Rate	Redemption Eligible Date (1)	Fixed to Floating Rate Conversion Date (2)	Floating Annual Rate (3)
Series A	March 14, 2017	5,750,000	$ 138,872	8.125 %	April 27, 2027	April 27, 2027	3M LIBOR + 5.660%
Series B	July 19, 2017	11,500,000	278,094	7.625 %	July 27, 2027	July 27, 2027	3M LIBOR + 5.352%
Series C	November 27, 2017	11,800,000	285,584	7.250 %	January 27, 2025	January 27, 2025	3M LIBOR + 5.011%
Total		29,050,000	$ 702,550				

(1) Subject to the Company’s right under limited circumstances to redeem the preferred stock earlier than the redemption eligible date disclosed in order to preserve its qualification as a REIT or following a change in control of the Company.

(2) The dividend rate on the fixed-to-floating rate redeemable preferred stock will remain at an annual fixed rate of the $25.00 per share liquidation preference from the issuance date up to but not including the transition date disclosed within. Effective as of the fixed-to-floating rate conversion date and onward, dividends will accumulate on a floating rate basis according to the terms disclosed within (3) below.

(3) On and after the fixed-to-floating rate conversion date, the dividend will accumulate and be payable quarterly at a percentage of the $25.00 per share liquidation preference equal to an annual floating rate of three-month LIBOR plus the spread indicated within each preferred class.

For each series of preferred stock, the Company may redeem the stock on or after the redemption date in whole or in part, at any time or from time to time. The Company may also purchase shares of preferred stock from time to time in the open market by tender or in privately negotiated transactions. Each series of preferred stock has a par value of $0.01 per share and a liquidation and redemption price of $25.00, plus any accumulated and unpaid dividends thereon up to, but excluding, the redemption date. Through June 30, 2021, the Company had declared and paid all required quarterly dividends on the Company’s preferred stock.

On February 4, 2021, the Company announced the redemption of all outstanding shares of the Company’s 7.75% Series D Cumulative Redeemable Preferred Stock and 7.5% Series E Cumulative Redeemable Preferred Stock. The redemption date for each series was March 15, 2021 and holders of record as of such date received the redemption payment of $25.00, plus any accumulated and unpaid dividends thereon up to, but excluding, the redemption date.

Distributions to Preferred Stockholders

The following table presents cash dividends declared by the Company on its preferred stock from December 31, 2019 through June 30, 2021:

Declaration Date	Record Date	Payment Date	Cash Dividend Per Preferred Share
Series A Preferred Stock:			
June 17, 2021	July 12, 2021	July 27, 2021	$ 0.507810
March 18, 2021	April 12, 2021	April 27, 2021	$ 0.507810
December 17, 2020	January 12, 2021	January 27, 2021	$ 0.507810
September 21, 2020	October 12, 2020	October 27, 2020	$ 0.507810
June 18, 2020	July 10, 2020	July 27, 2020	$ 0.507810
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.507810
Series B Preferred Stock:			
June 17, 2021	July 12, 2021	July 27, 2021	$ 0.476560
March 18, 2021	April 12, 2021	April 27, 2021	$ 0.476560
December 17, 2020	January 12, 2021	January 27, 2021	$ 0.476560
September 21, 2020	October 12, 2020	October 27, 2020	$ 0.476560
June 18, 2020	July 10, 2020	July 27, 2020	$ 0.476560
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.476560
Series C Preferred Stock:			
June 17, 2021	July 12, 2021	July 27, 2021	$ 0.453130
March 18, 2021	April 12, 2021	April 27, 2021	$ 0.453130
December 17, 2020	January 12, 2021	January 27, 2021	$ 0.453130
September 21, 2020	October 12, 2020	October 27, 2020	$ 0.453130
June 18, 2020	July 10, 2020	July 27, 2020	$ 0.453130
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.453130
Series D Preferred Stock:			
February 4, 2021[(1)]	March 15, 2021	March 15, 2021	$ 0.322920
December 17, 2020	January 1, 2021	January 15, 2021	$ 0.484375
September 21, 2020	October 1, 2020	October 15, 2020	$ 0.484375
June 18, 2020	July 1, 2020	July 15, 2020	$ 0.484375
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.484375
Series E Preferred Stock:			
February 4, 2021[(1)]	March 15, 2021	March 15, 2021	$ 0.312500
December 17, 2020	January 1, 2021	January 15, 2021	$ 0.468750
September 21, 2020	October 1, 2020	October 15, 2020	$ 0.468750
June 18, 2020	July 1, 2020	July 15, 2020	$ 0.468750
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.468750

(1) On February 4, 2021, the Company announced the redemption of all outstanding shares of the Company's Series D Preferred Stock and Series E Preferred Stock. The redemption date for each series was March 15, 2021 and holders of record as of such date received the redemption payment of $25.00, plus any accumulated and unpaid dividends thereon up to, but excluding, the redemption date. The cash dividend payment amount identified in this row represents the per share accrued and unpaid dividends paid on the redemption date.

On March 24, 2020, as a result of the volatile market conditions related to the COVID-19 pandemic, the Company announced that it had suspended its first quarter 2020 preferred stock dividends in order to preserve liquidity and long-term stockholder value. Subsequently, on April 6, 2020, the Company's board of directors declared its first quarter 2020 preferred stock dividends, as detailed above. Pursuant to their terms, all unpaid dividends on the Company's preferred stock accrue without interest.

Common Stock

As of June 30, 2021, the Company had 273,718,311 shares of common stock outstanding. The following table presents a reconciliation of the common shares outstanding for the three and six months ended June 30, 2021 and 2020:

	Number of common shares
Common shares outstanding, December 31, 2019	272,935,731
Issuance of common stock	36,761
Issuance of restricted stock [(1)]	832,867
Repurchase of common stock	(105,300)
Common shares outstanding, June 30, 2020	273,700,059
Common shares outstanding, December 31, 2020	273,703,882
Issuance of common stock	27,018
Issuance of restricted stock [(1)(2)]	(12,589)
Repurchase of common stock	—
Common shares outstanding, June 30, 2021	273,718,311

(1) Represents shares of restricted stock granted under the Company's Equity Incentive Plans, net of forfeitures.
(2) During the six months ended June 30, 2021, the Company also granted RSUs and PSUs to the Company's independent directors and certain eligible employees pursuant to the terms of the Company's Equity Incentive Plans. The RSUs and PSUs are subject to vesting requirements and the common shares to be issued, subject to each grantee's compliance with the terms and conditions of the applicable RSU or PSU award agreement, will not be considered outstanding until the applicable vesting date.

Distributions to Common Stockholders

The following table presents cash dividends declared by the Company on its common stock from December 31, 2019 through June 30, 2021:

Declaration Date	Record Date	Payment Date	Cash Dividend Per Common Share
June 17, 2021	June 29, 2021	July 29, 2021	$ 0.170000
March 18, 2021	March 29, 2021	April 29, 2021	$ 0.170000
December 17, 2020	December 30, 2020	January 29, 2021	$ 0.170000
September 21, 2020	October 1, 2020	October 29, 2020	$ 0.140000
June 18, 2020	June 30, 2020	July 29, 2020	$ 0.140000
April 6, 2020	April 16, 2020	April 29, 2020	$ 0.050000

On March 24, 2020, as a result of the volatile market conditions related to the COVID-19 pandemic, the Company announced that it had suspended its first quarter 2020 common stock dividend in order to preserve liquidity and long-term stockholder value. Subsequently, on April 6, 2020, the Company's board of directors declared an interim common stock dividend of $0.05 per share, as detailed above.

Dividend Reinvestment and Direct Stock Purchase Plan

The Company sponsors a dividend reinvestment and direct stock purchase plan through which stockholders may purchase additional shares of the Company's common stock by reinvesting some or all of the cash dividends received on shares of the Company's common stock. Stockholders may also make optional cash purchases of shares of the Company's common stock subject to certain limitations detailed in the plan prospectus. The plan allows for the issuance of up to an aggregate of 3,750,000 shares of the Company's common stock. As of June 30, 2021, 358,231 shares have been issued under the plan for total proceeds of approximately $5.5 million, of which 12,363 and 27,018 shares were issued for total proceeds of $0.1 million and $0.2 million during the three and six months ended June 30, 2021, respectively. During the three and six months ended June 30, 2020, 20,263 and 36,761 shares were issued for total proceeds of $0.1 million and $0.2 million, respectively.

Share Repurchase Program

The Company's share repurchase program allows for the repurchase of up to an aggregate of 37,500,000 shares of the Company's common stock. Shares may be repurchased from time to time through privately negotiated transactions or open market transactions, pursuant to a trading plan in accordance with Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, or by any combination of such methods. The manner, price, number and timing of share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The share repurchase program does not require the purchase of any minimum number of shares, and, subject to SEC rules, purchases may be commenced or suspended at any time without prior notice. The share repurchase program does not have an expiration date. As of June 30, 2021, a total of 12,174,300 shares had been repurchased by the Company under the program for an aggregate cost of $201.5 million; of these, 105,300 shares were repurchased at a total cost of $1.1 million during the six months ended June 30, 2020. No shares were repurchased during the three months ended June 30, 2020 or the three and six months ended June 30, 2021.

At-the-Market Offerings

The Company is party to an equity distribution agreement under which the Company is authorized to sell up to an aggregate of 35,000,000 shares of its common stock from time to time in any method permitted by law deemed to be an "at the market" offering as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act. As of June 30, 2021, 7,490,235 shares of common stock had been sold under the equity distribution agreements for total accumulated net proceeds of approximately $128.6 million. No shares were sold during the three and six months ended June 30, 2021 or 2020.

Accumulated Other Comprehensive Income

Accumulated other comprehensive income at June 30, 2021 and December 31, 2020 was as follows:

(in thousands)	June 30, 2021	December 31, 2020
Available-for-sale securities:		
Unrealized gains	$ 326,237	$ 661,734
Unrealized losses	(18,988)	(20,133)
Accumulated other comprehensive income	$ 307,249	$ 641,601

Reclassifications out of Accumulated Other Comprehensive Income

The Company reclassifies unrealized gains and losses on AFS securities in accumulated other comprehensive income to net (loss) income upon the recognition of any realized gains and losses on sales, net of income tax effects, if any, as individual securities are sold. For the three and six months ended June 30, 2021 the Company reclassified $5.1 million and $73.7 million, respectively, in unrealized gains on sold AFS securities from accumulated other comprehensive income to (loss) gain on investment securities on the condensed consolidated statements of comprehensive (loss) income. For the three and six months ended June 30, 2020 the Company reclassified $38.3 million and $471.3 million, respectively, in unrealized gains on sold AFS securities from accumulated other comprehensive income to (loss) gain on investment securities on the condensed consolidated statements of comprehensive (loss) income.

Note 17. Equity Incentive Plans

On May 19, 2021, the Company's stockholders approved the 2021 Plan, which replaced the 2009 Plan. The 2021 Plan provides for the issuance of up to 17,000,000 shares of the Company's common stock pursuant to awards granted thereunder. Awards previously granted under the 2009 Plan remain outstanding and valid in accordance with their terms, but no new awards will be granted under the 2009 Plan.

The Company's Equity Incentive Plans provide incentive compensation to attract and retain qualified directors, officers, personnel and other parties who may provide significant services to the Company. The Equity Incentive Plans are administered by the compensation committee of the Company's board of directors. The compensation committee has the full authority to administer and interpret the Equity Incentive Plans, to authorize the granting of awards, to determine the eligibility of potential recipients to receive an award, to determine the number of shares of common stock to be covered by each award (subject to the individual participant limitations provided in the Equity Incentive Plans), to determine the terms, provisions and conditions of each award (which may not be inconsistent with the terms of the Equity Incentive Plans), to prescribe the form of instruments evidencing awards and to take any other actions and make all other determinations that it deems necessary or appropriate in connection with the Equity Incentive Plans or the administration or interpretation thereof. In connection with this authority, the compensation committee may, among other things, establish performance goals that must be met in order for awards to be granted or to vest, or for the restrictions on any such awards to lapse.

The Equity Incentive Plans provide for grants of restricted common stock, RSUs, performance-based awards (including PSUs), phantom shares, dividend equivalent rights and other equity-based awards. The 2021 Plan is subject to a ceiling of 17,000,000 shares and the 2009 Plan is subject to a ceiling of 6,500,000 shares of the Company's common stock; however, following stockholder approval of the 2021 Plan, no new awards will be granted under the 2009 Plan. The Equity Incentive Plans allow for the Company's board of directors to expand the types of awards available under the Equity Incentive Plans to include long-term incentive plan units in the future. If an award granted under the Equity Incentive Plans expires or terminates, the shares subject to any portion of the award that expires or terminates without having been exercised or paid, as the case may be, will again become available for the issuance of additional awards. Unless earlier terminated by the Company's board of directors, no new award may be granted under the Equity Incentive Plans after the tenth anniversary of the date that the Equity Incentive Plans were approved by the Company's board of directors. No award may be granted under the Equity Incentive Plans to any person who, assuming payment of all awards held by such person, would own or be deemed to own more than 9.8% of the outstanding shares of the Company's common stock.

Restricted Stock Units

During the six months ended June 30, 2021, the Company granted 147,199 RSUs to its independent directors pursuant to the Equity Incentive Plans. The estimated fair value of these awards was $7.15 per share on grant date, based on the adjusted closing market price of the Company's common stock on the NYSE on such date. The shares underlying the grants are subject to a one-year vesting period.

During the six months ended June 30, 2021, the Company granted 1,189,518 RSUs to certain eligible employees pursuant to the terms of the Equity Incentive Plans and the associated award agreements. The estimated fair value of these awards was $7.10 per share on grant date, based on the adjusted closing market price of the Company's common stock on the NYSE on such date. The RSUs vest in three equal annual installments commencing on the first anniversary of the grant date, as long as such grantee complies with the terms and conditions of the applicable RSU agreement.

All RSUs entitle the grantee to receive dividend equivalent rights, or DERs, during the vesting period. A DER represents the right to receive a payment equal to the amount of cash dividends declared and payable on the grantee's unvested and outstanding equity incentive awards. In the case of RSUs, DERs are paid in cash within 60 days of the quarterly dividend payment date based on the number of unvested and outstanding RSUs held by the grantee on the applicable dividend record date. In the event that an RSU is forfeited, the related DERs which have not yet been paid shall be forfeited.

The following table summarizes the activity related to RSUs for the six months ended June 30, 2021 and 2020:

	Six Months Ended June 30,			
	2021		2020	
	Units	Weighted Average Grant Date Fair Market Value	Units	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	—	$ —	—	$ —
Granted	1,336,717	7.10	—	—
Vested	—	—	—	—
Forfeited	—	—	—	—
Outstanding at End of Period	1,336,717	$ 7.10	—	$ —

Performance Share Units

During the six months ended June 30, 2021, the Company granted 511,473 target number of PSUs to certain eligible employees pursuant to the terms of the 2021 Plan and the associated award agreements. The estimated fair value of these awards was $8.67 per share on grant date, which was determined using a Monte Carlo simulation. The PSUs will vest promptly following the completion of a three year performance period, as long as such grantee complies with the terms and conditions of the applicable PSU award agreement. The number of underlying shares of common stock that vest and that the grantee becomes entitled to receive at the time of vesting will be determined based on the level of achievement of certain Company performance goals during the performance period and will generally range from 0% to 200% of the target number of PSUs granted. The PSUs entitle the grantee to DERs during the vesting period, which accrue in the form of additional PSUs reflecting the value of any dividends declared on the Company's common stock during the vesting period. In the event that a PSU is forfeited, the related accrued DERs shall be forfeited.

The following table summarizes the activity related to PSUs for the six months ended June 30, 2021 and 2020:

	Six Months Ended June 30,			
	2021		2020	
	Target Units	Weighted Average Grant Date Fair Market Value	Target Units	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	—	$ —	—	$ —
Granted	511,473	8.67	—	—
Vested	—	—	—	—
Forfeited	(73,077)	(8.67)	—	—
Outstanding at End of Period	438,396	$ 8.67	—	$ —

Restricted Common Stock

During the six months ended June 30, 2021 and 2020, the Company granted 20,979 and 168,942 shares of common stock, respectively, to certain of its independent directors pursuant to the Equity Incentive Plans. The estimated fair value of these awards was $7.15 and $4.75 per share on grant date, based on the adjusted closing market price of the Company's common stock on the NYSE on such date. The shares underlying the 2021 grants vested immediately, while the shares underlying the 2020 grants were subject to a one-year vesting period.

