

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: September 30, 2024

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

(State or Other Jurisdiction of
Incorporation or Organization)

27-0312904

(I.R.S. Employer
Identification No.)

1601 Utica Avenue South, Suite 900

St. Louis Park, Minnesota

(Address of Principal Executive Offices)

55416

(Zip Code)

(612) 453-4100

(Registrant's Telephone Number, Including Area Code)

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

<u>Title of Each Class:</u>	<u>Trading Symbol(s)</u>	<u>Name of Exchange on Which Registered:</u>
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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 October 24, 2024, there were 103,650,126 shares of outstanding common stock, par value \$0.01 per share, issued and outstanding.

TWO HARBORS INVESTMENT CORP.**INDEX**

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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)

	September 30, 2024	December 31, 2023
	(unaudited)	
ASSETS		
Available-for-sale securities, at fair value (amortized cost \$8,563,998 and \$8,509,383, respectively; allowance for credit losses \$2,962 and \$3,943, respectively)	\$ 8,506,102	\$ 8,327,149
Mortgage servicing rights, at fair value	2,884,304	3,052,016
Mortgage loans held-for-sale, at fair value	3,344	332
Cash and cash equivalents	522,581	729,732
Restricted cash	89,125	65,101
Accrued interest receivable	36,561	35,339
Due from counterparties	298,283	323,224
Derivative assets, at fair value	12,572	85,291
Reverse repurchase agreements	359,180	284,091
Other assets	175,790	236,525
Total Assets ⁽¹⁾	\$ 12,887,842	\$ 13,138,800
LIABILITIES AND STOCKHOLDERS' EQUITY		
Liabilities:		
Repurchase agreements	\$ 8,763,400	\$ 8,020,207
Revolving credit facilities	999,171	1,329,171
Warehouse facilities	3,017	—
Term notes payable	—	295,271
Convertible senior notes	259,815	268,582
Derivative liabilities, at fair value	16,764	21,506
Due to counterparties	386,141	574,735
Dividends payable	58,730	58,731
Accrued interest payable	76,868	141,773
Commitments and contingencies (see Note 18)	—	—
Other liabilities	154,562	225,434
Total Liabilities ⁽¹⁾	10,718,468	10,935,410
Stockholders' Equity:		
Preferred stock, par value \$0.01 per share; 100,000,000 shares authorized and 24,870,817 and 25,356,426 shares issued and outstanding, respectively (\$621,770 and \$633,911 liquidation preference, respectively)	601,467	613,213
Common stock, par value \$0.01 per share; 175,000,000 shares authorized and 103,650,126 and 103,206,457 shares issued and outstanding, respectively	1,037	1,032
Additional paid-in capital	5,934,920	5,925,424
Accumulated other comprehensive loss	(53,959)	(176,429)
Cumulative earnings	1,372,056	1,349,973
Cumulative distributions to stockholders	(5,686,147)	(5,509,823)
Total Stockholders' Equity	2,169,374	2,203,390
Total Liabilities and Stockholders' Equity	\$ 12,887,842	\$ 13,138,800

(1) The condensed consolidated balance sheets include assets and liabilities of consolidated variable interest entities, or VIEs. At September 30, 2024 and December 31, 2023, assets of the VIEs totaled \$129,342 and \$525,259, and liabilities of the VIEs totaled \$101,996 and \$479,810, respectively. See Note 4 - *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 INCOME (LOSS) (unaudited)
(in thousands, except share data)

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2024	2023	2024	2023
Net interest income (expense):				
Interest income	\$ 112,642	\$ 123,608	\$ 346,378	\$ 357,963
Interest expense	154,931	173,094	469,138	475,145
Net interest expense	(42,289)	(49,486)	(122,760)	(117,182)
Net servicing income:				
Servicing income	171,732	178,625	514,080	507,168
Servicing costs	3,900	29,903	15,494	83,459
Net servicing income	167,832	148,722	498,586	423,709
Other (loss) income:				
Gain (loss) on investment securities	1,383	(471)	(32,029)	12,499
(Loss) gain on servicing asset	(133,349)	67,369	(145,194)	60,969
(Loss) gain on interest rate swap and swaption agreements	(172,263)	111,909	(51,741)	86,288
(Loss) gain on other derivative instruments	(32,722)	86,212	14,127	(22,398)
Gain on mortgage loans held-for-sale	927	—	924	—
Other income	123	2,903	349	5,103
Total other (loss) income	(335,901)	267,922	(213,564)	142,461
Expenses:				
Compensation and benefits	20,180	8,617	67,953	31,568
Other operating expenses	18,405	15,984	57,156	38,354
Total expenses	38,585	24,601	125,109	69,922
(Loss) income before income taxes	(248,943)	342,557	37,153	379,066
(Benefit from) provision for income taxes	(10,458)	36,365	15,714	52,237
Net (loss) income	(238,485)	306,192	21,439	326,829
Dividends on preferred stock	(11,784)	(12,115)	(35,352)	(36,595)
Gain on repurchase and retirement of preferred stock	—	—	644	2,454
Net (loss) income attributable to common stockholders	\$ (250,269)	\$ 294,077	\$ (13,269)	\$ 292,688
Basic (loss) earnings per weighted average common share	\$ (2.42)	\$ 3.04	\$ (0.14)	\$ 3.06
Diluted (loss) earnings per weighted average common share	\$ (2.42)	\$ 2.81	\$ (0.14)	\$ 2.91
Comprehensive income (loss):				
Net (loss) income	\$ (238,485)	\$ 306,192	\$ 21,439	\$ 326,829
Other comprehensive income (loss):				
Unrealized gain (loss) on available-for-sale securities	269,621	(350,922)	122,470	(381,297)
Other comprehensive income (loss)	269,621	(350,922)	122,470	(381,297)
Comprehensive income (loss)	31,136	(44,730)	143,909	(54,468)
Dividends on preferred stock	(11,784)	(12,115)	(35,352)	(36,595)
Gain on repurchase and retirement of preferred stock	—	—	644	2,454
Comprehensive income (loss) attributable to common stockholders	\$ 19,352	\$ (56,845)	\$ 109,201	\$ (88,609)