During the six months ended June 30, 2020, the Company granted 686,770 shares of restricted common stock, to the Company's executive officers and other eligible individuals, pursuant to the terms of the Equity Incentive Plans and the associated award agreements. The estimated fair value of these awards was $15.23 per share on grant date, based on the adjusted closing market price of the Company's common stock on the NYSE on such date. The shares underlying the grants vest in three equal annual installments commencing on the first anniversary of the grant date, as long as such grantee complies with the terms and conditions of the applicable restricted stock award agreement.

The following table summarizes the activity related to restricted common stock for the six months ended June 30, 2021 and 2020:

	Six Months Ended June 30,			
	2021		2020	
	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	1,221,995	$ 13.80	1,062,901	$ 15.26
Granted	20,979	7.15	855,712	13.16
Vested	(681,514)	(12.70)	(551,476)	(15.37)
Forfeited	(33,568)	(5.07)	(22,845)	(14.26)
Outstanding at End of Period	527,892	$ 15.50	1,344,292	$ 13.90

Non-Cash Equity Compensation Expense

For the three and six months ended June 30, 2021, the Company recognized compensation related to RSUs, PSUs and restricted common stock granted pursuant to the Equity Incentive Plans of $4.6 million and $6.4 million, respectively. For the three and six months ended June 30, 2020, the Company recognized compensation related to restricted common stock granted pursuant to the Equity Incentive Plans of $2.3 million and $4.6 million, respectively. As of June 30, 2021, the Company had $11.3 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.2 years.

Note 18. Restructuring Charges

On April 13, 2020, the Company announced that it had elected to not renew the Management Agreement with PRCM Advisers on the basis of unfair compensation payable to the manager pursuant to Section 13(a)(ii) of the Management Agreement. As a result, the Company had expected the Management Agreement to terminate on September 19, 2020, at which time the Company would have been required to pay a termination fee equal to three times the sum of the average annual base management fee earned by PRCM Advisers during the 24-month period immediately preceding the date of termination, calculated as of the end of the most recently completed fiscal quarter prior to the date of termination, pursuant to the terms of the Management Agreement. The termination fee was calculated to be $139.8 million based on results as of June 30, 2020 and recorded during the three months ended June 30, 2020.

On July 15, 2020, the Company provided PRCM Advisers with a notice of termination of the Management Agreement for “cause” on the basis of certain material breaches of the Management Agreement by PRCM Advisers, its agents and/or its assignees that are incapable of being cured within the time period set forth therein and certain events of gross negligence on the part of PRCM Advisers in the performance of its duties under the Management Agreement. The Management Agreement subsequently terminated on August 14, 2020. No termination fee was payable to PRCM Advisers in connection with such termination pursuant to Section 15(a) of the Management Agreement.

In connection with the termination of the Management Agreement for cause, the Company reversed the $139.8 million accrued fee attributable to the non-renewal during the three months ended September 30, 2020. For the year ended December 31, 2020, the Company incurred a total of $5.7 million in contract termination costs, which includes all estimated costs incurred for legal and advisory services provided to facilitate the termination of the Management Agreement. In accordance with ASC 420, *Exit or Disposal Cost Obligations*, all expenses incurred for contract terminations are included within restructuring charges on the Company’s condensed consolidated statements of comprehensive (loss) income. During the three and six months ended June 30, 2020, the Company incurred $145.1 million and $145.8 million, respectively, of restructuring charges. The Company did not incur any restructuring charges during the three and six months ended June 30, 2021.

Note 19. Income Taxes

For the three and six months ended June 30, 2021 and 2020, the Company qualified to be taxed as a REIT under the Code for U.S. federal income tax purposes. As long as the Company qualifies as a REIT, the Company generally will not be subject to U.S. federal income taxes on its taxable income to the extent it annually distributes its net taxable income to stockholders, and does not engage in prohibited transactions. The Company intends to distribute 100% of its REIT taxable income and comply with all requirements to continue to qualify as a REIT. The majority of states also recognize the Company’s REIT status. The Company’s TRSs file separate tax returns and are fully taxed as standalone U.S. C corporations. It is assumed that the Company will retain its REIT status and will incur no REIT level taxation as it intends to comply with the REIT regulations and annual distribution requirements.

During the three months ended June 30, 2021, the Company’s TRSs recognized a benefit from income taxes of $20.9 million, which was primarily due to losses recognized on MSR, offset by net gains recognized on derivative instruments held in the Company’s TRSs. During the six months ended June 30, 2021, the Company’s TRSs recognized a provision for income taxes of $1.8 million, which was primarily due to gains recognized on MSR, offset by net losses recognized on derivative instruments held in the Company’s TRSs. During the three and six months ended June 30, 2020, the Company’s TRSs recognized a benefit from income taxes of $18.2 million and $31.3 million, respectively. The benefit recognized for the three months ended June 30, 2020 was primarily due to losses recognized on MSR held in the Company’s TRSs. The benefit recognized for the six months ended June 30, 2020 was primarily due to losses recognized on MSR, offset by net gains recognized on derivative instruments held in the Company’s TRSs.

Based on the Company’s evaluation, it has been concluded that there are no significant uncertain tax positions requiring recognition in the Company’s condensed consolidated financial statements of a contingent tax liability for uncertain tax positions. Additionally, there were no amounts accrued for penalties or interest as of or during the periods presented in these condensed consolidated financial statements.

Note 20. Earnings Per Share

The following table presents a reconciliation of the (loss) earnings and shares used in calculating basic and diluted (loss) earnings per share for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share data)	2021	2020	2021	2020
Basic (Loss) Earnings Per Share:				
Net (loss) income	$ (117,960)	$ (173,564)	$ 122,197	$ (2,043,22
Dividends on preferred stock	13,747	18,951	30,963	37,90
Dividends and undistributed earnings allocated to participating restricted stock units	227	—	484	—
Net (loss) income attributable to common stockholders, basic	$ (131,934)	$ (192,515)	$ 90,750	$ (2,081,12
Basic weighted average common shares	273,718,561	273,604,079	273,714,684	273,498,34
Basic (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.33	$ (7.6
Diluted (Loss) Earnings Per Share:				
Net (loss) income attributable to common stockholders, basic	$ (131,934)	$ (192,515)	$ 90,750	$ (2,081,12
Reallocation impact of undistributed earnings to participating restricted stock units	—	—	(11)	—
Interest expense attributable to convertible notes (1)	—	—	7,908	—
Net (loss) income attributable to common stockholders - diluted	$ (131,934)	$ (192,515)	$ 98,647	$ (2,081,12
Basic weighted average common shares	273,718,561	273,604,079	273,714,684	273,498,34
Effect of dilutive shares issued in an assumed conversion	—	—	32,284,519	—
Diluted weighted average common shares	273,718,561	273,604,079	305,999,203	273,498,34
Diluted (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.32	$ (7.6

(1) If applicable, includes a nondiscretionary adjustment for the assumed change in the management fee calculation.

For the three months ended June 30, 2021, excluded from the calculation of diluted earnings per share is the effect of adding undistributed earnings reallocated to 954,763 weighted average participating RSUs, as their inclusion would be antidilutive. For the six months ended June 30, 2021, participating RSUs were included in the calculations of basic and diluted earnings per share under the two-class method since it was more dilutive than the alternative treasury stock method.

For the three and six months ended June 30, 2021, excluded from the calculation of diluted earnings per share is the effect of adding back $7.1 million and $5.6 million of interest expense and 48,043,744 and 13,789,691 weighted average common share equivalents, respectively, related to the assumed conversion of the Company’s convertible senior notes, as their inclusion would be antidilutive.

For the three and six months ended June 30, 2020, excluded from the calculation of diluted earnings per share is the effect of adding back $4.8 million and $9.5 million of interest expense, net of a nondiscretionary adjustment for the assumed change in the management fee calculation, and 18,171,150 and 18,171,150 weighted average common share equivalents, respectively, related to the assumed conversion of the Company’s convertible senior notes, as their inclusion would be antidilutive.

Note 21. Related Party Transactions

The following summary provides disclosure of the material transactions with affiliates of the Company.

Through August 14, 2020, the Company was externally managed and advised by PRCM Advisers under the terms of a Management Agreement between the Company and PRCM Advisers. The Company terminated the Management Agreement effective August 14, 2020 for "cause" in accordance with Section 15(a) thereof. On August 15, 2020, the Company completed its transition to self-management and directly hired the senior management team and other personnel who had historically provided services to the Company.

Prior to the termination of the Management Agreement, PRCM Advisers was responsible for administering the Company's business activities and day-to-day operations, at all times subject to the supervision and oversight of the Company's board of directors. Under the Management Agreement, PRCM Advisers was required to provide the Company with its personnel, including its executive officers, investment professionals and other support personnel. The Company did not have its own employees. Each of the Company's executive officers was an employee or partner of an affiliate of PRCM Advisers. The Company paid PRCM Advisers a management fee equal to 1.5% per annum, calculated and payable quarterly in arrears, of the Company's stockholders' equity, and reimbursed it for certain expenses, as described below.

For purposes of calculating the management fee, the Company's stockholders' equity represented the sum of the net proceeds from all issuances of the Company's equity securities since inception (allocated on a pro rata daily basis for such issuances during the fiscal quarter of any such issuance), plus the Company's retained earnings at the end of the most recently completed calendar quarter (without taking into account any non-cash equity compensation expense incurred in current or prior periods), less any amount that the Company has paid for repurchases of its common stock since inception, and excluding any unrealized gains, losses or other items that do not affect realized net income (regardless of whether such items are included in other comprehensive income or loss, or in net income), among other certain adjustments outlined in the Management Agreement. The base management fee was subject to other adjustments from time to time, as described in the Management Agreement.

In accordance with the Management Agreement, the Company incurred $11.4 million and $26.0 million as a management fee to PRCM Advisers for the three and six months ended June 30, 2020.

Additionally, prior to the termination of the Management Agreement, the Company reimbursed PRCM Advisers for (i) the Company's allocable share of the compensation paid by PRCM Advisers to its personnel serving as the Company's principal financial officer and general counsel and personnel employed by PRCM Advisers as in-house legal, tax, accounting, consulting, auditing, administrative, information technology, valuation, computer programming and development and back-office resources to the Company, (ii) any amounts for personnel of PRCM Advisers' affiliates arising under a shared facilities and services agreement, and (iii) certain costs allocated to the Company by PRCM Advisers for data services and technology. In accordance with the Management Agreement, expense reimbursements to PRCM Advisers were required to be made in cash on a quarterly basis following the end of each quarter. The Company reimbursed PRCM Advisers for direct and allocated costs incurred by PRCM Advisers on behalf of the Company of approximately $4.3 million and $16.1 million for the three and six months ended June 30, 2020.

Following the termination of the Management Agreement, the Company no longer pays a management fee to, or reimburses the expenses of, PRCM Advisers. Expenses for which the Company previously reimbursed PRCM Advisers are now paid directly by the Company. The Company is also now responsible for the cash compensation and employee benefits of the Company's Chief Executive Officer, Chief Investment Officer and investment professionals, which were previously the responsibility of PRCM Advisers. Prior to the termination of the Management Agreement, the Company was only responsible for the equity compensation paid to such individuals.

Note 22. Subsequent Events

On July 14, 2021, the Company completed a public offering of 40,000,000 shares of its common stock. The underwriters purchased the shares from the Company at a price of $6.42 per share, for net proceeds to the Company of approximately $256.5 million after deducting offering expenses. In connection with the offering, the Company also granted the underwriters an option for 30 days to purchase up to an additional 6,000,000 shares of common stock.

Events subsequent to June 30, 2021 were evaluated through the date these condensed consolidated financial statements were issued and no other additional events were identified requiring further disclosure in these condensed consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with the consolidated financial statements and accompanying notes included elsewhere in this Quarterly Report on Form 10-Q as well as our Annual Report on Form 10-K for the year ended December 31, 2020.

General

We are a Maryland corporation focused on investing in and managing Agency residential mortgage-backed securities, or Agency RMBS, mortgage servicing rights, or MSR, and other financial assets, which we collectively refer to as our target assets. We operate as a real estate investment trust, or REIT, as defined under the Internal Revenue Code of 1986, as amended, or the Code.

Our objective is to provide attractive risk-adjusted total return to our stockholders over the long term, primarily through dividends and secondarily through capital appreciation. We acquire and manage an investment portfolio of our target assets, which include the following:

- Agency RMBS (which includes inverse interest-only Agency securities classified as "Agency Derivatives" for purposes of U.S. generally accepted accounting principles, or U.S. GAAP), meaning RMBS whose principal and interest payments are guaranteed by the Government National Mortgage Association (or Ginnie Mae), the Federal National Mortgage Association (or Fannie Mae), or the Federal Home Loan Mortgage Corporation (or Freddie Mac), or collectively, the government sponsored entities, or GSEs; and
- MSR; and
- Other financial assets comprising approximately 5% to 10% of the portfolio.

Historically, we viewed our target assets in two strategies that were based on our core competencies of understanding and managing prepayment and credit risk. Our rates strategy included assets that were primarily sensitive to changes in interest rates and prepayment speeds, specifically Agency RMBS and MSR. Our credit strategy included assets that were primarily sensitive to changes in inherent credit risk, including non-Agency securities, meaning securities that are not issued or guaranteed by Ginnie Mae, Fannie Mae or Freddie Mac. In the first quarter of 2020, we experienced unprecedented market conditions as a result of the global COVID-19 pandemic, including unusually significant spread widening in both Agency RMBS and non-Agency securities. In response, we focused our efforts on raising excess liquidity and de-risking our portfolio. On March 25, 2020, we sold substantially all of our non-Agency securities in order to eliminate the risks posed by continued margin calls and ongoing funding concerns associated with the significant spread widening on these assets. We also sold approximately one-third of our Agency RMBS in order to reduce risk and raise cash to establish a strong defensive liquidity position to weather potential ongoing economic and market instability. Throughout the remainder of 2020, we focused on the composition of our Agency RMBS and MSR portfolio, deploying risk as the market entered a period of stabilization and asset price recovery. Going forward, management expects our capital to be fully allocated to our strategy of pairing Agency RMBS and MSR.

Our Agency RMBS portfolio is comprised primarily of fixed rate mortgage-backed securities backed by single-family and multi-family mortgage loans. All of our principal and interest Agency RMBS are Fannie Mae or Freddie Mac mortgage pass-through certificates or collateralized mortgage obligations that carry an implied rating of "AAA," or Ginnie Mae mortgage pass-through certificates, which are backed by the guarantee of the U.S. government. The majority of these securities consist of whole pools in which we own all of the investment interests in the securities.

Within our MSR business, we acquire MSR assets, which represent the right to control the servicing of residential mortgage loans and the obligation to service the loans in accordance with relevant standards, from high-quality originators. We do not directly service the mortgage loans underlying the MSR we acquire; rather, we contract with appropriately licensed third-party subservicers to handle substantially all servicing functions in the name of the subservicer. As the servicer of record, however, we remain accountable to the GSEs for all servicing matters and, accordingly, provide substantial oversight of each of our subservicers.

We believe MSR are a natural fit for our portfolio over the long term. Our MSR business leverages our core competencies in prepayment and credit risk analytics and the MSR assets provide offsetting risks to our Agency RMBS, hedging both interest rate and mortgage spread risk. One of our goals is to create long-lasting relationships with high quality originators in order to facilitate our acquisition of MSR through both flow and bulk transactions.

In making our capital allocation decisions, we take into consideration a number of factors, including the opportunities available in the marketplace, the cost and availability of financing, and the cost of hedging interest rate, prepayment, credit and other portfolio risks. We have expertise in mortgage credit and may choose to invest again in those assets should the opportunity arise.

For the three months ended June 30, 2021, our net spread realized on the portfolio was higher than the prior quarter due primarily to higher MSR servicing income, net of estimated amortization, and lower servicing expenses. Cost of financing was higher as a result of increased use of MSR financing, which carry higher rates relative to Agency RMBS financing, as well as the issuance of additional convertible notes in the first quarter of 2021, offset by lower interest rates on RMBS financing. The following table provides the average annualized yield on our assets for the three months ended June 30, 2021, and the four immediately preceding quarters:

	Three Months Ended				
	June 30, 2021	**March 31, 2021**	**December 31, 2020**	**September 30, 2020**	**June 30, 2020**
Average annualized portfolio yield (1)	2.72%	2.25%	2.26%	2.42%	2.84%
Cost of financing (2)	0.79%	0.60%	0.50%	0.64%	2.61%
Net spread	1.93%	1.65%	1.76%	1.78%	0.23%

(1) Average annualized yield includes interest income on Agency RMBS and non-Agency securities and MSR servicing income, net of estimated amortization, and servicing expenses.
(2) Cost of financing includes swap interest rate spread and amortization of upfront payments made or received upon entering.

We seek to deploy moderate leverage as part of our investment strategy. We generally finance our Agency RMBS securities through short- and long-term borrowings structured as repurchase agreements. We also finance our MSR through revolving credit facilities, repurchase agreements, term notes payable and convertible senior notes.

Our Agency RMBS, given their liquidity and high credit quality, are eligible for higher levels of leverage, while MSR, with less liquidity and/or more exposure to prepayment, utilize lower levels of leverage. As a result, our debt-to-equity ratio is determined by our portfolio mix as well as many additional factors, including the liquidity of our portfolio, the availability and price of our financing, the diversification of our counterparties and their available capacity to finance our assets, and anticipated regulatory developments. Over the past several quarters, we have generally maintained a debt-to-equity ratio range of 5.0 to 7.0 times to finance our securities portfolio and MSR, on a fully deployed capital basis. Our debt-to-equity ratio is directly correlated to the composition of our portfolio; specifically, the higher percentage of Agency RMBS we hold, the higher our debt-to-equity ratio is. We may alter the percentage allocation of our portfolio among our target assets depending on the relative value of the assets that are available to purchase from time to time, including at times when we are deploying proceeds from offerings we conduct. See Item 7, "*Management's Discussion and Analysis of Financial Condition and Results of Operations - Financial Condition - Repurchase Agreements*" for further discussion.

We recognize that investing in our target assets is competitive and we compete with other entities for attractive investment opportunities. We believe that our significant focus in the residential market, the extensive mortgage market expertise of our investment team, our strong analytics and our disciplined relative value investment approach give us a competitive advantage versus our peers.

We have elected to be treated as a REIT for U.S. federal income tax purposes. To qualify as a REIT we are required to meet certain investment and operating tests and annual distribution requirements. We generally will not be subject to U.S. federal income taxes on our taxable income to the extent that we annually distribute all of our net taxable income to stockholders, do not participate in prohibited transactions and maintain our intended qualification as a REIT. However, certain activities that we may perform may cause us to earn income which will not be qualifying income for REIT purposes. We have designated certain of our subsidiaries as taxable REIT subsidiaries, or TRSs, as defined in the Code, to engage in such activities. We also operate our business in a manner that will permit us to maintain our exemption from registration under the Investment Company Act of 1940, as amended, or the 1940 Act. While we do not currently originate or service residential mortgage loans, certain of our subsidiaries have obtained the requisite licenses and approvals to own and manage MSR.

Through August 14, 2020, we were externally managed and advised by PRCM Advisers LLC, a subsidiary of Pine River Capital Management L.P., under the terms of a Management Agreement between us and PRCM Advisers. We terminated the Management Agreement effective August 14, 2020 for "cause" in accordance with Section 15(a) thereof. On August 15, 2020, we completed our transition to self-management and directly hired the senior management team and other personnel who had historically provided services to us.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains, or incorporates by reference, not only historical information, but also forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, or the Exchange Act, and that are subject to the safe harbors created by such sections. Forward-looking statements involve numerous risks and uncertainties. Our actual results may differ from our beliefs, expectations, estimates, and projections and, consequently, you should not rely on these forward-looking statements as predictions of future events. Forward-looking statements are not historical in nature and can be identified by words such as “anticipate,” “estimate,” “will,” “should,” “expect,” “target,” “believe,” “intend,” “seek,” “plan,” “goals,” “future,” “likely,” “may” and similar expressions or their negative forms, or by references to strategy, plans, or intentions. These forward-looking statements are subject to risks and uncertainties, including, among other things, those described in our Annual Report on Form 10-K for the year ended December 31, 2020, under the caption “Risk Factors.” Other risks, uncertainties and factors that could cause actual results to differ materially from those projected are described below and may be described from time to time in reports we file with the Securities and Exchange Commission, or SEC, including our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update or revise any such forward-looking statements, whether as a result of new information, future events, or otherwise.

Important factors, among others, that may affect our actual results include:

- changes in interest rates and the market value of our target assets;
- changes in prepayment rates of mortgages underlying our target assets;
- the state of the credit markets and other general economic conditions, particularly as they affect the price of earning assets, the credit status of borrowers and home prices;
- the ongoing impact of the COVID-19 pandemic, and the actions taken by federal and state governmental authorities and GSEs in response, on the U.S. economy, financial markets and our target assets;
- legislative and regulatory actions affecting our business;
- the availability and cost of our target assets;
- the availability and cost of financing for our target assets, including repurchase agreement financing, revolving credit facilities, term notes and convertible notes;
- the impact of any increases in payment delinquencies and defaults on the mortgages comprising and underlying our target assets, including additional servicing costs and servicing advance obligations on the MSR assets we own;
- changes in liquidity in the market for real estate securities, the re-pricing of credit risk in the capital markets, inaccurate ratings of securities by rating agencies, rating agency downgrades of securities, and increases in the supply of real estate securities available-for-sale;
- changes in the values of securities we own and the impact of adjustments reflecting those changes on our condensed consolidated statements of comprehensive income (loss) and balance sheets, including our stockholders’ equity;
- our ability to generate cash flow from our target assets;
- our ability to effectively execute and realize the benefits of strategic transactions and initiatives, including our transition to self-management, we have pursued or may in the future pursue;
- our decision to terminate our Management Agreement with PRCM Advisers and the ongoing litigation with PRCM Advisers related to such termination;
- changes in the competitive landscape within our industry, including changes that may affect our ability to attract and retain personnel;
- our exposure to legal and regulatory claims, penalties or enforcement activities, including those related to the termination of our Management Agreement with PRCM Advisers and arising from our ownership and management of MSR and prior securitization transactions;
- our exposure to counterparties involved in our MSR business and prior securitization transactions and our ability to enforce representations and warranties made by them;
- our ability to acquire MSR and successfully operate our seller-servicer subsidiary and oversee the activities of our subservicers;
- our ability to manage various operational and regulatory risks associated with our business;
- interruptions in or impairments to our communications and information technology systems;
- our ability to maintain appropriate internal controls over financial reporting;
- our ability to establish, adjust and maintain appropriate hedges for the risks in our portfolio;
- our ability to maintain our REIT qualification for U.S. federal income tax purposes; and

- limitations imposed on our business due to our REIT status and our status as exempt from registration under the 1940 Act.

This Quarterly Report on Form 10-Q may contain statistics and other data that, in some cases, have been obtained or compiled from information made available by mortgage loan servicers and other third-party service providers.

Factors Affecting our Operating Results

Our net interest income includes income from our securities portfolio, including the amortization of purchase premiums and accretion of purchase discounts. Net interest income, as well as our servicing income, net of subservicing expenses, will fluctuate primarily as a result of changes in market interest rates, our financing costs and prepayment speeds on our assets. Interest rates, financing costs and prepayment rates vary according to the type of investment, conditions in the financial markets, competition and other factors, none of which can be predicted with any certainty.

On January 1, 2020 we adopted Accounting Standards Update (ASU) No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which changed the impairment model for most financial assets and certain other instruments. Valuation allowances for credit losses on available-for-sale, or AFS, debt securities are recognized, rather than direct reductions in the amortized cost of the investments, regardless of whether the impairment is considered to be other-than-temporary. We use a discounted cash flow method to estimate and recognize an allowance for credit losses on AFS securities, as detailed in Note 2 to the condensed consolidated financial statements, included under Item 1 of this Quarterly Report on Form 10-Q..

Fair Value Measurement

A significant portion of our assets and liabilities are reported at fair value and, therefore, our condensed consolidated balance sheets and statements of comprehensive (loss) income are significantly affected by fluctuations in market prices. At June 30, 2021, approximately 79.4% of our total assets, or $9.9 billion, consisted of financial instruments recorded at fair value. See Note 10 - *Fair Value* to the condensed consolidated financial statements, included in this Quarterly Report on Form 10-Q, for descriptions of valuation methodologies used to measure material assets and liabilities at fair value and details of the valuation models, key inputs to those models and significant assumptions utilized. Although we execute various hedging strategies to mitigate our exposure to changes in fair value, we cannot fully eliminate our exposure to volatility caused by fluctuations in market prices.

Any temporary change in the fair value of our AFS securities, excluding certain Agency interest-only mortgage-backed securities, is recorded as a component of accumulated other comprehensive income and does not impact our reported income (loss) for U.S. GAAP purposes, or GAAP net income (loss). However, beginning on January 1, 2020 (as discussed above), changes in the provision for credit losses on AFS securities are recognized immediately in GAAP net income (loss). Our GAAP net income (loss) is also affected by fluctuations in market prices on the remainder of our financial assets and liabilities recorded at fair value, including interest rate swap, cap and swaption agreements and certain other derivative instruments (*i.e.*, TBAs, put and call options for TBAs, U.S. Treasury and Eurodollar futures, Markit IOS total return swaps and inverse interest-only securities), which are accounted for as derivative trading instruments under U.S. GAAP, Agency interest-only mortgage-backed securities and MSR.

We have numerous internal controls in place to help ensure the appropriateness of fair value measurements. Significant fair value measures are subject to detailed analytics and management review and approval. Our entire investment portfolio reported at fair value is priced by third-party brokers and/or by independent pricing vendors. We generally receive three or more broker and vendor quotes on pass-through principal and interest (P&I) Agency RMBS, and generally receive multiple broker or vendor quotes on all other securities, including interest-only Agency RMBS and inverse interest-only Agency RMBS. We also receive three vendor quotes for the MSR in our investment portfolio. For Agency RMBS, the third-party pricing vendors and brokers use pricing models that commonly incorporate such factors as coupons, primary and secondary mortgage rates, rate reset periods, issuer, prepayment speeds, credit enhancements and expected life of the security. For MSR, vendors use pricing models that generally incorporate observable inputs such as principal balance, note rate, geographical location, loan-to-value (LTV) ratios, FICO, appraised value and other loan characteristics, along with observed market yields and trading levels. Pricing vendors will customarily incorporate loan servicing cost, servicing fee, ancillary income, and earnings rate on escrow as observable inputs. Unobservable or model-driven inputs include forecast cumulative defaults, default curve, forecast loss severity and forecast voluntary prepayment.

We evaluate the prices we receive from both third-party brokers and pricing vendors by comparing those prices to actual purchase and sale transactions, our internally modeled prices calculated based on market observable rates and credit spreads, and to each other both in current and prior periods. We review and may challenge valuations from third-party brokers and pricing vendors to ensure that such quotes and valuations are indicative of fair value as a result of this analysis. We then estimate the fair value of each security based upon the median of the final broker quotes received, and we estimate the fair value of MSR based upon the average of prices received from third-party vendors, subject to internally-established hierarchy and override procedures.

We utilize "bid side" pricing for our Agency RMBS and, as a result, certain assets, especially the most recent purchases, may realize a markdown due to the "bid-offer" spread. To the extent that this occurs, any economic effect of this would be reflected in accumulated other comprehensive income.

Considerable judgment is used in forming conclusions and estimating inputs to our Level 3 fair value measurements. Level 3 inputs such as interest rate movements, prepayments speeds, credit losses and discount rates are inherently difficult to estimate. Changes to these inputs can have a significant effect on fair value measurements. Accordingly, there is no assurance that our estimates of fair value are indicative of the amounts that would be realized on the ultimate sale or exchange of these assets. At June 30, 2021, 16.2% of our total assets were classified as Level 3 fair value assets.

Market Conditions and Outlook

During the second quarter of 2021, the U.S. Federal Reserve, or the Fed, moved its overnight reverse repurchase rate from 0 to 5 basis points and term overnight indexed swap markets indicate expectations for continued low levels in the near term. Longer dated rates declined over 40 basis points, retracing more than 50 percent of the first quarter increase, while shorter term rates were up slightly. The Fed has maintained its monthly pace of net purchasing $40 billion of MBS and $80 billion of U.S. Treasuries but has started to discuss tapering these purchases as inflation has exceeded expectations and the labor market has continued to make progress towards the Fed's goals. The current pace of asset purchases has kept spreads on current coupon MBS near record tight levels. We expect the reduced pace of future purchases, which is likely to be announced later this year, to cause current coupon spreads to widen off their current tight levels. The spread between primary and secondary mortgage rates was largely unchanged in the second quarter despite significantly lower rates. Prepayment rates on MBS remain at elevated levels and are likely to increase as primary rates declined approximately 25 basis points throughout the second quarter.

The economic outlook for the remainder of 2021 and beyond remains uncertain and will be heavily dependent on the path of inflation, fiscal policy and the Fed's ability to navigate the transition to a less accommodative policy stance. In the housing market, the past quarter has seen a number of policy and administrative changes in the Federal Housing Finance Agency, or the FHFA, and GSEs. Sandra Thompson was named the Acting Director of the FHFA, replacing Mark Calabria. Programs announced in the quarter such as RefiNow and RefiPossible reduced the cost of refinancing for lower income borrowers, while the removal the Adverse Market Refi Fee that will take effect in August, will reduce the cost of refinancing for all borrowers when it goes into effect. The new leadership is expected to exhibit a renewed focus on expanding opportunity for distressed or low-income borrowers and we expect the policy risk around prepayment speeds for mortgage investors to stay elevated in the near term.

We believe our current portfolio allocation and our investing expertise, as well as our operational capabilities to invest in MSR, will allow us to navigate the dynamic mortgage market while future regulatory and policy activities take shape. Our portfolio, consisting as it does of Agency RMBS and MSR, with offsetting risk characteristics, allows us to mitigate a variety of risks, including interest rate and RMBS spread volatility.

The following table provides the carrying value of our investment portfolio by product type:

(dollars in thousands)	June 30, 2021		December 31, 2020	
Agency RMBS	$ 7,834,487	79.0 %	$ 14,637,891	89.7 %
Mortgage servicing rights	2,020,106	20.4 %	1,596,153	9.8 %
Agency Derivatives	50,463	0.5 %	61,617	0.4 %
Non-Agency securities	5,559	0.1 %	13,031	0.1 %
Total	$ 9,910,615		$ 16,308,692	

Prepayment speeds and volatility due to interest rates

Our portfolio is subject to market risks, primarily interest rate risk and prepayment risk. We seek to offset a portion of our Agency pool market value exposure through our MSR and interest-only Agency RMBS portfolios. During periods of decreasing interest rates with rising prepayment speeds, the market value of our Agency pools generally increases and the market value of our interest-only securities and MSR generally decreases. The inverse relationship occurs when interest rates rise and prepayments fall. Although interest rates moved higher during the first quarter of 2021, they retraced lower in the second quarter of 2021 and we believe the low interest rate environment is expected to persist in the near term. Changes in home price performance, key employment metrics and government programs, among other macroeconomic factors, could cause prepayment speeds to remain fast on many RMBS, which could lead to less attractive reinvestment opportunities. Nonetheless, we believe our portfolio management approach, including our asset selection process, positions us to respond to a variety of market scenarios, including an overall faster prepayment environment.

The following table provides the three-month average constant prepayment rate, or CPR, experienced by Agency RMBS and MSR owned by us as of June 30, 2021, and the four immediately preceding quarter-ends:

	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020	June 30, 2020
Agency RMBS	32.3 %	30.8 %	27.0 %	23.1 %	19.9 %
Mortgage servicing rights	29.0 %	37.7 %	41.2 %	41.5 %	35.6 %

Although we are unable to predict future interest rate movements, our strategy of pairing Agency RMBS with MSR, with a focus on managing various associated risks, including interest rate, prepayment, credit, mortgage spread and financing risk, is intended to generate attractive yields with a low level of sensitivity to changes in the yield curve, prepayments and interest rate cycles.

Our Agency RMBS are primarily collateralized by pools of fixed-rate mortgage loans. Our Agency portfolio also includes securities with implicit prepayment protection, including lower loan balances (securities collateralized by loans of less than $200,000 in initial principal balance), higher LTVs (securities collateralized by loans with LTVs greater than or equal to 80%), certain geographic concentrations and lower FICO scores. Our overall allocation of Agency RMBS and holdings of pools with specific characteristics are viewed in the context of our aggregate rates strategy, including MSR and related derivative hedging instruments. Additionally, the selection of securities with certain attributes is driven by the perceived relative value of the securities, which factors in the opportunities in the marketplace, the cost of financing and the cost of hedging interest rate, prepayment, credit and other portfolio risks. As a result, Agency RMBS capital allocation reflects management's flexible approach to investing in the marketplace.