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, 2022	\$ 630,999	\$ 864	\$ 5,645,998	\$ (278,711)	\$ 1,453,371	\$ (5,268,996)	\$ 2,183,525
Net loss	—	—	—	—	(176,808)	—	(176,808)
Other comprehensive income before reclassifications	—	—	—	62,709	—	—	62,709
Amounts reclassified from accumulated other comprehensive income	—	—	—	63,222	—	—	63,222
Other comprehensive income	—	—	—	125,931	—	—	125,931
Issuance of common stock, net of offering costs	—	102	177,627	—	—	—	177,729
Preferred dividends declared	—	—	—	—	—	(12,365)	(12,365)
Common dividends declared	—	—	—	—	—	(58,381)	(58,381)
Non-cash equity award compensation	—	1	6,051	—	—	—	6,052
Balance, March 31, 2023	630,999	967	5,829,676	(152,780)	1,276,563	(5,339,742)	2,245,683
Net income	—	—	—	—	197,445	—	197,445
Other comprehensive loss before reclassifications	—	—	—	(156,306)	—	—	(156,306)
Amounts reclassified from accumulated other comprehensive income	—	—	—	—	—	—	—
Other comprehensive loss	—	—	—	(156,306)	—	—	(156,306)
Repurchase and retirement of preferred stock	(12,420)	—	—	—	2,454	—	(9,966)
Issuance of common stock, net of offering costs	—	—	149	—	—	—	149
Repurchase of common stock	—	(6)	(7,050)	—	—	—	(7,056)
Preferred dividends declared	—	—	—	—	—	(12,115)	(12,115)
Common dividends declared	—	—	—	—	—	(43,560)	(43,560)
Non-cash equity award compensation	—	1	1,734	—	—	—	1,735
Balance, June 30, 2023	618,579	962	5,824,509	(309,086)	1,476,462	(5,395,417)	2,216,009
Net income	—	—	—	—	306,192	—	306,192
Other comprehensive loss before reclassifications	—	—	—	(350,922)	—	—	(350,922)
Amounts reclassified from accumulated other comprehensive income	—	—	—	—	—	—	—
Other comprehensive loss	—	—	—	(350,922)	—	—	(350,922)
Issuance of common stock, net of offering costs	—	—	48	—	—	—	48
Preferred dividends declared	—	—	—	—	—	(12,115)	(12,115)
Common dividends declared	—	—	—	—	—	(43,560)	(43,560)
Non-cash equity award compensation	—	—	1,576	—	—	—	1,576
Balance, September 30, 2023	\$ 618,579	\$ 962	\$ 5,826,133	\$ (660,008)	\$ 1,782,654	\$ (5,451,092)	\$ 2,117,228