The following tables provide the carrying value of our Agency RMBS portfolio by underlying mortgage loan rate type:

	June 30, 2021							
(dollars in thousands)	Principal/ Current Face	Carrying Value	Weighted Average CPR	% Prepayment Protected	Gross Weighted Average Coupon Rate	Amortized Cost	Allowance for Credit Losses	Weighted Average Loan Age (months)
Agency RMBS AFS:								
30-Year Fixed								
≤ 2.5%	$ —	$ —	— %	— %	— %	$ —	$ —	0
3.0%	1,278,481	1,356,599	19.4 %	100.0 %	3.7 %	1,316,295	—	20
3.5%	1,206,002	1,295,416	31.8 %	100.0 %	4.3 %	1,261,045	—	24
4.0%	2,035,962	2,218,839	37.3 %	100.0 %	4.6 %	2,118,338	—	42
4.5%	1,792,623	1,977,125	36.7 %	100.0 %	5.0 %	1,889,286	—	42
≥ 5.0%	409,699	459,873	38.7 %	98.2 %	5.9 %	433,991	—	74
	6,722,767	7,307,852	33.1 %	99.9 %	4.6 %	7,018,955	—	37
Other P&I	89,536	101,379	33.4 %	— %	6.6 %	99,144	—	232
Interest-only	4,274,783	425,256	17.5 %	— %	3.6 %	419,475	(15,154)	38
Agency Derivatives	281,473	50,463	18.2 %	— %	6.7 %	39,338	—	200
Total Agency RMBS	$ 11,368,559	$ 7,884,950		92.6 %		$ 7,576,912	$ (15,154)	

(dollars in thousands)	December 31, 2020 Principal/ Current Face	Carrying Value	Weighted Average CPR	% Prepayment Protected	Gross Weighted Average Coupon Rate	Amortized Cost	Allowance for Credit Losses	Weighted Average Loan Age (months)
Agency RMBS AFS:								
30-Year Fixed								
≤ 2.5%	$ 1,878,319	$ 2,005,269	7.7 %	100.0 %	3.4 %	$ 1,977,388	$ —	7
3.0%	2,359,772	2,541,676	19.3 %	100.0 %	3.7 %	2,433,757	—	14
3.5%	3,327,048	3,636,988	28.5 %	100.0 %	4.2 %	3,485,035	—	17
4.0%	2,642,730	2,911,556	37.5 %	100.0 %	4.6 %	2,751,139	—	36
4.5%	2,276,487	2,538,418	34.3 %	100.0 %	5.0 %	2,400,043	—	35
≥ 5.0%	519,976	590,044	33.6 %	98.4 %	5.8 %	551,230	—	65
	13,004,332	14,223,951	27.4 %	99.9 %	4.3 %	13,598,592	—	24
Other P&I	99,023	113,302	9.6 %	— %	6.6 %	110,002	—	226
Interest-only	3,649,556	300,638	14.0 %	— %	3.5 %	315,876	(17,889)	48
Agency Derivatives	318,162	61,617	16.5 %	— %	6.7 %	45,618	—	195
Total Agency RMBS	$ 17,071,073	$ 14,699,508		96.7 %		$ 14,070,088	$ (17,889)	

Counterparty exposure and leverage ratio

We monitor counterparty exposure in our broker, banking and lending counterparties on a daily basis. We believe our broker and banking counterparties are well-capitalized organizations and we attempt to manage our cash balances across these organizations to reduce our exposure to any single counterparty.

As of June 30, 2021, we had entered into repurchase agreements with 45 counterparties, 16 of which had outstanding balances at June 30, 2021. In addition, we held short- and long-term borrowings under revolving credit facilities, long-term term notes payable and short- and long-term unsecured convertible senior notes. As of June 30, 2021, the debt-to-equity ratio funding our AFS securities, MSR and Agency Derivatives, which includes unsecured borrowings under convertible senior notes, was 3.9:1.0.

As of June 30, 2021, we held $1.3 billion in cash and cash equivalents, approximately $5.3 million of unpledged Agency securities and derivatives and $4.7 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on our unpledged securities of approximately $7.7 million. As of June 30, 2021, we held approximately $216.9 million of unpledged MSR and $70.3 million of unpledged servicing advances. Overall, we had unused committed borrowing capacity on MSR asset and servicing advance financing facilities of $304.0 million and $177.5 million, respectively. Generally, unused borrowing capacity may be the result of our election not to utilize certain financing, as well as delays in the timing in which funding is provided, insufficient collateral or the inability to meet lenders' eligibility requirements for specific types of asset classes.

We also monitor exposure to our MSR counterparties. We may be required to make representations and warranties to investors in the loans underlying the MSR we own; however, some of our MSR were purchased on a bifurcated basis, meaning the representation and warranty obligations remain with the seller. If the representations and warranties we make prove to be inaccurate, we may be obligated to repurchase certain mortgage loans, which may impact the profitability of our portfolio. Although we obtain similar representations and warranties from the counterparty from which we acquired the relevant asset, if those representations and warranties do not directly mirror those we make to the investor, or if we are unable to enforce the representations and warranties against the counterparty for a variety of reasons, including the financial condition or insolvency of the counterparty, we may not be able to seek indemnification from our counterparties for any losses attributable to the breach.

Proposed changes to LIBOR

LIBOR is used extensively in the U.S. and globally as a “benchmark” or “reference rate” for various commercial and financial contracts, including corporate and municipal bonds and loans, floating rate mortgages, asset-backed securities, consumer loans, and interest rate swaps and other derivatives. It had been expected that a number of private-sector banks currently reporting information used to set LIBOR would stop doing so after 2021 when their current reporting commitment ends, which would either cause LIBOR to stop publication immediately or cause LIBOR’s regulator to determine that its quality has degraded to the degree that it is no longer representative of its underlying market. On March 5, 2021, Intercontinental Exchange Inc. announced that ICE Benchmark Administration Limited, the administrator of LIBOR, intends to stop publication of the majority of USD-LIBOR tenors on June 30, 2023. In the U.S., the Alternative Reference Rates Committee, or ARRC, has identified the Secured Overnight Financing Rate, or SOFR, as its preferred alternative rate for U.S. dollar-based LIBOR. SOFR is a measure of the cost of borrowing cash overnight, collateralized by U.S. Treasury securities, and is based on directly observable U.S. Treasury-backed repurchase transactions. Some market participants may continue to explore whether other U.S. dollar-based reference rates would be more appropriate for certain types of instruments. The ARRC has proposed a paced market transition plan to SOFR, and various organizations are currently working on industry wide and company-specific transition plans as it relates to derivatives and cash markets exposed to LIBOR. We have material contracts that are indexed to USD-LIBOR and are monitoring this activity, evaluating the related risks and our exposure, and adding alternative language to contracts, where necessary.

Summary of Results of Operations and Financial Condition

During the first quarter of 2020, we experienced unprecedented market conditions as a result of the global COVID-19 pandemic, including unusually significant spread widening in both Agency RMBS and non-Agency securities. In response, we focused our efforts on raising excess liquidity and de-risking our portfolio. On March 25, 2020, we sold substantially all of our non-Agency securities in order to eliminate the risks posed by continued margin calls and ongoing funding concerns associated with the significant spread widening on these assets. We also sold approximately one-third of our Agency RMBS portfolio in order to reduce risk and raise cash to establish a strong defensive liquidity position to weather potential ongoing economic and market instability. These actions, occurring at a time of wide spreads and low prices, resulted in large realized losses in the first quarter and a corresponding decline in book value.

The actions taken by the Fed to purchase Agency RMBS have been successful in stabilizing this market, as spreads and prices largely recovered on these assets in the second quarter of 2020. In addition, repurchase agreement financing markets for Agency RMBS continue to function well, term markets have re-developed, and we have experienced no issues in accessing this source of funding.

Certain mortgage loan forbearance programs were announced in connection with the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act. As the servicer of record for the MSR assets in our portfolio, we may be responsible for continuing to advance principal, interest, taxes and insurance on mortgage loans that are in forbearance, delinquency or default. At June 30, 2021, 17,579 loans, or 2.2% of our MSR portfolio by loan count, were in forbearance, of which 12.8% had made their June 2021 payment and were current as of June 30, 2021. Therefore, approximately 2.0% of our portfolio by loan count was in forbearance and not current as of June 30, 2021. We are confident in our ability to meet our servicing advance obligations and have entered into a revolving credit facility to finance these advances.

Our GAAP net loss attributable to common stockholders was $131.7 million ($(0.48) per diluted weighted average share) for the three months ended June 30, 2021 and our GAAP net income attributable to common stockholders was $91.2 million ($0.32 per diluted weighted average share) for the six months ended June 30, 2021, as compared to GAAP net loss attributable to common stockholders of $192.5 million and $2.1 billion ($(0.70) and $(7.61) per diluted weighted average share) for the three and six months ended June 30, 2020.

With our accounting treatment for AFS securities, unrealized fluctuations in the market values of AFS securities, excluding Agency interest-only securities and certain securities with an allowance for credit losses, do not impact our GAAP net (loss) income or taxable income but are recognized on our condensed consolidated balance sheets as a change in stockholders’ equity under “accumulated other comprehensive income.” For the three and six months ended June 30, 2021, net unrealized losses on AFS securities recognized as other comprehensive loss, net of tax, were $62.9 million and $334.4 million, respectively. This, combined with GAAP net loss attributable to common stockholders of $131.7 million and GAAP net income attributable to common stockholders of $91.2 million for the three and six months ended June 30, 2021, respectively, resulted in comprehensive loss attributable to common stockholders of $194.6 million and $243.1 million for the three and six months ended June 30, 2021, respectively. For the three and six months ended June 30, 2020, net unrealized gains on AFS securities recognized as other comprehensive income, net of tax, were $192.8 million and net unrealized losses on AFS securities recognized as other comprehensive loss, net of tax, were $5.3 million, respectively. This, combined with GAAP net loss attributable to common stockholders of $192.5 million and $2.1 billion, resulted in comprehensive income attributable to common stockholders of $0.3 million and comprehensive loss attributable to common stockholders of $2.1 billion for the three and six months ended June 30, 2020, respectively.

Our book value per common share for U.S. GAAP purposes was $6.42 at June 30, 2021, a decrease from $7.63 per common share at December 31, 2020. For the six months ended June 30, 2021, we recognized comprehensive loss attributable to common stockholders of $243.1 million and declared common dividends of $46.8 million, which drove the overall decrease in book value.

Although some uncertainty remains regarding the future effects of the COVID-19 pandemic and the actions that may be taken by federal and state governmental authorities and GSEs in response, the Agency RMBS market has stabilized and there is more clarity regarding forbearance levels and deferral programs on Agency MSR. Our liquidity position is strong, with $1.3 billion in unrestricted cash as of June 30, 2021. Given our increased confidence, we expect to continue to deploy such capital to our target assets over time.

The following tables present the components of our comprehensive (loss) income for the three and six months ended June 30, 2021 and 2020:

(in thousands, except share data) Income Statement Data:	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
	(unaudited)		(unaudited)	
Interest income:				
Available-for-sale securities	$ 43,092	$ 105,730	$ 98,744	$ 354,41
Other	351	1,597	808	8,42
Total interest income	43,443	107,327	99,552	362,83
Interest expense:				
Repurchase agreements	6,981	50,811	15,451	203,41
Revolving credit facilities	7,075	2,826	11,770	6,35
Term notes payable	3,225	3,553	6,436	8,35
Convertible senior notes	7,126	4,769	13,476	9,54
Federal Home Loan Bank advances	—	155	—	1,74
Total interest expense	24,407	62,114	47,133	229,42
Net interest income	19,036	45,213	52,419	133,41
Other (loss) income:				
(Loss) gain on investment securities	(41,519)	53,492	91,349	(1,028,11
Servicing income	112,816	112,891	219,935	243,68
(Loss) gain on servicing asset	(268,051)	(238,791)	59,387	(825,45
Gain (loss) on interest rate swap and swaption agreements	24,648	(46,922)	9,049	(297,51
Gain (loss) on other derivative instruments	51,312	76,606	(224,699)	(56,86
Other income (loss)	41	66	(5,701)	86
Total other (loss) income	(120,753)	(42,658)	149,320	(1,963,39
Expenses:				
Management fees	—	11,429	—	25,97
Servicing expenses	18,680	23,947	43,627	43,85
Compensation and benefits	11,259	8,127	19,447	16,40
Other operating expenses	7,218	5,711	14,705	12,51
Restructuring charges	—	145,069	—	145,78
Total expenses	37,157	194,283	77,779	244,53
(Loss) income before income taxes	(138,874)	(191,728)	123,960	(2,074,52
(Benefit from) provision for income taxes	(20,914)	(18,164)	1,763	(31,30
Net (loss) income	(117,960)	(173,564)	122,197	(2,043,22
Dividends on preferred stock	13,747	18,951	30,963	37,90
Net (loss) income attributable to common stockholders	$ (131,707)	$ (192,515)	$ 91,234	$ (2,081,12
Basic (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.33	$ (7.6
Diluted (loss) earnings per weighted average common share	$ (0.48)	$ (0.70)	$ 0.32	$ (7.6
Dividends declared per common share	$ 0.17	$ 0.19	$ 0.34	$ 0.1
Weighted average number of shares of common stock:				
Basic	273,718,561	273,604,079	273,714,684	273,498,34
Diluted	273,718,561	273,604,079	305,999,203	273,498,34

(in thousands) **Income Statement Data:**	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
	(unaudited)		(unaudited)	
Comprehensive (loss) income:				
Net (loss) income	$ (117,960)	$ (173,564)	$ 122,197	$ (2,043,220)
Other comprehensive (loss) income, net of tax:				
Unrealized (loss) gain on available-for-sale securities	(62,899)	192,794	(334,352)	(5,276)
Other comprehensive (loss) income	(62,899)	192,794	(334,352)	(5,276)
Comprehensive (loss) income	(180,859)	19,230	(212,155)	(2,048,496)
Dividends on preferred stock	13,747	18,951	30,963	37,901
Comprehensive (loss) income attributable to common stockholders	$ (194,606)	$ 279	$ (243,118)	$ (2,086,397)

(in thousands) **Balance Sheet Data:**	June 30, 2021	December 31, 2020
	(unaudited)	
Available-for-sale securities	$ 7,840,046	$ 14,650,922
Mortgage servicing rights	$ 2,020,106	$ 1,596,153
Total assets	$ 12,502,112	$ 19,515,921
Repurchase agreements	$ 8,350,622	$ 15,143,898
Revolving credit facilities	$ 533,519	$ 283,830
Term notes payable	$ 396,183	$ 395,609
Convertible senior notes	$ 423,742	$ 286,183
Total stockholders’ equity	$ 2,484,055	$ 3,088,926

Results of Operations

The following analysis focuses on financial results during the three and six months ended June 30, 2021 and 2020.

Interest Income

Interest income decreased from $107.3 million and $362.8 million for the three and six months ended June 30, 2020 to $43.4 million and $99.6 million for the same periods in 2021 due to sales of both Agency RMBS and non-Agency securities that occurred during the first quarter of 2020, further sales of some higher coupon Agency RMBS and higher amortization recognized on Agency RMBS due to prepayments.

Interest Expense

Interest expense decreased from $62.1 million and $229.4 million for the three and six months ended June 30, 2020, respectively, to $24.4 million and $47.1 million for the same periods in 2021 due to lower borrowing balances related to the sale of both Agency RMBS and non-Agency securities that occurred during the first quarter of 2020 and a lower interest rate environment.

Net Interest Income

The following tables present the components of interest income and average annualized net asset yield earned by asset type, the components of interest expense and average annualized cost of funds on borrowings incurred by liability and/or collateral type, and net interest income and average annualized net interest rate spread for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30, 2021			Six Months Ended June 30, 2021		
(dollars in thousands)	**Average Balance [1]**	**Interest Income/Expense**	**Net Yield/Cost of Funds [2]**	**Average Balance [1]**	**Interest Income/Expense**	**Net Yield/Cos of Funds [2]**
Interest-earning assets:						
Available-for-sale securities	$ 9,073,951	$ 43,092	1.9 %	$ 10,512,788	$ 98,744	1.9
Other	—	351	— %	—	808	—
Total interest income/net asset yield	$ 9,073,951	$ 43,443	1.9 %	$ 10,512,788	$ 99,552	1.9
Interest-bearing liabilities:						
Borrowings collateralized by:						
Available-for-sale securities	$ 9,649,189	$ 5,687	0.2 %	$ 11,217,274	$ 14,051	0.3
Agency derivatives [3]	44,067	89	0.8 %	46,645	195	0.8
Mortgage servicing rights and advances [4]	1,012,706	11,505	4.5 %	909,365	19,411	4.3
Unsecured borrowings:						
Convertible senior notes	423,613	7,126	6.7 %	399,852	13,476	6.7
Total interest expense/cost of funds	$ 11,129,575	$ 24,407	0.9 %	$ 12,573,136	47,133	0.7
Net interest income/spread [5]		$ 19,036	1.0 %		$ 52,419	1.2

	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020			
(dollars in thousands)	**Average Balance [1]**	**Interest Income/Expense**	**Net Yield/Cost of Funds [2]**	**Average Balance [1]**		**Interest Income/Expense**	**Net Yield/Co of Funds [2]**
Interest-earning assets							
Available-for-sale securities	$ 16,861,604	$ 105,730	2.5 %	$ 23,538,072		$ 354,414	3.0
Other	—	1,597	— %	4,152		8,420	3.8
Total interest income/net asset yield	$ 16,861,604	$ 107,327	2.5 %	$ 23,542,224	23542224	$ 362,834	3.1
Interest-bearing liabilities							
Borrowings collateralized by:							
Available-for-sale securities	$ 17,099,037	$ 50,518	1.2 %	$ 23,000,387		$ 202,116	1.8
Agency derivatives [3]	51,967	236	1.8 %	51,057		572	2.2
Mortgage servicing rights [4]	685,263	6,591	3.8 %	795,257		17,189	4.3
Unsecured borrowings:							
Convertible senior notes	285,422	4,769	6.7 %	285,284		9,545	6.7
Total interest expense/cost of funds	$ 18,121,689	$ 62,114	1.4 %	$ 24,131,985		$ 229,422	1.9
Net interest income/spread [5]		$ 45,213	1.1 %			$ 133,412	1.2

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(1) Average asset balance represents average amortized cost on AFS securities and average unpaid principal balance, adjusted for purchase price changes, on other assets.
(2) Cost of funds does not include the accrual and settlement of interest associated with interest rate swaps. In accordance with U.S. GAAP, those costs are included in gain (loss) on interest rate swap and swaption agreements in the condensed consolidated statements of comprehensive (loss) income. For the three and six months ended June 30, 2021, our total average cost of funds on the assets assigned as collateral for borrowings shown in the table above, including interest spread expense associated with interest rate swaps, was 0.8% and 0.7%, respectively, compared to 0.1% and 1.6% for the same periods in 2020.
(3) Yields on Agency Derivatives not shown as interest income is included in gain (loss) on other derivative instruments in the condensed consolidated statements of comprehensive (loss) income.
(4) Yields on mortgage servicing rights not shown as these assets do not earn interest.
(5) Net interest spread does not include the accrual and settlement of interest associated with interest rate swaps. In accordance with U.S. GAAP, those costs are included in gain (loss) on interest rate swap and swaption agreements in the condensed consolidated statements of comprehensive (loss) income. For the three and six months ended June 30, 2021, our total average net interest rate spread on the assets

and liabilities shown in the table above, including interest spread expense associated with interest rate swaps, was 1.1% and 1.2%, respectively, compared to 2.5% and 1.4% for the same periods in 2020.

The decrease in yields on AFS securities for the three and six months ended June 30, 2021, as compared to the same periods in 2020, was predominantly driven by the sale of substantially all legacy non-Agencies during the first quarter of 2020 as well as sales of Agency pools with higher yields. The decrease in cost of funds associated with the financing of AFS securities for the three and six months ended June 30, 2021, as compared to the same periods in 2020, was also a result of the sale of non-Agencies as well as decreases in the borrowing rates offered by financing counterparties.

The decrease in cost of funds associated with the financing of Agency Derivatives for the three and six months ended June 30, 2021, as compared to the same periods in 2020, was the result of decreases in the borrowing rates offered by counterparties.

The increase in cost of funds associated with the financing of MSR assets and related servicing advance obligations for the three and six months ended June 30, 2021, as compared to the same periods in 2020, was due to an increase in the use of revolving credit facility and repurchase agreement financing versus term notes financing, which carry lower rates, as well as an increase in amortization of deferred debt issuance costs on this financing. During the year ended December 31, 2020, we entered into a new revolving credit facility to finance our servicing advance obligations, which are included in other assets on our condensed consolidated balance sheets.

Our convertible senior notes due 2022 were issued in January 2017. Our convertible senior notes due 2026 were issued in February 2021, and a portion of the proceeds from the offering were used to partially repurchase our senior notes due 2022. Both convertible senior notes due 2022 and 2026 are unsecured and pay interest semiannually at a rate of 6.25% per annum. The cost of funds associated with our convertible senior notes for the three and six months ended June 30, 2021, as compared to the same periods in 2020, was consistent.

The following tables present the components of the yield earned on our AFS securities portfolio as a percentage of our average amortized cost of securities for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Gross yield/stated coupon	4.7 %	4.0 %	4.4 %	3.9
Net (premium amortization) discount accretion	(2.8) %	(1.5) %	(2.5) %	(0.9)
Net yield (1)	1.9 %	2.5 %	1.9 %	3.0

(1) Excludes Agency Derivatives. For the three and six months ended June 30, 2021, the average annualized net yield on total RMBS, including Agency Derivatives, was 1.9%, compared to 3.0% for the same period in 2020. Yields have not been adjusted for cost of delay and cost to carry purchase premiums.

(Loss) Gain On Investment Securities

The following tables present the components of (loss) gain on investment securities for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30, 2021			Six Months Ended June 30, 2021		
(in thousands)	**Available-For-Sale Securities**	**Trading Securities**	**Total**	**Available-For-Sale Securities**	**Trading Securities**	**Total**
Proceeds from sales	$ 2,549,602	$ —	$ 2,549,602	$ 4,600,545	$ —	$ 4,600,54
Amortized cost of securities sold	(2,532,087)	—	(2,532,087)	(4,516,832)	—	(4,516,83
Total realized gains on sales	17,515	—	17,515	83,713	—	83,71
Provision for credit losses	(7,392)	—	(7,392)	(6,257)	—	(6,25
Other	(51,642)	—	(51,642)	13,893	—	13,89
(Loss) gain on investment securities	$ (41,519)	$ —	$ (41,519)	$ 91,349	$ —	$ 91,34

(in thousands)	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020		
	Available-For-Sale Securities	Trading Securities	Total	Available-For-Sale Securities	Trading Securities	Total
Proceeds from sales	$ 1,383,118	$ —	$ 1,383,118	16,969,870	$ 1,053,477	$ 18,023,347
Amortized cost of securities sold	(1,326,218)	—	(1,326,218)	(17,947,686)	(1,052,500)	(19,000,186
Total realized gains (losses) on sales	56,900	—	56,900	(977,816)	977	(976,839
Provision for credit losses	(1,193)	—	(1,193)	(46,831)	—	(46,831
Other	(2,215)	—	(2,215)	(4,445)	—	(4,445
Gain (loss) on investment securities	$ 53,492	$ —	$ 53,492	$ (1,029,092)	$ 977	$ (1,028,115

Due to the unprecedented market conditions experienced as a result of the global COVID-19 pandemic, we sold substantially all of our portfolio of non-Agency securities and approximately one-third of our Agency RMBS during the first quarter of 2020. We do not expect to sell assets on a frequent basis, but may sell assets to reallocate capital into new assets that we believe have higher risk-adjusted returns.

Subsequent to the adoption of Topic 326 on January 1, 2020, the Company uses a discounted cash flow method to estimate and recognize an allowance for credit losses on AFS securities, as detailed in Note 2 to the condensed consolidated financial statements, included under Item 1 of this Quarterly Report on Form 10-Q. Subsequent adverse or favorable changes in expected cash flows are recognized immediately in earnings as a provision for or reversal of provision for credit losses (within (loss) gain on investment securities).

The majority of the “other” component of (loss) gain on investment securities is related to changes in unrealized gains (losses) on Agency interest-only mortgage-backed securities. For the three months ended June 30, 2021, the unrealized losses recognized were primarily due to faster prepayment assumption. For the six months ended June 30, 2021, the unrealized gains recognized were primarily due to slower prepayment assumption.

Servicing Income

The following table presents the components of servicing income for the three and six months ended June 30, 2021 and 2020:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Servicing fee income	$ 111,083	$ 104,463	$ 216,248	$ 222,354
Ancillary and other fee income	622	476	1,238	997
Float income	1,111	7,952	2,449	20,337
Total	$ 112,816	$ 112,891	$ 219,935	$ 243,688

For the three months ended June 30, 2021, as compared to the same period in 2020, servicing income was consistent. The decrease in servicing income for the six months ended June 30, 2021, as compared to the same period in 2020, was the result of lower servicing fee income as a result of a lower portfolio balance due to prepayments and deferred servicing fee income for loans in forbearance as a result of COVID-19. Additionally, the decrease in float income was the result of decreased float earning rates.

(Loss) Gain on Servicing Asset

The following table presents the components of (loss) gain on servicing asset for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Changes in fair value due to changes in valuation inputs or assumptions used in the valuation model	$ (72,910)	$ (111,013)	$ 428,783	$ (611,776)
Changes in fair value due to realization of cash flows (runoff)	(195,141)	(127,778)	(369,396)	(213,680)
(Loss) gain on servicing asset	$ (268,051)	$ (238,791)	$ 59,387	$ (825,456)

The increase in loss on servicing asset for the three months ended June 30, 2021, as compared to the same period in 2020, was driven by higher portfolio runoff, offset by a decrease in expected prepayment speed assumptions used in the fair valuation of MSR. The increase in gain (decrease in loss) on servicing asset for the six months ended June 30, 2021, as compared to the same period in 2020, was driven by favorable change in valuation assumptions used in the fair market valuation of MSR, including the impact of acquiring MSR at a cost below fair value, offset by increased portfolio runoff during the six months ended June 30, 2021.

Gain (Loss) on Interest Rate Swap and Swaption Agreements

The following table summarizes the net interest spread and gains and losses associated with our interest rate swap and swaption positions recognized during the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Net interest spread	$ 2,399	$ (56,331)	$ 4,049	$ (68,946)
Early termination, agreement maturation and option expiration gains (losses)	8,642	(747,055)	2,292	(385,202)
Change in unrealized gain on interest rate swap and swaption agreements, at fair value	13,607	756,464	2,708	156,630
Gain (loss) on interest rate swap and swaption agreements	$ 24,648	$ (46,922)	$ 9,049	$ (297,518)

Net interest spread recognized for the accrual and/or settlement of the net interest expense associated with our interest rate swaps results from receiving either a floating interest rate (LIBOR or the OIS rate) or a fixed interest rate and paying either a fixed interest rate or a floating interest rate (LIBOR or the OIS rate) on positions held to economically hedge/mitigate portfolio interest rate exposure (or duration) risk. We may elect to terminate certain swaps and swaptions to align with our investment portfolio, agreements may mature or options may expire resulting in full settlement of our net interest spread asset/liability and the recognition of realized gains and losses, including early termination penalties. During the second quarter of 2020, we elected to terminate certain swaps and swaptions in order to adjust the total notional and fixed interest rates on these instruments, as a result of adjustments made to our investment portfolio and changes in interest rates. The change in fair value of interest rate swaps and swaptions during the three and six months ended June 30, 2021 and 2020 was a result of changes to floating interest rates (LIBOR or the OIS rate), the swap curve and corresponding counterparty borrowing rates. Since swaps and swaptions are used for purposes of hedging our interest rate exposure, their unrealized valuation gains and losses (excluding the reversal of unrealized gains and losses to realized gains and losses upon termination, maturation or option expiration) are generally offset by unrealized losses and gains in our Agency RMBS AFS portfolio, which are recorded either directly to stockholders' equity through other comprehensive (loss) income, net of tax, or to (loss) gain on investment securities, in the case of Agency interest-only mortgage-backed securities.

Gain (Loss) on Other Derivative Instruments

The following table provides a summary of the total net gains (losses) recognized on other derivative instruments we hold for purposes of both hedging and non-hedging activities, principally TBAs, U.S. Treasury and Eurodollar futures and inverse interest-only securities during the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2021**	**2020**	**2021**	**2020**
Interest income, net of accretion, on inverse interest-only securities	$ 1,309	$ 2,659	$ 3,184	$ 4,556
Realized and unrealized net gains (losses) on other derivative instruments (1)	50,003	73,947	(227,883)	(61,418)
Gain (loss) on other derivative instruments	$ 51,312	$ 76,606	$ (224,699)	$ (56,862)

(1) As these derivative instruments are considered trading instruments, our financial results include both realized and unrealized gains (losses) associated with these instruments.

For further details regarding our use of derivative instruments and related activity, refer to Note 7 - *Derivative Instruments and Hedging Activities* to the condensed consolidated financial statements, included in this Quarterly Report on Form 10-Q.

Expenses

The following table presents the components of expenses, other than restructuring charges, for the three and six months ended June 30, 2021 and 2020:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except share data)	**2021**	**2020**	**2021**	**2020**
Management fees	$ —	$ 11,429	$ —	$ 25,979
Servicing expenses	$ 18,680	$ 23,947	$ 43,627	$ 43,852
Operating expenses:				
Compensation and benefits:				
Non-cash equity compensation expenses	$ 4,611	$ 2,315	$ 6,401	$ 4,630
All other compensation and benefits	6,648	5,812	13,046	11,774
Total compensation and benefits	$ 11,259	$ 8,127	$ 19,447	$ 16,404
Other operating expenses:				
Nonrecurring expenses	$ 1,397	$ —	$ 3,368	$ —
All other operating expenses	5,821	5,711	11,337	12,512
Total other operating expenses	$ 7,218	$ 5,711	$ 14,705	$ 12,512
Annualized operating expense ratio	2.8 %	1.9 %	2.4 %	1.6 %
Annualized operating expense ratio, excluding non-cash equity compensation and other nonrecurring expenses	1.9 %	1.6 %	1.7 %	1.3 %

Prior to the termination of the Management Agreement on August 14, 2020, a management fee was payable to PRCM Advisers under the agreement. The management fee was calculated based on our stockholders' equity with certain adjustments outlined in the management agreement.

We incur servicing expenses generally related to the subservicing of MSR. The decrease in servicing expenses during the three months ended June 30, 2021, as compared to the same period in 2020, was a result of a decrease in loan forbearance and adjustments for preliquidation claims. For the six months ended June 30, 2021, as compared to the same period in 2020, servicing expenses were consistent.

Prior to the termination of the Management Agreement, included in compensation and benefits and other operating expenses were direct and allocated costs incurred by PRCM Advisers on our behalf and reimbursed by us. For the three and six months ended June 30, 2020 these direct and allocated costs totaled approximately $4.3 million and $16.1 million, respectively. Included in these reimbursed costs was compensation paid to employees of an affiliate of PRCM Advisers serving as our principal financial officer and general counsel of $0.2 million and $1.3 million respectively for the three and six months ended June 30, 2020. Prior to termination of the Management Agreement, the allocation of compensation paid to employees of an affiliate of PRCM Advisers serving as our principal financial officer and general counsel was based on time spent overseeing our activities in accordance with the Management Agreement; we did not reimburse PRCM Advisers for any expenses related to the compensation of our chief executive officer or chief investment officer. Additionally, included in compensation and benefits is non-cash equity compensation expense, which represents amortization of the restricted stock awarded to our independent directors, executive officers and other eligible individuals. Included in non-cash equity compensation expense for the three and six months ended June 30, 2020 was amortization of restricted stock awarded to our executive officers, including our chief executive officer, chief investment officer, principal financial officer and general counsel of $1.1 million and $2.1 million, respectively.

Following the termination of the Management Agreement, we no longer pay a management fee to, or reimburse the expenses of, PRCM Advisers. Expenses for which we previously reimbursed PRCM Advisers are now paid directly by us. We are also now responsible for the cash compensation and employee benefits of our chief executive officer, chief investment officer and investment professionals, which were previously the responsibility of PRCM Advisers. Prior to the termination of the Management Agreement, we were only responsible for the equity compensation paid to such individuals.

Restructuring Charges

On April 13, 2020, we announced that we had elected to not renew the Management Agreement with PRCM Advisers on the basis of unfair compensation payable to the manager pursuant to Section 13(a)(ii) of the Management Agreement. As a result, we had expected the Management Agreement to terminate on September 19, 2020, at which time we would have been required to pay a termination fee equal to three times the sum of the average annual base management fee earned by PRCM Advisers during the 24-month period immediately preceding the date of termination, calculated as of the end of the most recently completed fiscal quarter prior to the date of termination, pursuant to the terms of the Management Agreement. The termination fee was calculated to be $139.8 million based on results as of June 30, 2020 and recorded during the three months ended June 30, 2020.