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

TWO HARBORS INVESTMENT CORP.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (unaudited), continued
(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, 2023	\$ 613,213	\$ 1,032	\$ 5,925,424	\$ (176,429)	\$ 1,349,973	\$ (5,509,823)	\$ 2,203,390
Net income	—	—	—	—	203,588	—	203,588
Other comprehensive loss before reclassifications	—	—	—	(109,658)	—	—	(109,658)
Amounts reclassified from accumulated other comprehensive income	—	—	—	6,580	—	—	6,580
Other comprehensive loss	—	—	—	(103,078)	—	—	(103,078)
Repurchase and retirement of preferred stock	(11,746)	—	—	—	644	—	(11,102)
Issuance of common stock, net of offering costs	—	—	54	—	—	—	54
Preferred dividends declared	—	—	—	—	—	(11,784)	(11,784)
Common dividends declared	—	—	—	—	—	(47,081)	(47,081)
Non-cash equity award compensation	—	3	6,080	—	—	—	6,083
Balance, March 31, 2024	601,467	1,035	5,931,558	(279,507)	1,554,205	(5,568,688)	2,240,070
Net income	—	—	—	—	56,336	—	56,336
Other comprehensive loss before reclassifications	—	—	—	(53,466)	—	—	(53,466)
Amounts reclassified from accumulated other comprehensive income	—	—	—	9,393	—	—	9,393
Other comprehensive loss	—	—	—	(44,073)	—	—	(44,073)
Issuance of common stock, net of offering costs	—	—	50	—	—	—	50
Preferred dividends declared	—	—	—	—	—	(11,784)	(11,784)
Common dividends declared	—	—	—	—	—	(46,945)	(46,945)
Non-cash equity award compensation	—	1	1,642	—	—	—	1,643
Balance, June 30, 2024	601,467	1,036	5,933,250	(323,580)	1,610,541	(5,627,417)	2,195,297
Net loss	—	—	—	—	(238,485)	—	(238,485)
Other comprehensive income before reclassifications	—	—	—	267,864	—	—	267,864
Amounts reclassified from accumulated other comprehensive income	—	—	—	1,757	—	—	1,757
Other comprehensive income	—	—	—	269,621	—	—	269,621
Issuance of common stock, net of offering costs	—	1	60	—	—	—	61
Preferred dividends declared	—	—	—	—	—	(11,784)	(11,784)
Common dividends declared	—	—	—	—	—	(46,946)	(46,946)
Non-cash equity award compensation	—	—	1,610	—	—	—	1,610
Balance, September 30, 2024	\$ 601,467	\$ 1,037	\$ 5,934,920	\$ (53,959)	\$ 1,372,056	\$ (5,686,147)	\$ 2,169,374

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)

	Nine Months Ended September 30,	
	2024	2023
Cash Flows From Operating Activities:		
Net income	\$ 21,439	\$ 326,829
Adjustments to reconcile net income to net cash provided by operating activities:		
Amortization of premiums and discounts on investment securities, net	11,400	21,686
Amortization of deferred debt issuance costs on term notes payable and convertible senior notes	1,639	1,940
Reversal of provision for credit losses on investment securities	(25)	(217)
Realized and unrealized losses (gains) on investment securities	32,054	(12,282)
Loss (gain) on servicing asset	145,194	(60,969)
Realized and unrealized loss (gain) on interest rate swaps and swaptions	98,109	(72,374)
Unrealized gains on other derivative instruments	(37,903)	(49,296)
Gains on mortgage loans held-for-sale	(924)	—
Gain on repurchase of term notes payable and convertible senior notes	(226)	(5,104)
Equity based compensation	9,336	9,363
Originations and purchases of mortgage loans held-for-sale	(22,444)	(79)
Proceeds from sales of mortgage loans held-for-sale	19,559	—
Proceeds from repayment of mortgage loans held-for-sale	143	30
Net change in assets and liabilities:		
Increase in accrued interest receivable	(1,222)	(3,020)
Decrease in deferred income taxes, net	9,229	46,740
Decrease in accrued interest payable	(64,905)	(3,325)
Change in other operating assets and liabilities, net	1,610	33,848
Net cash provided by operating activities	222,063	233,770
Cash Flows From Investing Activities:		
Purchases of available-for-sale securities	(1,513,681)	(3,644,567)
Proceeds from sales of available-for-sale securities	896,520	1,694,891
Principal payments on available-for-sale securities	517,249	507,200
Purchases of mortgage servicing rights, net of purchase price adjustments	(86,619)	(301,594)
Proceeds from sales of mortgage servicing rights	109,284	134,387
Short sales (purchases) of derivative instruments, net	21,955	(3,925)
(Payments for termination and settlement) proceeds from sales and settlement of derivative instruments, net	(13,677)	120,943
Payments for reverse repurchase agreements	(2,937,425)	(1,822,726)
Proceeds from reverse repurchase agreements	2,862,336	2,606,894
Acquisition of RoundPoint Mortgage Servicing LLC, net of cash acquired	(20,976)	26,798
Decrease in due to counterparties, net	(163,653)	(291,554)
Net cash used in investing activities	\$ (328,687)	\$ (973,253)

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)

	Nine Months Ended September 30,	
	2024	2023
Cash Flows From Financing Activities:		
Proceeds from repurchase agreements	\$ 35,971,915	\$ 30,770,899
Principal payments on repurchase agreements	(35,228,722)	(30,260,640)
Proceeds from revolving credit facilities	58,500	349,000
Principal payments on revolving credit facilities	(388,500)	(57,160)
Proceeds from warehouse facilities	7,734	—
Principal payments on warehouse facilities	(4,717)	—
Repayment of term notes payable	(295,776)	(100,970)
Repurchase of convertible senior notes	(9,675)	(13,169)
Repurchase and retirement of preferred stock	(11,102)	(9,966)
Proceeds from issuance of common stock, net of offering costs	165	177,926
Repurchase of common stock	—	(7,056)
Dividends paid on preferred stock	(35,580)	(36,845)
Dividends paid on common stock	(140,745)	(154,080)
Net cash (used in) provided by financing activities	(76,503)	657,939
Net decrease in cash, cash equivalents and restricted cash	(183,127)	(81,544)
Cash, cash equivalents and restricted cash at beginning of period	794,833	1,126,505
Cash, cash equivalents and restricted cash at end of period	\$ 611,706	\$ 1,044,961
Supplemental Disclosure of Cash Flow Information:		
Cash paid for interest	\$ 506,654	\$ 455,678
Cash paid for taxes, net	\$ 3,648	\$ 5,830
Noncash Activities:		
Dividends declared but not paid at end of period	\$ 58,730	\$ 55,675