On July 15, 2020, we provided PRCM Advisers with a notice of termination of the Management Agreement for “cause” on the basis of certain material breaches of the Management Agreement by PRCM Advisers, its agents and/or its assignees that are incapable of being cured within the time period set forth therein and certain events of gross negligence on the part of PRCM Advisers in the performance of its duties under the Management Agreement. The Management Agreement subsequently terminated on August 14, 2020. No termination fee was payable to PRCM Advisers in connection with such termination, pursuant to Section 15(a) of the Management Agreement.

In connection with the termination of the Management Agreement, we reversed the $139.8 million accrued termination fee during the three months ended September 30, 2020. For the year ended December 31, 2020, we incurred a total of $5.7 million in contract termination costs, which includes all estimated costs incurred for legal and advisory services provided to facilitate the termination of the Management Agreement. In accordance with Accounting Standards Codification (ASC) 420, *Exit or Disposal Cost Obligations*, all contract termination costs are included within restructuring charges on our condensed consolidated statements of comprehensive (loss) income. During the three and six months ended June 30, 2020, we incurred $145.1 million and $145.8 million, respectively, of restructuring charges. We did not incur any restructuring charges during the three and six months ended June 30, 2021.

Income Taxes

During the three months ended June 30, 2021, our TRSs recognized a benefit from income taxes of $20.9 million, which was primarily due to losses recognized on MSR, offset by net gains recognized on derivative instruments held in the TRSs. During the six months ended June 30, 2021, our TRSs recognized a provision for income taxes of $1.8 million, which was primarily due to gains recognized on MSR, offset by net losses recognized on derivative instruments held in the TRSs. During the three and six months ended June 30, 2020, our TRSs recognized a benefit from income taxes of $18.2 million and $31.3 million respectively. The benefit recognized for the three months ended June 30, 2020 was primarily due to losses recognized on MSR held in our TRSs. The benefit recognized for the six months ended June 30, 2020 was primarily due to losses recognized on MSR, offset by net gains recognized on derivative instruments held in our TRSs.

Financial Condition

Available-for-Sale Securities, at Fair Value

The majority of our AFS investment securities portfolio is comprised of fixed rate Agency mortgage-backed securities backed by single-family and multi-family mortgage loans. We also hold $5.6 million in tranches of mortgage-backed and asset-backed P&I and interest-only non-Agency securities. All of our P&I Agency RMBS AFS are Fannie Mae or Freddie Mac mortgage pass-through certificates or collateralized mortgage obligations that carry an implied rating of "AAA," or Ginnie Mae mortgage pass-through certificates, which are backed by the guarantee of the U.S. government. The majority of these securities consist of whole pools in which we own all of the investment interests in the securities.

The table below summarizes certain characteristics of our Agency RMBS AFS at June 30, 2021:

	June 30, 2021								
(dollars in thousands, except purchase price)	Principal/ Current Face	Net (Discount) Premium	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value	Weighted Average Coupon Rate	Weighted Average Purchase Price
P&I securities	$ 6,812,303	$ 305,796	$ 7,118,099	$ —	$ 291,473	$ (341)	$ 7,409,231	3.97 %	$ 105.03
Interest-only securities	4,274,783	419,475	419,475	(15,154)	30,561	(9,626)	425,256	2.86 %	$ 14.03
Total	$ 11,087,086	$ 725,271	$ 7,537,574	$ (15,154)	$ 322,034	$ (9,967)	$ 7,834,487		

Our three-month average constant prepayment rate, or CPR, experienced by Agency RMBS AFS owned by us as of June 30, 2021, on an annualized basis, was 32.3%.

Mortgage Servicing Rights, at Fair Value

One of our wholly owned subsidiaries has approvals from Fannie Mae and Freddie Mac to own and manage MSR, which represent the right to control the servicing of mortgage loans. We do not directly service mortgage loans, and instead contract with appropriately licensed subservicers to handle substantially all servicing functions in the name of the subservicer for the loans underlying our MSR. As of June 30, 2021, our MSR had a fair market value of $2.0 billion.

As of June 30, 2021, our MSR portfolio included MSR on 784,334 loans with an unpaid principal balance of approximately $185.2 billion. The following tables summarize certain characteristics of the loans underlying our MSR by gross weighted average coupon rate types and ranges at June 30, 2021:

	June 30, 2021									
(dollars in thousands)	Number of Loans	Unpaid Principal Balance	% Fannie Mae	Gross Weighted Average Coupon Rate	Weighted Average Loan Age (months)	Weighted Average Original FICO	Weighted Average Original LTV	60+ Day Delinquencies	3-Month CPR	Net Servicing Fee (bps)
30-Year Fixed:										
≤ 3.25%	161,009	$ 54,154,835	49.5 %	2.9 %	7	768	71.4 %	0.3 %	7.5 %	25.
> 3.25 - 3.75%	154,486	40,599,280	62.5 %	3.4 %	28	759	73.9 %	1.2 %	27.7 %	26.
> 3.75 - 4.25%	149,732	32,449,883	63.9 %	3.9 %	49	755	76.0 %	3.3 %	41.2 %	27.
> 4.25 - 4.75%	100,082	18,906,967	65.9 %	4.4 %	51	739	77.9 %	5.7 %	45.8 %	26.
> 4.75 - 5.25%	50,197	8,589,943	67.2 %	4.9 %	45	724	79.3 %	7.7 %	46.3 %	27.
> 5.25%	20,400	2,958,553	70.2 %	5.5 %	44	706	79.4 %	10.4 %	44.3 %	30.
	635,906	157,659,461	59.1 %	3.6 %	29	756	74.3 %	2.4 %	30.0 %	26.
15-Year Fixed:										
≤ 2.25%	10,336	3,543,357	91.0 %	2.0 %	4	778	58.9 %	0.1 %	4.9 %	25.
> 2.25 - 2.75%	32,964	8,400,083	67.4 %	2.4 %	9	776	58.9 %	0.2 %	12.9 %	25.
> 2.75 - 3.25%	47,013	8,037,948	70.3 %	2.9 %	38	769	61.8 %	0.7 %	25.5 %	26.
> 3.25 - 3.75%	31,530	4,180,274	71.4 %	3.4 %	51	758	64.7 %	1.8 %	31.5 %	27.
> 3.75 - 4.25%	15,066	1,697,354	64.5 %	3.9 %	49	744	65.3 %	2.7 %	31.9 %	29.
> 4.25%	7,651	735,194	62.5 %	4.5 %	40	729	66.1 %	3.2 %	35.3 %	31.
	144,560	26,594,210	71.7 %	2.8 %	27	768	61.3 %	0.8 %	22.0 %	26.
Total ARMs	3,868	956,067	63.2 %	3.1 %	49	762	68.1 %	3.6 %	41.4 %	25.
Total	784,334	$ 185,209,738	61.0 %	3.5 %	29	758	72.4 %	2.2 %	29.0 %	26.

Financing

Our borrowings consist primarily of repurchase agreements, revolving credit facilities and term notes payable. These borrowings are collateralized by our pledge of AFS securities, derivative instruments, MSR, servicing advances and certain cash balances. Substantially all of our Agency RMBS are currently pledged as collateral, and a portion of our non-Agency securities have been pledged as collateral for repurchase agreements.

During the year ended December 31, 2019, we formed a trust entity, or the MSR Issuer Trust, for the purpose of financing MSR through securitization, pursuant to which, through two of our wholly owned subsidiaries, MSR is pledged to the MSR Issuer Trust and in return, the MSR Issuer Trust issues term notes to qualified institutional buyers and a variable funding note, or VFN, to one of the subsidiaries, in each case secured on a pari passu basis. In connection with the transaction, we also entered into a repurchase facility that is secured by the VFN issued in connection with the MSR securitization transaction, which is collateralized by our MSR.

Additionally, our convertible senior notes due 2022 were issued in January 2017. Our convertible senior notes due 2026 were issued in February 2021, and a portion of the proceeds from the offering were used to partially repurchase our senior notes due 2022. Both convertible senior notes due 2022 and 2026 are unsecured and pay interest semiannually at a rate of 6.25% per annum.

Through February 19, 2021, our wholly owned subsidiary, TH Insurance Holdings Company LLC, or TH Insurance, was a member of the Federal Home Loan Bank of Des Moines, or the FHLB. As a member of the FHLB, TH Insurance had access to a variety of products and services offered by the FHLB, including secured advances. However, we did not have any outstanding secured advances or credit capacity available as of December 31, 2020. TH Insurance's FHLB membership expired on February 19, 2021.

At June 30, 2021, borrowings under repurchase agreements, revolving credit facilities, term notes payable and convertible senior notes had the following characteristics:

(dollars in thousands)	June 30, 2021		
Borrowing Type	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Years to Maturity
Repurchase agreements	$ 8,350,622	0.28 %	0.2
Revolving credit facilities	533,519	3.68 %	1.2
Term notes payable	396,183	2.89 %	3.0
Convertible senior notes (1)	423,742	6.25 %	3.2
Total	$ 9,704,066	0.84 %	0.5

(dollars in thousands)	June 30, 2021		
Collateral Type	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Haircut on Collateral Value
Agency RMBS	$ 8,181,645	0.22 %	4.7 %
Non-Agency securities	1,196	1.85 %	34.0 %
Agency Derivatives	42,781	0.79 %	21.3 %
Mortgage servicing rights	1,032,202	3.43 %	28.6 %
Mortgage servicing advances	22,500	3.16 %	12.3 %
Other (1)	423,742	6.25 %	NA
Total	$ 9,704,066	0.84 %	7.2 %

(1) Includes unsecured convertible senior notes due 2022 and 2026 paying interest semiannually at a rate of 6.25% per annum on the aggregate principal amount of $431.3 million.

As of June 30, 2021, the debt-to-equity ratio funding our AFS securities, MSR, servicing advances and Agency Derivatives, which includes unsecured borrowings under convertible senior notes, was 3.9:1.0. We believe the current degree of leverage within our portfolio helps ensure that we have access to unused borrowing capacity, thus supporting our liquidity and the strength of our balance sheet.

The following table provides a summary of our borrowings under repurchase agreements, revolving credit facilities, term notes payable, convertible senior notes and (previously held) FHLB advances, our net TBA notional amounts and our debt-to-equity ratios for the three months ended June 30, 2021, and the four immediately preceding quarters:

(dollars in thousands)

For the Three Months Ended	Quarterly Average	End of Period Balance	Maximum Balance of Any Month-End	End of Period Total Borrowings to Equity Ratio	End of Period Net Long (Short) TBA Notional	End of Period Economic Debt-to-Equity Ratio (1)
June 30, 2021	$ 11,129,575	$ 9,704,066	$ 12,837,520	3.9:1.0	$ 6,854,000	6.5:1.0
March 31, 2021	$ 14,016,694	$ 12,938,748	$ 14,525,894	4.8:1.0	$ 4,800,000	6.4:1.0
December 31, 2020	$ 16,431,516	$ 16,109,520	$ 16,842,273	5.2:1.0	$ 5,197,000	6.8:1.0
September 30, 2020	$ 17,702,696	$ 17,332,697	$ 17,896,976	5.7:1.0	$ 6,236,000	7.7:1.0
June 30, 2020	$ 18,121,689	$ 17,938,992	$ 18,062,737	6.3:1.0	$ 3,236,000	7.4:1.0

(1) Defined as total borrowings under repurchase agreements, revolving credit facilities, term notes payable, convertible senior notes and (previously held) FHLB advances, plus implied debt on net TBA notional, divided by total equity.

Equity

The tables below provide details of our changes in stockholders' equity from March 31, 2021 to June 30, 2021 as well as a reconciliation of comprehensive income and GAAP net income to non-GAAP measures:

(dollars in millions, except per share amounts)	Book Value	Common Shares Outstanding	Common Book Value Per Share
Common stockholders' equity at March 31, 2021	$ 1,994.4	273.7	$ 7.29
Core Earnings, net of tax benefit of $0.8 million (1)	65.2		
Dividends on preferred stock	(13.7)		
Core Earnings attributable to common stockholders, net of tax benefit of $0.8 million (1)	51.5		
Realized and unrealized gains and losses, net of tax benefit of $20.1 million	(183.2)		
Other comprehensive loss, net of tax	(62.9)		
Dividend declaration	(46.7)		
Other	4.6	—	
Issuance of common stock, net of offering costs	0.1	—	
Common stockholders' equity at June 30, 2021	$ 1,757.8	273.7	$ 6.42
Total preferred stock liquidation preference	726.3		
Total equity at June 30, 2021	$ 2,484.1		

(in millions)		Three Months Ended June 30, 2021
Comprehensive loss attributable to common stockholders	$	(194.6)
Adjustment for other comprehensive loss attributable to common stockholders:		
Unrealized losses on available-for-sale securities		62.9
Net loss attributable to common stockholders		(131.7)
Adjustments for non-Core Earnings:		
Realized gains on investment securities		(15.5)
Unrealized losses on investment securities		49.6
Provision for credit losses on investment securities		7.4
Realized and unrealized losses on mortgage servicing rights		202.7
Realized gain on termination or expiration of interest rate swaps and swaptions		(8.7)
Unrealized gain on interest rate swaps and swaptions		(13.6)
Realized and unrealized gains on other derivative instruments		(24.7)
Change in servicing reserves		0.1
Non-cash equity compensation expense		4.6
Other nonrecurring expenses		1.4
Benefit from income taxes on non-Core Earnings		(20.1)
Core Earnings attributable to common stockholders [(1)]	$	51.5

(1) Core Earnings is a non-U.S. GAAP measure that we define as comprehensive (loss) income attributable to common stockholders, excluding "realized and unrealized gains and losses" (impairment losses, provision for (reversal of) credit losses, realized and unrealized gains and losses on the aggregate portfolio, reserve expense for representation and warranty obligations on MSR, non-cash compensation expense related to restricted common stock, other nonrecurring expenses and restructuring charges). As defined, Core Earnings includes net interest income, accrual and settlement of interest on derivatives, dollar roll income on TBAs, servicing income, net of estimated amortization on MSR, management fees and recurring cash related operating expenses. Dollar roll income is the economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements. Core Earnings provides supplemental information to assist investors in analyzing the Company's results of operations and helps facilitate comparisons to industry peers.

Liquidity and Capital Resources

Our liquidity and capital resources are managed and forecasted on a daily basis. We believe this ensures that we have sufficient liquidity to absorb market events that could negatively impact collateral valuations and result in margin calls. We also believe that it gives us the flexibility to manage our portfolio to take advantage of market opportunities.

Our principal sources of cash consist of borrowings under repurchase agreements, revolving credit facilities, term notes payable, payments of principal and interest we receive on our target assets, cash generated from our operating results, and proceeds from capital market transactions. We typically use cash to repay principal and interest on our borrowings, to purchase our target assets, to make dividend payments on our capital stock, and to fund our operations. To the extent that we raise additional equity capital through capital market transactions, we anticipate using cash proceeds from such transactions to purchase our target assets and for other general corporate purposes. Such general corporate purposes may include the refinancing or repayment of debt, the repurchase or redemption of common and preferred equity securities, and other capital expenditures.

As of June 30, 2021, we held $1.3 billion in cash and cash equivalents available to support our operations; $9.9 billion of AFS securities, MSR, and derivative assets held at fair value; and $9.7 billion of outstanding debt in the form of repurchase agreements, borrowings under revolving credit facilities, term notes payable and convertible senior notes. During the three and six months ended June 30, 2021, the debt-to-equity ratio funding our AFS securities, MSR and Agency Derivatives, which includes unsecured borrowings under convertible senior notes, decreased from 4.8:10 to 3.9:1.0 and decreased from 5.2:1.0 to 3.9:1.0, respectively. The decrease for both periods was driven by decreased financing on Agency RMBS due to sales and prepayments on the related assets. During the three and six months ended June 30, 2021, our economic debt-to-equity ratio funding our AFS securities, MSR and Agency Derivatives, which includes unsecured borrowings under convertible senior notes and implied debt on net TBA notional, increased from 6.4:1.0 to 6.5:1.0 and decreased from 6.8:1.0 to 6.5:1.0, respectively.

As of June 30, 2021, we held approximately $5.3 million of unpledged Agency securities and derivatives and $4.7 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on unpledged securities of approximately $7.7 million. As of June 30, 2021, we held approximately $216.9 million of unpledged MSR and $70.3 million of unpledged servicing advances. Overall, we had unused committed borrowing capacity on MSR asset and servicing advance financing facilities of $304.0 million and $177.5 million, respectively. Generally, unused borrowing capacity may be the result of our election not to utilize certain financing, as well as delays in the timing in which funding is provided, insufficient collateral or the inability to meet lenders' eligibility requirements for specific types of asset classes. On a daily basis, we monitor and forecast our available, or excess, liquidity. Additionally, we frequently perform shock analyses against various market events to monitor the adequacy of our excess liquidity. If borrowing rates and/or collateral requirements change in the near term, we believe we are subject to less earnings volatility than a more leveraged organization.

During the six months ended June 30, 2021, we did not experience any material issues accessing our funding sources, although the balance sheet capacity of some counterparties has tightened due to compliance with the Basel III regulatory capital reform rules as well as the management of perceived risk in the current market environment due to the COVID-19 pandemic. We expect ongoing sources of financing to be primarily repurchase agreements, revolving credit facilities, term notes payable, convertible notes and similar financing arrangements. We plan to finance our assets with a moderate amount of leverage, the level of which may vary based upon the particular characteristics of our portfolio and market conditions.

As of June 30, 2021, we had master repurchase agreements in place with 45 counterparties (lenders), the majority of which are U.S. domiciled financial institutions, and we continue to evaluate additional counterparties to manage and optimize counterparty risk. Under our repurchase agreements, we are required to pledge additional assets as collateral to our lenders when the estimated fair value of the existing pledged collateral under such agreements declines and such lenders, through a margin call, demand additional collateral. Lenders generally make margin calls because of a perceived decline in the value of our assets collateralizing the repurchase agreements. This may occur following the monthly principal reduction of assets due to scheduled amortization and prepayments on the underlying mortgages, or may be caused by changes in market interest rates, a perceived decline in the market value of the investments and other market factors. To cover a margin call, we may pledge additional assets or cash. At maturity, any cash on deposit as collateral is generally applied against the repurchase agreement balance, thereby reducing the amount borrowed. Should the value of our assets suddenly decrease, significant margin calls on our repurchase agreements could result, causing an adverse change in our liquidity position.

The following table summarizes our repurchase agreements and counterparty geographical concentration at June 30, 2021 and December 31, 2020:

	June 30, 2021			December 31, 2020		
(dollars in thousands)	Amount Outstanding	Net Counterparty Exposure(1)	Percent of Funding	Amount Outstanding	Net Counterparty Exposure(1)	Percent of Funding
North America	$ 5,545,470	$ 252,823	49.4 %	$ 9,653,053	$ 413,862	66.2 %
Europe (2)	2,123,379	232,447	45.4 %	3,413,584	117,463	18.8 %
Asia (2)	681,773	26,603	5.2 %	2,077,261	93,865	15.0 %
Total	$ 8,350,622	$ 511,873	100.0 %	$ 15,143,898	$ 625,190	100.0 %

(1) Represents the net carrying value of the assets sold under agreements to repurchase, including accrued interest plus any cash or assets on deposit to secure the repurchase obligation, less the amount of the repurchase liability, including accrued interest.
(2) Exposure to European and Asian domiciled banks and their U.S. subsidiaries.

In addition to our master repurchase agreements to fund our Agency and non-Agency securities, we have one repurchase facility and three revolving credit facilities that provide short- and long-term financing for our MSR portfolio. We also have one revolving credit facility that provides long-term financing for our servicing advances. An overview of the facilities is presented in the table below:

(dollars in thousands)

	June 30, 2021				
Expiration Date (1)	**Amount Outstanding**	**Unused Committed Capacity** (2)	**Unused Uncommitted Capacity**	**Total Capacity**	**Eligible Collateral**
March 12, 2022	$ 270,099	$ 79,901	$ 350,000	$ 700,000	Mortgage servicing rights
March 31, 2022	$ 125,000	$ 100,000	$ 75,000	$ 300,000	Mortgage servicing rights (3)
March 20, 2024	$ 122,293	$ 102,707	$ 75,000	$ 300,000	Mortgage servicing rights (4)
January 31, 2022	$ 118,628	$ 21,372	$ —	$ 140,000	Mortgage servicing rights
September 28, 2022	$ 22,500	$ 177,500	$ —	$ 200,000	Mortgage servicing advances

(1) The facilities are set to mature on the stated expiration date, unless extended pursuant to their terms.
(2) Represents unused capacity amounts to which commitment fees are charged.
(3) This repurchase facility is secured by the VFN issued in connection with the MSR securitization transaction completed on June 27, 2019, which is collateralized by our MSR. The committed capacity is set to mature on September 30, 2021 while the uncommitted capacity is set to mature on March 31, 2022, unless extended pursuant to their terms.
(4) The revolving period of this facility ceases on March 17, 2023, at which time the facility starts a 12-month amortization period.

We are subject to a variety of financial covenants under our lending agreements. The following represent the most restrictive financial covenants across our lending agreements as of June 30, 2021:

- Total indebtedness to tangible net worth must be less than 8.0:1.0. As of June 30, 2021, our total indebtedness to tangible net worth, as defined, was 4.0:1.0.
- Cash liquidity must be greater than $200.0 million. As of June 30, 2021, our liquidity, as defined, was $1.3 billion.
- Net worth must be greater than the higher of $1.5 billion or 50% of the highest net worth during the 24 calendar months prior, measured beginning March 31, 2020. As of June 30, 2021, 50% of the highest net worth during the 24 calendar months prior, as defined, was $1.6 billion and our net worth, as defined, was $2.5 billion.

We are also subject to additional financial covenants in connection with various other agreements we enter into in the normal course of our business. We intend to continue to operate in a manner which complies with all of our financial covenants.

The following table summarizes assets at carrying values that were pledged or restricted as collateral for the future payment obligations of repurchase agreements, revolving credit facilities, term notes payable and derivative instruments at June 30, 2021 and December 31, 2020:

(in thousands)	**June 30, 2021**	**December 31, 2020**
Available-for-sale securities, at fair value	$ 7,830,079	$ 14,633,217
Mortgage servicing rights, at fair value	1,803,233	1,146,710
Restricted cash	679,479	1,126,439
Due from counterparties	6,606	21,312
Derivative assets, at fair value	50,416	61,557
Other assets	29,142	28,540
Total	$ 10,398,955	$ 17,017,775

Although we generally intend to hold our target assets as long-term investments, we may sell certain of our assets in order to manage our interest rate risk and liquidity needs, to meet other operating objectives and to adapt to market conditions. Our Agency RMBS are generally actively traded and thus, in most circumstances, readily liquid. However, certain of our assets, including MSR, are subject to longer trade timelines, and, as a result, market conditions could significantly and adversely affect the liquidity of our assets. Any illiquidity of our assets may make it difficult for us to sell such assets if the need or desire arises. Our ability to quickly sell certain assets, such as MSR may be limited by delays encountered while obtaining certain regulatory approvals required for such dispositions and may be further limited by delays due to the time period needed for negotiating transaction documents, conducting diligence, and complying with regulatory requirements regarding the transfer of such assets before settlement may occur. Consequently, even if we identify a buyer for our MSR, there is no assurance that we would be able to quickly sell such assets if the need or desire arises.

In addition, if we are required to liquidate all or a portion of our portfolio quickly, we may realize significantly less than the value at which we previously recorded our assets. Assets that are illiquid are more difficult to finance, and to the extent that we use leverage to finance assets that become illiquid, we may lose that leverage or have it reduced. Assets tend to become less liquid during times of financial stress, which is often the time that liquidity is most needed. As a result, our ability to sell assets or vary our portfolio in response to changes in economic and other conditions may be limited by liquidity constraints, which could adversely affect our results of operations and financial condition.

We cannot predict the timing and impact of future sales of our assets, if any. Because many of our assets are financed with repurchase agreements, revolving credit facilities and term notes payable, a significant portion of the proceeds from sales of our assets (if any), prepayments and scheduled amortization are used to repay balances under these financing sources.

The following table provides the maturities of our repurchase agreements, revolving credit facilities, term notes payable and convertible senior notes as of June 30, 2021 and December 31, 2020:

(in thousands)	June 30, 2021	December 31, 2020
Within 30 days	$ 2,098,610	$ 5,370,506
30 to 59 days	1,318,326	4,292,861
60 to 89 days	2,319,000	2,062,234
90 to 119 days	1,356,623	1,610,198
120 to 364 days	1,790,181	1,868,099
One to three years	540,976	510,013
Three to five years	280,350	395,609
Total	$ 9,704,066	$ 16,109,520

For the three months ended June 30, 2021, our restricted and unrestricted cash balance increased approximately $175.8 million to $2.1 billion at June 30, 2021. The cash movements can be summarized by the following:

- *Cash flows from operating activities.* For the three months ended June 30, 2021, operating activities increased our cash balances by approximately $213.8 million, primarily driven by our financial results for the quarter.
- *Cash flows from investing activities*. For the three months ended June 30, 2021, investing activities increased our cash balances by approximately $3.3 billion, primarily driven by net sales of and principal payments on AFS securities, offset by purchases of MSR.
- *Cash flows from financing activities.* For the three months ended June 30, 2021, financing activities decreased our cash balance by approximately $3.3 billion, primarily driven by net repayment of repurchase agreements due to the decreased financing on Agency RMBS as a result of sales and prepayments on the related assets.

Inflation

Substantially all of our assets and liabilities are financial in nature. As a result, changes in interest rates and other factors impact our performance far more than does inflation, although inflation rates can often have a meaningful influence over the direction of interest rates. Our financial statements are prepared in accordance with U.S. GAAP and dividends are based upon net ordinary income and capital gains as calculated for tax purposes; in each case, our results of operations and reported assets, liabilities and equity are measured with reference to historical cost or fair value without considering inflation.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We seek to manage our risks related to the credit quality of our assets, interest rates, liquidity, prepayment speeds and market value while providing an opportunity to stockholders to realize attractive risk-adjusted total return through ownership of our capital stock. Although we do not seek to avoid risk completely, we believe that risk can be quantified from historical experience, and we seek to manage our risk levels in order to earn sufficient compensation to justify the risks we undertake and to maintain capital levels consistent with taking such risks.

To manage the risks to our portfolio, we employ portfolio-wide and asset-specific risk measurement and management processes in our daily operations. Risk management tools include software and services licensed or purchased from third parties as well as proprietary and third-party analytical tools and models. There can be no guarantee that these tools and methods will protect us from market risks.

Interest Rate Risk

Interest rates are highly sensitive to many factors, including fiscal and monetary policies and domestic and international economic and political considerations, as well as other factors beyond our control. We are subject to interest rate risk in connection with our assets and related financing obligations. Subject to maintaining our qualification as a REIT, we engage in a variety of interest rate risk management techniques that seek to mitigate the influence of interest rate changes on the values of our assets.

We may enter into a variety of derivative and non-derivative instruments to economically hedge interest rate risk or “duration mismatch (or gap)” by adjusting the duration of our floating-rate borrowings into fixed-rate borrowings to more closely match the duration of our assets. This particularly applies to borrowing agreements with maturities or interest rate resets of less than six months. Typically, the interest receivable terms (*i.e.*, LIBOR or the OIS rate) of certain derivatives match the terms of the underlying debt, resulting in an effective conversion of the rate of the related borrowing agreement from floating to fixed. The objective is to manage the cash flows associated with current and anticipated interest payments on borrowings, as well as the ability to roll or refinance borrowings at the desired amount by adjusting the duration. To help manage the adverse impact of interest rate changes on the value of our portfolio as well as our cash flows, we may, at times, enter into various forward contracts, including short securities, Agency to-be-announced securities, or TBAs, options, futures, swaps, caps, credit default swaps and total return swaps. In executing on the Company’s current interest rate risk management strategy, the Company has entered into TBAs, interest rate swap and swaption agreements and U.S. Treasury and Eurodollar futures. In addition, because MSR are negative duration assets, they provide a hedge to interest rate exposure on our Agency RMBS portfolio. In hedging interest rate risk, we seek to reduce the risk of losses on the value of our investments that may result from changes in interest rates in the broader markets, improve risk-adjusted returns and, where possible, obtain a favorable spread between the yield on our assets and the cost of our financing.

REIT income arising from “clearly identified” hedging transactions that are entered into to manage the risk of interest rate or price changes with respect to borrowings, including gain from the disposition of such hedging transactions, to the extent the hedging transactions hedge indebtedness incurred, or to be incurred, by the REIT to acquire or carry real estate assets, will not be treated as gross income for purposes of either the 75% or the 95% gross income tests. In general, for a hedging transaction to be “clearly identified,” (i) it must be identified as a hedging transaction before the end of the day on which it is acquired, originated, or entered into; and (ii) the items of risks being hedged must be identified “substantially contemporaneously” with entering into the hedging transaction (generally not more than 35 days after entering into the hedging transaction). We intend to structure any hedging transactions in a manner that does not jeopardize our qualification as a REIT, although this determination depends on an analysis of the facts and circumstances concerning each hedging transaction. We also implement part of our hedging strategy through our TRSs, which are subject to U.S. federal, state and, if applicable, local income tax.

We treat our TBAs as qualifying assets for purposes of the 75% asset test, to the extent set forth in an opinion from Sidley Austin LLP substantially to the effect that, for purposes of the 75% asset test, our ownership of a TBA should be treated as ownership of the underlying Agency RMBS. We also treat income and gains from our TBAs as qualifying income for purposes of the 75% gross income test, to the extent set forth in an opinion from Sidley Austin LLP substantially to the effect that, for purposes of the 75% gross income test, any gain recognized by us in connection with the settlement of our TBAs should be treated as gain from the sale or disposition of the underlying Agency RMBS.

Interest Rate Effect on Net Interest Income

Our operating results depend in large part on differences between the income earned on our assets and our cost of borrowing and hedging activities. The costs associated with our borrowings are generally based on prevailing market interest rates. During a period of rising interest rates, our borrowing costs generally will increase while the coupon interest earned on our existing portfolio of leveraged fixed-rate Agency RMBS will remain static. Both of these factors could result in a decline in our net interest spread and net interest margin. The inverse result may occur during a period of falling interest rates. The severity of any such decline or increase in our net interest spread and net interest margin would depend on our asset/liability composition at the time, as well as the magnitude and duration of the interest rate increase or decrease.

Our hedging techniques are partly based on assumed levels of prepayments of our target assets. If prepayments are slower or faster than assumed, the life of the investment will be longer or shorter, which could reduce the effectiveness of any hedging strategies we may use and may cause losses on such transactions. Hedging strategies involving the use of derivative securities are highly complex and may produce volatile returns.

Interest Rate Mismatch Risk

The following analyses of risks are based on our experience, estimates, models and assumptions. The analysis is based on models which utilize estimates of fair value and interest rate sensitivity. Actual economic conditions or implementation of decisions may produce results that differ significantly from the estimates and assumptions used in our models.

We perform interest rate sensitivity analyses on various measures of our financial results and condition by examining how our assets, financing, and hedges will perform in various interest rate "shock" scenarios. Two of these measures are presented below in more detail. The first measure is change in annualized net interest income over the next 12 months, including interest spread from our interest rate swaps and float income from custodial accounts associated with our MSR. The second measure is change in value of financial position, including the value of our derivative assets and liabilities. All changes in value are measured as the change from the June 30, 2021 financial position. All projected changes in annualized net interest income are measured as the change from the projected annualized net interest income based off current performance returns.

Computation of the cash flows for the rate-sensitive assets underpinning change in annualized net interest income are based on assumptions related to, among other things, prepayment speeds, yield on future acquisitions, slope of the yield curve, and size of the portfolio. (The assumption for prepayment speeds for Agency RMBS, and MSR, for example, is that they do not change in response to changes in interest rates.) Assumptions for the interest rate sensitive liabilities relate to, among other things, collateral requirements as a percentage of borrowings and amount/term of borrowing. These assumptions may not hold in practice; realized net interest income results may therefore be significantly different from the net interest income produced in scenario analyses. We also note that the uncertainty associated with the estimate of a change in net interest income is directly related to the size of interest rate move considered.

Computation of results for portfolio value involves a two-step process. The first is the use of models to project how the value of interest rate sensitive instruments will change in the scenarios considered. The second, and equally important, step is the improvement of the model projections based on application of our experience in assessing how current market and macroeconomic conditions will affect the prices of various interest rate sensitive instruments. Judgment is best applied to localized (less than 25 basis points, or bps) interest rate moves. The more an instantaneous interest rate move exceeds 25 bps, the greater the likelihood that accompanying market events are significant enough to warrant reconsideration of interest rate sensitivities. As with net interest income, the uncertainty associated with the estimate of change in portfolio value is therefore directly related to the size of interest rate move considered.

The following interest rate sensitivity table displays the potential impact of instantaneous, parallel changes in interest rates of +/- 25 and +/- 50 bps on annualized net interest income and portfolio value, based on our interest sensitive financial instruments at June 30, 2021. The preceding discussion shows that the results for the 25 bps move scenarios are the best representation of our interest rate exposure, followed by those for the 50 bps move scenarios. This hierarchy reflects our localized approach to managing interest rate risk: monitoring rates and rebalancing our hedges on a day to day basis, where rate moves only rarely exceed 25 bps in either direction.