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 founded in 2009 that, through its wholly owned subsidiaries (collectively, the Company), invests in, finances and manages mortgage servicing rights, or MSR, and Agency residential mortgage-backed securities, or Agency RMBS, and, through its operational platform, RoundPoint Mortgage Servicing LLC, or RoundPoint, is one of the largest servicers of conventional loans in the country. Agency refers to a U.S. government sponsored enterprise, or GSE, such as the Federal National Mortgage Association, or Fannie Mae, or the Federal Home Loan Mortgage Corporation, or Freddie Mac, or a U.S. government agency such as the Government National Mortgage Association, or Ginnie Mae. The Company is structured as an internally-managed real estate investment trust, or REIT, and its common stock is listed on the New York Stock Exchange, or NYSE, under the symbol “TWO”.

The Company seeks to leverage its core competencies of understanding and managing interest rate and prepayment risk to invest in its portfolio of MSR and Agency RMBS, with the objective of delivering more stable performance, relative to RMBS portfolios without MSR, across changing market environments. The Company is acutely focused on creating sustainable stockholder value over the long term.

Effective September 30, 2023, one of the Company’s wholly owned subsidiaries, TH MSR Holdings LLC (formerly Matrix Financial Services Corporation), acquired RoundPoint from Freedom Mortgage Corporation, or Freedom, after the completion of customary closing conditions and receiving the required regulatory and GSE approvals. Upon closing, all servicing and origination licenses and operational capabilities remained with RoundPoint, and RoundPoint became a wholly owned subsidiary of TH MSR Holdings. Management believes this acquisition will add value for stakeholders of the Company through cost savings achieved by bringing the servicing of its MSR portfolio in-house, greater control over the Company’s MSR portfolio and the associated cash flows, and the ability to participate more fully in the mortgage finance space as opportunities arise.

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.

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 the 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 entity’s 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, 2023. In the opinion of management, all normal and recurring adjustments necessary to present fairly the financial condition of the Company at September 30, 2024 and results of operations for all periods presented have been made. The results of operations for the three and nine months ended September 30, 2024 should not be construed as indicative of the results to be expected for future periods or the full year.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

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, the amount and timing of credit losses, prepayment rates, the period of time during which the Company anticipates an increase in the fair values of real estate securities sufficient to recover unrealized losses in those securities, 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 2023 Annual Report on Form 10-K is a summary of the Company's significant accounting policies. Provided below is a summary of any additional and/or modified accounting policies that were significant to the Company's financial condition and results of operations for the nine months ended September 30, 2024.

Mortgage Loans Held-for-Sale, at Fair Value

The Company originates residential mortgage loans with the intention of selling such loans on a servicing-retained basis in the secondary market. As these loans are originated with intent to sell, the loans are classified as held-for-sale, and the Company has elected to measure these loans held-for-sale at fair value. The Company estimates fair value of mortgage loans held-for-sale using a market approach by utilizing either: (i) the fair value of securities backed by similar mortgage loans, adjusted for certain factors to approximate the fair value of a whole mortgage loan, including the value attributable to mortgage servicing and credit risk; (ii) current commitments to purchase loans; or (iii) recent observable market trades for similar loans, adjusted for credit risk and other individual loan characteristics. In connection with the Company's election to measure originated mortgage loans held-for-sale at fair value, the Company records the loan origination fees when earned, net of direct loan originations costs associated with these loans. Loan origination fees and underwriting fees are recorded within the other income line item in the condensed consolidated statements of comprehensive income (loss). Gains or losses recognized upon sale of loans and fair value adjustments are recorded within gain on mortgage loans held-for-sale in the condensed consolidated statements of comprehensive income (loss).

Interest income on mortgage loans held-for-sale is recognized at the loan coupon rate. Loans are considered past due when they are 30 days past their contractual due date. Interest income recognition is suspended when mortgage loans are placed on nonaccrual status. Generally, mortgage loans are placed on nonaccrual status when delinquent for more than 90 days or when determined not to be probable of full collection. Interest accrued, but not collected, at the date mortgage loans are placed on nonaccrual is reversed and subsequently recognized only to the extent it is received in cash or until it qualifies for return to accrual status. However, where there is doubt regarding the ultimate collectability of loan principal, all cash received is applied to reduce the carrying value of such loans. Mortgage loans are restored to accrual status only when contractually current or the collection of future payments is reasonably assured.

Derivative Financial Instruments, at Fair Value

In accordance with Accounting Standards Codification (ASC) 815, *Derivatives and Hedging*, or ASC 815, all derivative financial instruments, whether designated for hedging relationships or not, are recorded on the consolidated balance sheets as assets or liabilities and carried at fair value.

The Company enters into interest rate derivative contracts for a variety of reasons, including minimizing fluctuations in earnings or market values on certain assets or liabilities, including the Company's loan origination pipeline, that may be caused by changes in interest rates. The pipeline refers to loan applications that have been initiated and offered to borrowers, which remain in the pipeline from the time they are locked until they fall out or are sold into the secondary mortgage market and consists of interest rate lock commitments, or IRLCs, and mortgage loans held-for-sale at fair value. The Company 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, total return swaps and forward mortgage loan sale commitments.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

At the inception of a derivative contract, the Company determines whether the instrument will be part of a qualifying hedge accounting relationship or whether the Company will account for the contract as a trading instrument. Due to the volatility of the interest rate and credit markets and difficulty in effectively matching pricing or cash flows, the Company has elected to treat all derivative contracts as trading instruments. Changes in fair value as well as the accrual and settlement of interest associated with derivatives accounted for as trading instruments are reported in the condensed consolidated statements of comprehensive income (loss) as (loss) gain on interest rate swap and swaption agreements, (loss) gain on other derivative instruments or gain on mortgage loans held-for-sale, depending on the type of derivative instrument.

Due to the nature of the Company's derivative instruments, they may be in a receivable/asset position or a payable/liability position at the end of an accounting period. Amounts payable to and receivable from the same party under contracts may be offset as long as the following conditions are met: (i) each of the two parties owes the other determinable amounts; (ii) the reporting party has the right to offset the amount owed with the amount owed by the other party; (iii) the reporting party intends to offset; and (iv) the right of offset is enforceable by law. If the aforementioned conditions are not met, amounts payable to and receivable from are presented by the Company on a gross basis in its consolidated balance sheets. The Company's centrally cleared interest rate swaps and exchange-traded futures and options on futures 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 derivative instrument'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 derivative instrument, 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 centrally cleared or exchange-traded derivative asset or liability. The receipt or payment of initial margin is accounted for separate from the derivative asset or liability and is netted on a counterparty basis and classified within restricted cash, due from counterparties, or due to counterparties on the Company's condensed consolidated balance sheets.

The Company has provided specific disclosure regarding the location and amounts of derivative instruments in the consolidated financial statements and how derivative instruments and related hedged items are accounted for. See Note 9 - *Derivative Instruments and Hedging Activities* of these notes to the consolidated financial statements.

Warehouse Facilities

To finance origination activities, the Company enters into warehouse facilities collateralized by the value of the mortgage loans pledged for a period of up to 90 days per loan. Borrowings under these warehouse facilities are considered short-term debt. The Company's warehouse facilities generally bear interest rates based on an index plus a spread. Borrowings under warehouse facilities are treated as collateralized financing transactions and are carried at contractual amounts, as specified in the respective agreements.

Recently Issued and/or Adopted Accounting Standards

Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued ASU No. 2023-07, which requires public entities to disclose significant segment expenses and other segment items on an annual and interim basis and to provide in interim periods all disclosures about a reportable segment's profit or loss and assets that are currently required annually. Public entities with a single reportable segment are required to provide the new disclosures and all the disclosures required under ASC 280, *Segment Reporting*. The ASU does not change how a public entity identifies its operating segments, aggregates them or applies the quantitative thresholds to determine its reportable segments. The ASU is effective for fiscal years beginning after December 15, 2023, and for interim periods beginning after December 15, 2024, with early adoption permitted. The guidance should be applied retrospectively to all periods presented in the financial statements, unless it is impracticable. The segment expense categories and amounts disclosed in the prior periods should be based on the significant segment expense categories identified and disclosed in the period of adoption. The Company has early adopted this ASU, which did not have a material impact on the Company's financial condition, results of operations or financial statement disclosures.

Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU No. 2023-09, which requires entities to provide additional information about federal, state and foreign income taxes and reconciling items in the rate reconciliation table, and to disclose further disaggregation of income taxes paid (net of refunds received) by federal (national), state and foreign taxes by jurisdiction. For public business entities, the ASU is effective for annual periods beginning after December 15, 2024, with early adoption permitted. The guidance should be applied prospectively, but entities have the option to apply it retrospectively for each period presented. The Company has determined this ASU will not have a material impact on the Company's financial condition, results of operations or financial statement disclosures.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Enhancement and Standardization of Climate-Related Disclosures

In March 2024, the Securities and Exchange Commission, or the SEC, issued Release No. 33-11275, its final rule on the enhancement and standardization of climate-related disclosures for investors requiring registrants to provide certain climate-related information in their registration statements and annual reports. The rules require information about a registrant's climate-related risks that are reasonably likely to have a material impact on its business, results of operations, or financial condition. The required information about climate-related risks will also include disclosure of a registrant's greenhouse gas emissions. In addition, the rules will require registrants to present certain climate-related financial metrics in their audited financial statements. For large accelerated filers like the Company, the individual requirements will be phased-in with the first phase being effective for the fiscal year beginning January 1, 2025. Disclosures will be required prospectively, with information for prior periods required only to the extent it was previously disclosed in an SEC filing. On April 4, 2024, the SEC voluntarily stayed the final rules pending judicial review. The Company is currently evaluating the impact of these final rules on its consolidated financial statements and disclosures.