	Changes in Interest Rates			
(dollars in thousands)	**-50 bps**	**-25 bps**	**+25 bps**	**+50 bps**
Change in annualized net interest income [1]:	$ (10,072)	$ (4,886)	$ 4,277	$ 8,605
% change in net interest income [1]	*(5.7)%*	*(2.8)%*	*2.4 %*	*4.9 %*
Change in value of financial position:				
Available-for-sale securities	$ 23,058	$ 13,636	$ (18,818)	$ (44,192)
As a % of common equity	*1.3 %*	*0.8 %*	*(1.1)%*	*(2.5)%*
Mortgage servicing rights [2]	$ (266,606)	$ (129,553)	$ 118,565	$ 225,449
As a % of common equity [2]	*(15.2)%*	*(7.4)%*	*6.8 %*	*12.8 %*
Derivatives, net	$ 168,337	$ 90,308	$ (101,818)	$ (213,764)
As a % of common equity	*9.6 %*	*5.1 %*	*(5.8)%*	*(12.1)%*
Reverse repurchase agreements	$ 14	$ 7	$ (7)	$ (14)
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Repurchase agreements	$ (9,071)	$ (4,536)	$ 4,536	$ 9,040
As a % of common equity	*(0.5)%*	*(0.2)%*	*0.3 %*	*0.5 %*
Revolving credit facilities	$ (296)	$ (148)	$ 148	$ 296
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Term notes payable	$ (2,187)	$ (875)	$ 437	$ 625
As a % of common equity	*(0.1)%*	*— %*	*— %*	*— %*
Convertible senior notes	$ (2,712)	$ (1,356)	$ 1,356	$ 2,675
As a % of common equity	*(0.2)%*	*(0.1)%*	*0.1 %*	*0.2 %*
Total Net Assets	$ (89,463)	$ (32,517)	$ 4,399	$ (19,885)
As a % of total assets	*(0.7)%*	*(0.3)%*	*— %*	*(0.2)%*
As a % of common equity	(5.1)%	(1.8)%	0.3 %	(1.1)%

(1) Amounts include the effect of interest spread from our interest rate swaps and float income from custodial accounts associated with our MSR, but do not reflect any potential changes to dollar roll income associated with our TBA positions, which are accounted for as derivative instruments in accordance with U.S. GAAP.
(2) Includes the effect of unsettled MSR.

Certain assumptions have been made in connection with the calculation of the information set forth in the foregoing interest rate sensitivity table and, as such, there can be no assurance that assumed events will occur or that other events will not occur that would affect the outcomes. The base interest rate scenario assumes interest rates at June 30, 2021. As discussed, the analysis utilizes assumptions and estimates based on our experience and judgment. Furthermore, future purchases and sales of assets could materially change our interest rate risk profile.

The information set forth in the interest rate sensitivity table above and all related disclosures constitutes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. While this table reflects the estimated impact of interest rate changes on the static portfolio, we actively manage our portfolio and continuously make adjustments to the size and composition of our asset and hedge portfolio. Actual results could differ significantly from those estimated in the foregoing interest rate sensitivity table.

Prepayment Risk

Prepayment risk is the risk that principal will be repaid at a different rate than anticipated. As we receive prepayments of principal on our Agency RMBS, premiums paid on such assets will be amortized against interest income. In general, an increase in prepayment rates will accelerate the amortization of purchase premiums, thereby reducing the interest income earned on the assets.

We believe that we will be able to reinvest proceeds from scheduled principal payments and prepayments at acceptable yields; however, no assurances can be given that, should significant prepayments occur, market conditions would be such that acceptable investments could be identified and the proceeds timely reinvested.

MSR are also subject to prepayment risk in that, generally, an increase in prepayment rates would result in a decline in value of the MSR.

Market Risk

Market Value Risk. Our AFS securities are reflected at their estimated fair value, with the difference between amortized cost net of allowance for credit losses and estimated fair value for all AFS securities except Agency interest-only securities reflected in accumulated other comprehensive income. The estimated fair value of these securities fluctuates primarily due to changes in interest rates, market valuation of credit risks, and other factors. Generally, in a rising interest rate environment, we would expect the fair value of these securities to decrease; conversely, in a decreasing interest rate environment, we would expect the fair value of these securities to increase. As market volatility increases or liquidity decreases, the fair value of our assets may be adversely impacted.

Our MSR are reflected at their estimated fair value. The estimated fair value fluctuates primarily due to changes in interest rates and other factors. Generally, in a rising interest rate environment, we would expect prepayments to decrease and the fair value of our MSR to increase. Conversely, in a decreasing interest rate environment, we would expect prepayments to increase and the fair value of our MSR to decrease.

Real estate risk. Residential property values are subject to volatility and may be affected adversely by a number of factors, including national, regional and local economic conditions; local real estate conditions (such as the supply of housing); changes or continued weakness in specific industry segments; construction quality, age and design; demographic factors; retroactive changes to building or similar codes; and natural disasters and other catastrophes. Decreases in property values reduce the value of the collateral for residential mortgage loans and the potential proceeds available to borrowers to repay the loans, which may increase costs to service the residential mortgage loans underlying our MSR.

Liquidity Risk

Our liquidity risk is principally associated with our financing of long-maturity assets with shorter-term borrowings in the form of repurchase agreements and borrowings under revolving credit facilities. Although the interest rate adjustments of these assets and liabilities fall within the guidelines established by our operating policies, maturities are not required to be, nor are they, matched.

Should the value of our assets pledged as collateral suddenly decrease, lender margin calls could increase, causing an adverse change in our liquidity position. Moreover, the portfolio construction of MSR, which generally have negative duration, combined with levered RMBS, which generally have positive duration, may in certain market scenarios lead to variation margin calls, which could negatively impact our excess cash position. Additionally, if one or more of our repurchase agreement or revolving credit facility counterparties chose not to provide ongoing funding, our ability to finance would decline or exist at possibly less advantageous terms. As such, we cannot provide assurance that we will always be able to roll over our repurchase agreements and revolving credit facilities. See Item 2, "*Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources*" in this Quarterly Report on 10-Q for further information about our liquidity and capital resource management.

Certain mortgage loan forbearance programs were announced in connection with the CARES Act. As the servicer of record for the MSR assets in our portfolio, we may be responsible for continuing to advance principal, interest, taxes and insurance on mortgage loans that are in forbearance, delinquency or default. Although the potential aggregate size of the servicing advance obligation is not known, at this time we believe we will be well positioned from a liquidity standpoint, through a combination of excess cash and financing facilities, to continue to make servicing advances in the future.

Credit Risk

We believe that our investment strategy will generally keep our risk of credit losses low to moderate. However, we retain the risk of potential credit losses on all of the loans underlying our remaining non-Agency securities.

Item 4. Controls and Procedures

A review and evaluation was performed by our management, including our Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, of the effectiveness of our disclosure controls and procedures (as such term is defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on that review and evaluation, the CEO and CFO have concluded that our current disclosure controls and procedures, as designed and implemented, were effective as of June 30, 2021. Although our CEO and CFO have determined our disclosure controls and procedures were effective at the end of the period covered by this Quarterly Report on Form 10-Q, a control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that it will detect or uncover failures within the Company to disclose material information otherwise required to be set forth in the reports we submit under the Exchange Act.

There was no change in our internal control over financial reporting that occurred during the quarter ended June 30, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time the Company may be involved in various legal claims and/or administrative proceedings that arise in the ordinary course of our business. Under ASC 450, *Contingencies*, or ASC 450, liabilities are established for legal claims when payments associated with the claims become probable and the costs can be reasonably estimated. The actual costs of resolving legal claims may be substantially higher or lower than the amounts established or the range of reasonably possible loss disclosed for those claims.

As previously disclosed, on April 13, 2020, the Company announced that it had elected not to renew the Management Agreement with PRCM Advisers. Subsequently, on July 15, 2020, the Company provided PRCM Advisers with a notice of termination of the Management Agreement for “cause” in accordance with Section 15(a) of the Management Agreement. The Company terminated the Management Agreement for “cause” on the basis of certain material breaches and certain events of gross negligence on the part of PRCM Advisers in the performance of its duties under the Management Agreement.

On July 21, 2020, PRCM Advisers filed a complaint against the Company in the United States District Court for the Southern District of New York, or the Court. Subsequently, PRCM Advisers filed an amended complaint, or the Federal Complaint, on September 4, 2020. The Federal Complaint alleges, among other things, the misappropriation of trade secrets in violation of both the Defend Trade Secrets Act and New York common law, breach of contract, breach of the implied covenant of good faith and fair dealing, unfair competition and business practices, unjust enrichment, conversion, and tortious interference with contract. The Federal Complaint seeks, among other things, an order enjoining the Company from making any use of or disclosing PRCM Advisers’ trade secret, proprietary, or confidential information; damages in an amount to be determined at a hearing and/or trial; disgorgement of the Company’s wrongfully obtained profits; and fees and costs incurred by PRCM Advisers in pursuing the action. On September 25, 2020, the Company filed a motion to dismiss the Federal Complaint. PRCM Advisers thereafter filed an opposition to the motion to dismiss on October 16, 2020, and on October 26, 2020, the Company filed its reply.

On June 23, 2021, the Court granted in part and denied in part the Company’s motion to dismiss. The Court dismissed PRCM Advisers’ claims challenging the termination of the Management Agreement, including PRCM Advisers’ claims for breach of contract with respect to Sections 13(a) and 15 of the Management Agreement and for breach of the implied covenant of good faith and fair dealing, as well as certain of PRCM Advisers’ other claims. The Company’s board of directors believes the Federal Complaint is without merit and that the Company has fully complied with the terms of the Management Agreement.

Separately, the staff of the SEC is conducting a non-public investigation in connection with the Company's decisions not to renew its Management Agreement with PRCM Advisers on the basis of unfair compensation payable to PRCM Advisers in accordance with Section 13(a)(ii) of the Management Agreement and to terminate its Management Agreement with PRCM Advisers for “cause” in accordance with Section 15 of the Management Agreement. The Company is cooperating with the SEC. The Company cannot predict the duration or outcome of the SEC investigation or the extent of any impact it may have on the Company.

As of June 30, 2021, the Company’s condensed consolidated statements of comprehensive (loss) income do not recognize a contingency liability or disclose a range of reasonably possible loss under ASC 450 because management does not believe that a loss or expense related to the Federal Complaint or the SEC investigation is probable or reasonably estimable. If and when management believes losses associated with the Federal Complaint or the SEC investigation are a probable future event that may result in a loss or expense to the Company and the loss or expense is reasonably estimable, the Company will recognize a contingency liability and resulting loss in such period.

Item 1A. Risk Factors

There have been no material changes to the risk factors set forth under the heading “Item 1A. Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2020, or the Form 10-K. The materialization of any risks and uncertainties identified in our Forward-Looking Statements contained in this Quarterly Report on Form 10-Q, together with those previously disclosed in the Form 10-K or those that are presently unforeseen could result in significant adverse effects on our financial condition, results of operations, and cash flows. See Item 2, “*Management’s Discussion and Analysis of Financial Condition and Results of Operations - Forward-Looking Statements*” in this Quarterly Report on Form 10-Q.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

(a) None.

(b) None.

(c) The Company's share repurchase program allows for the repurchase of up to an aggregate of 37,500,000 shares of the Company's common stock. Shares may be repurchased from time to time through privately negotiated transactions or open market transactions, pursuant to a trading plan in accordance with Rules 10b5-1 and 10b-18 under the Exchange Act or by any combination of such methods. The manner, price, number and timing of share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The share repurchase program does not require the purchase of any minimum number of shares, and, subject to SEC rules, purchases may be commenced or suspended at any time without prior notice. The share repurchase program does not have an expiration date. As of June 30, 2021, we had repurchased 12,174,300 shares under the program for a total cost of $201.5 million. We did not repurchase shares during the three months ended June 30, 2021.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

(a) Exhibits

A list of exhibits to this Quarterly Report on Form 10-Q is set forth below.

Exhibit Number	Exhibit Description
3.1	Articles of Amendment and Restatement of Two Harbors Investment Corp. (incorporated by reference to Exhibit 99.1 to Annex B filed with Amendment No. 4 to the Registrant's Registration Statement on Form S-4 filed with the SEC on October 8, 2009).
3.2	Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K filed with the SEC on December 19, 2012).
3.3	Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp., effective as of 5:01 PM Eastern Time on November 1, 2017 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 2, 2017).
3.4	Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp., effective as of 5:02 PM Eastern Time on November 1, 2017 (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed with the SEC on November 2, 2017).
3.5	Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on September 23, 2020).
3.6	Articles Supplementary to the Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. designating the shares of 8.125% Series A Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, $0.01 par value per share (incorporated by reference to Exhibit 3.3 of the Registrant's Form 8-A filed with the SEC on March 13, 2017).
3.7	Articles Supplementary to the Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. designating the shares of 7.625% Series B Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, $0.01 par value per share (incorporated by reference to Exhibit 3.4 of the Registrant's Form 8-A filed with the SEC on July 17, 2017).
3.8	Articles Supplementary to the Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. designating the shares of 7.25% Series C Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, $0.01 par value per share (incorporated by reference to Exhibit 3.7 of the Registrant's Form 8-A filed with the SEC on November 22, 2017).
3.9	Articles Supplementary to the Articles of Amendment to the Articles of Amendment and Restatement of Two Harbors Investment Corp. reclassifying and redesignating (i) all 3,000,000 authorized but unissued shares of 7.75% Series D Cumulative Redeemable Preferred Stock, $0.01 par value per share, as shares of undesignated preferred stock, and (ii) all 8,000,000 authorized but unissued shares of 7.50% Series E Cumulative Redeemable Preferred Stock, $0.01 par value per share, as shares of undesignated preferred stock (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the SEC on March 19, 2021).
3.10	Amended and Restated Bylaws of Two Harbors Investment Corp. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed with the SEC on September 23, 2020).
10.1*	Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement filed with the SEC on April 6, 2021).
10.2*	Form of Director Restricted Stock Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.3*	Form of Officer Restricted Stock Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.4*	Form of Officer Performance Share Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.5*	Form of Common Stock Award Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.6*	Separation and Release Agreement, dated June 30, 2021 (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed with the SEC on June 30, 2021).
31.1	Certification of the Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)

31.2	Certification of the Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
32.1	Certification of the Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (furnished herewith)
32.2	Certification of the Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (furnished herewith)
101	Financial statements from the Quarterly Report on Form 10-Q of Two Harbors Investment Corp. for the three months ended June 30, 2021, filed with the SEC on August 5, 2021, formatted in Inline XBRL: (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statements of Comprehensive (Loss) Income, (iii) the Condensed Consolidated Statements of Stockholders' Equity, (iv) the Condensed Consolidated Statements of Cash Flows, and (v) the Notes to the Condensed Consolidated Financial Statements. (filed herewith)
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101). (filed herewith)

* Management or compensatory agreement

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

			TWO HARBORS INVESTMENT CORP.
Dated:	August 5, 2021	By:	/s/ William Greenberg
			William Greenberg President, Chief Executive Officer, and Chief Investment Officer (Principal Executive Officer)
Dated:	August 5, 2021	By:	/s/ Mary Riskey
			Mary Riskey Chief Financial Officer (Principal Financial and Accounting Officer)

EXHIBIT 31.1

CHIEF EXECUTIVE OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, William Greenberg, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Two Harbors Investment Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date:	August 5, 2021	/s/ William Greenberg
		William Greenberg
		President, Chief Executive Officer, and Chief Investment Officer

EXHIBIT 31.2

CHIEF FINANCIAL OFFICER CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mary Riskey, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Two Harbors Investment Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 5, 2021

/s/ Mary Riskey
Mary Riskey
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Two Harbors Investment Corp. (the “Registrant”) hereby certifies that the Registrant’s Quarterly Report on Form 10-Q for the three and six months ended June 30, 2021 (the “Quarterly Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date:	August 5, 2021	/s/ William Greenberg
		William Greenberg
		President, Chief Executive Officer, and Chief Investment Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Quarterly Report or as a separate disclosure document.

EXHIBIT 32.2

CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned officer of Two Harbors Investment Corp. (the “Registrant”) hereby certifies that the Registrant’s Quarterly Report on Form 10-Q for the three and six months ended June 30, 2021 (the “Quarterly Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date:	August 5, 2021	/s/ Mary Riskey
		Mary Riskey
		Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. §1350 and is not being filed as part of the Quarterly Report or as a separate disclosure document.