Note 3. Acquisition of RoundPoint Mortgage Servicing LLC

Effective September 30, 2023, the Company acquired RoundPoint from Freedom after the completion of customary closing conditions and receiving the required regulatory and GSE approvals. The provisional purchase price recognized was \$44.7 million, with \$23.6 million paid upon closing and \$21.1 million recognized as a payable to Freedom within the other liabilities line item on the Company's condensed consolidated balance sheet as of September 30, 2023. The Company performed a provisional allocation of the consideration of \$44.7 million to RoundPoint's assets and liabilities, as set forth below. During the three months ended December 31, 2023, the Company recognized a total of \$0.2 million in measurement period adjustments, resulting in a final purchase price of \$44.5 million. The remaining payable to Freedom of \$20.9 million was paid in January 2024. The allocation of the adjusted purchase price of \$44.5 million to RoundPoint's assets and liabilities is also set forth below. The determination of fair value of assets and liabilities required the use of significant assumptions and estimates. Significant estimates included, but were not limited to, future expected cash flows, including projected revenues and expenses, and discount rates. These estimates were based on assumptions that management believes to be reasonable as well as a third party-prepared valuation analysis; however, actual results may differ from these estimates. The measurement period adjustments made during the three months ended December 31, 2023 are set forth below. No measurement period adjustments were made subsequent to December 31, 2023.

(in thousands)	Acquisition Date Amounts Recognized	Subsequent Measurement Period Adjustments	Acquisition Date Amounts Recognized, as adjusted
Total Consideration	\$ 44,732	\$ (188)	\$ 44,544
Assets:			
Cash and cash equivalents	\$ 50,366	\$ —	\$ 50,366
Intangible assets	786	13	799
Other assets	29,148	—	29,148
Total Assets Acquired	\$ 80,300	\$ 13	\$ 80,313
Liabilities:			
Accrued expenses	\$ 4,483	\$ —	\$ 4,483
Other liabilities	58,739	—	58,739
Total Liabilities Assumed	\$ 63,222	\$ —	\$ 63,222
Net Assets	\$ 17,078	\$ 13	\$ 17,091
Goodwill	\$ 27,654	\$ (201)	\$ 27,453

TWO HARBORS INVESTMENT CORP.**Notes to the Condensed Consolidated Financial Statements (unaudited)**

As a result of the RoundPoint acquisition, the Company identified intangible assets in the form of mortgage servicing and origination state licenses, insurance state licenses, GSE servicing approvals and trade names. The Company recorded the intangible assets at fair value at the acquisition date and amortizes the value of finite-lived intangibles into expense over the expected useful life. Trade names, with a total acquisition date fair value of \$0.2 million, are amortized straight-line over a finite life of six months based on the Company's determination of the time to change a trade name. The Company determined the licenses and approvals, with a total acquisition date fair value of \$0.6 million, have indefinite useful lives and are periodically evaluated for impairment given there are no legal, regulatory, contractual, competitive or economic factors that would limit their useful lives.

The total goodwill of \$27.5 million was calculated as the excess of the total consideration transferred over the net assets acquired and primarily includes the existence of an assembled workforce, synergies and benefits expected to result from combining operations with RoundPoint and adding in-house servicing. The full amount of goodwill for tax purposes of \$27.5 million is expected to be deductible. The Company will assess the goodwill annually during the fourth quarter and in interim periods whenever events or circumstances make it more likely than not that an impairment may have occurred.

Acquisition-related costs are expensed in the period incurred and included within the other operating expenses line item in the Company's condensed consolidated statements of comprehensive income (loss). During the three and nine months ended September 30, 2023, the Company recognized \$1.1 million and \$1.2 million, respectively, of acquisition-related costs. The Company did not recognize any further acquisition-related costs in 2024.

As discussed above, the acquisition of RoundPoint closed effective September 30, 2023. Accordingly, RoundPoint's consolidated balance sheet is included within the Company's consolidated balance sheet as of September 30, 2024. Beginning October 1, 2023, RoundPoint's results of operations have been consolidated with the Company's in accordance with U.S. GAAP; inter-company accounts and transactions have been eliminated. The following table presents unaudited pro forma combined revenues and income before income taxes for the three and nine months ended September 30, 2024 and 2023 prepared as if the RoundPoint acquisition had been consummated on January 1, 2023.

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Revenue ⁽¹⁾	\$ (51,527)	\$ 585,641	\$ 646,894	\$ 1,044,039
(Loss) income before income taxes	\$ (248,943)	\$ 339,009	\$ 37,153	\$ 357,636

(1) The Company's revenue is defined as the sum of the interest income, servicing income and total other income line items on the condensed consolidated statements of comprehensive income (loss).

The above unaudited supplemental pro forma financial information has not been adjusted for transactions that are now considered inter-company as a result of the acquisition, the conforming of accounting policies, nor the divestiture of RoundPoint's retail origination business and RPX servicing exchange platform, as required by the stock purchase agreement. The unaudited supplemental pro forma financial information also does not include any anticipated synergies or other anticipated benefits of the RoundPoint acquisition and, accordingly, the unaudited supplemental pro forma financial information is not necessarily indicative of either future results of operations or results that might have been achieved had the acquisition been consummated on January 1, 2023.

Additionally, in the third quarter of 2022, TH MSR Holdings agreed to engage RoundPoint as a subservicer prior to the closing date and began transferring loans to RoundPoint in the fourth quarter of 2022. As such, prior to the acquisition on September 30, 2023, the Company incurred servicing expenses related to RoundPoint's subservicing of the Company's MSR of \$10.3 million and \$23.9 million, respectively, during the three and nine months ended September 30, 2023. These subservicing expenses are included within the servicing costs line item on the Company's condensed consolidated statements of comprehensive income (loss).

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

Note 4. Variable Interest Entities

The Company enters into transactions with subsidiary trust entities that are established for limited purposes. One of the Company's subsidiary trust entities, MSR Issuer Trust, was formed for the purpose of financing MSR through securitization, pursuant to which, through two of the Company's wholly owned subsidiaries, MSR is pledged to MSR Issuer Trust and in return, 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. The Company has one repurchase facility that is secured by the VFN, which is collateralized by the Company's MSR. During the nine months ended September 30, 2024, all outstanding term notes previously issued by MSR Issuer Trust matured and were repaid.

Another of the Company's subsidiary trust entities, Servicing Advance Receivables Issuer Trust, was formed for the purpose of financing servicing advances through a revolving credit facility, pursuant to which Servicing Advance Receivables Issuer Trust issued a VFN backed by servicing advances pledged to the financing counterparty.

Both MSR Issuer Trust and Servicing Advance Receivables Issuer Trust are considered VIEs for financial reporting purposes and 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 is the primary beneficiary and, thus, 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 MSR Issuer Trust and Servicing Advance Receivables Issuer Trust, which, in turn, support MSR Issuer Trust's obligations to noteholders under the securitization transaction and 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 September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Note receivable ⁽¹⁾	\$ —	\$ 399,317
Restricted cash	42,696	45,642
Accrued interest receivable ⁽¹⁾	—	551
Other assets	86,646	79,749
Total Assets	\$ 129,342	\$ 525,259
Term notes payable	\$ —	\$ 399,317
Revolving credit facilities	59,300	34,300
Accrued interest payable	403	816
Other liabilities	42,293	45,377
Total Liabilities	\$ 101,996	\$ 479,810

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

Additionally, the Company entered into a definitive stock purchase agreement on August 2, 2022 to acquire RoundPoint whereby the preliminary purchase price was subject to a post-closing adjustment based on RoundPoint's aggregate "earnings" (as defined in the stock purchase agreement) from October 1, 2022 through the closing date, or the Interim Period, in addition to other post-closing adjustments. During the Interim Period, the manner in which the purchase price is calculated represented an implicit guarantee of the value of RoundPoint's net book value, in which the Company held the variable interests. These terms also indicated that RoundPoint met the criteria to be considered a VIE that the Company must review for consolidation. As the Company had the obligation to absorb losses and the right to receive benefits of RoundPoint during the Interim Period that could be significant, but not the power to direct the activities of RoundPoint that most significantly impacted its performance, the Company was not the primary beneficiary and, thus, did not consolidate RoundPoint during the Interim Period. Effective September 30, 2023, the parties had satisfied customary closing conditions and received the required regulatory and GSE approvals to close the transaction. Upon closing, RoundPoint became a consolidated wholly owned subsidiary of the Company and was no longer considered a VIE.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Note 5. 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. The following table presents the Company's AFS investment securities by collateral type as of September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Agency:		
Federal National Mortgage Association	\$ 5,454,956	\$ 5,467,684
Federal Home Loan Mortgage Corporation	2,988,421	2,790,662
Government National Mortgage Association	58,866	64,653
Non-Agency	3,859	4,150
Total available-for-sale securities	<u>\$ 8,506,102</u>	<u>\$ 8,327,149</u>

At September 30, 2024 and December 31, 2023, the Company pledged AFS securities with a carrying value of \$8.4 billion and \$8.1 billion, respectively, as collateral for repurchase agreements. See Note 13 - *Repurchase Agreements*.

At September 30, 2024 and December 31, 2023, 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 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 September 30, 2024 and December 31, 2023, the carrying value, which also represents the maximum exposure to loss, of all non-Agency securities in unconsolidated VIEs was \$3.9 million and \$4.2 million, respectively.

The following tables present the amortized cost and carrying value of AFS securities by collateral type as of September 30, 2024 and December 31, 2023:

		September 30, 2024						
(in thousands)	Principal/ Current Face	Un-amortized Premium	Accretible Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	\$ 8,437,248	\$ 161,829	\$ (68,694)	\$ 8,530,383	\$ —	\$ 67,110	\$ (119,162)	\$ 8,478,331
Interest-only	501,846	29,209	—	29,209	(2,546)	817	(3,568)	23,912
Total Agency	8,939,094	191,038	(68,694)	8,559,592	(2,546)	67,927	(122,730)	8,502,243
Non-Agency	519,568	3,834	(17)	4,406	(416)	190	(321)	3,859
Total	<u>\$ 9,458,662</u>	<u>\$ 194,872</u>	<u>\$ (68,711)</u>	<u>\$ 8,563,998</u>	<u>\$ (2,962)</u>	<u>\$ 68,117</u>	<u>\$ (123,051)</u>	<u>\$ 8,506,102</u>
		December 31, 2023						
(in thousands)	Principal/ Current Face	Un-amortized Premium	Accretible Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	\$ 8,421,733	\$ 155,171	\$ (130,932)	\$ 8,445,972	\$ —	\$ 22,677	\$ (196,748)	\$ 8,271,901
Interest-only	840,723	58,567	—	58,567	(3,619)	907	(4,757)	51,098
Total Agency	9,262,456	213,738	(130,932)	8,504,539	(3,619)	23,584	(201,505)	8,322,999
Non-Agency	569,897	4,199	(19)	4,844	(324)	173	(543)	4,150
Total	<u>\$ 9,832,353</u>	<u>\$ 217,937</u>	<u>\$ (130,951)</u>	<u>\$ 8,509,383</u>	<u>\$ (3,943)</u>	<u>\$ 23,757</u>	<u>\$ (202,048)</u>	<u>\$ 8,327,149</u>

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)

The following table presents the Company's AFS securities according to their estimated weighted average life classifications as of September 30, 2024:

(in thousands)	September 30, 2024		
	Agency	Non-Agency	Total
< 1 year	\$ 85,742	\$ —	\$ 85,742
≥ 1 and < 3 years	13,121	—	13,121
≥ 3 and < 5 years	2,196,810	64	2,196,874
≥ 5 and < 10 years	6,206,570	3,491	6,210,061
≥ 10 years	—	304	304
Total	\$ 8,502,243	\$ 3,859	\$ 8,506,102

Measurement of Allowances for Credit Losses on AFS Securities

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. The following tables present the changes for the three and nine months ended September 30, 2024 and 2023 in the allowance for credit losses on Agency and non-Agency AFS securities:

(in thousands)	Three Months Ended September 30, 2024			Nine Months Ended September 30, 2024		
	Agency	Non-Agency	Total	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	\$ (2,893)	\$ (447)	\$ (3,340)	\$ (3,619)	\$ (324)	\$ (3,943)
Additions on securities for which credit losses were not previously recorded	—	(4)	(4)	(40)	(33)	(73)
Decrease (increase) on securities with previously recorded credit losses	256	24	280	180	(82)	98
Write-offs	91	11	102	933	23	956
Allowance for credit losses at end of period	\$ (2,546)	\$ (416)	\$ (2,962)	\$ (2,546)	\$ (416)	\$ (2,962)

(in thousands)	Three Months Ended September 30, 2023			Nine Months Ended September 30, 2023		
	Agency	Non-Agency	Total	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	\$ (5,087)	\$ (273)	\$ (5,360)	\$ (6,785)	\$ (173)	\$ (6,958)
Additions on securities for which credit losses were not previously recorded	(36)	(3)	(39)	(45)	(361)	(406)
(Increase) decrease on securities with previously recorded credit losses	162	(25)	137	600	23	623
Write-offs	706	—	706	1,975	210	2,185
Allowance for credit losses at end of period	\$ (4,255)	\$ (301)	\$ (4,556)	\$ (4,255)	\$ (301)	\$ (4,556)

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)

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 September 30, 2024 and December 31, 2023. At September 30, 2024 and December 31, 2023, the Company held 645 and 646 AFS securities, respectively; of the securities for which an allowance for credit losses has not been recorded, 6 and 477 were in an unrealized loss position for less than twelve consecutive months and 373 and 0 were in an unrealized loss position for more than twelve consecutive months, respectively.

	September 30, 2024					
	Less than 12 Months		Unrealized Loss Position for 12 Months or More		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
(in thousands)						
Agency	\$ 1,275	\$ (38)	\$ 4,141,819	\$ (120,723)	\$ 4,143,094	\$ (120,761)
Non-Agency	632	(47)	509	(22)	1,141	(69)
Total	\$ 1,907	\$ (85)	\$ 4,142,328	\$ (120,745)	\$ 4,144,235	\$ (120,830)

	December 31, 2023					
	Less than 12 Months		Unrealized Loss Position for 12 Months or More		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
(in thousands)						
Agency	\$ 6,269,848	\$ (199,276)	\$ —	\$ —	\$ 6,269,848	\$ (199,276)
Non-Agency	883	(173)	—	—	883	(173)
Total	\$ 6,270,731	\$ (199,449)	\$ —	\$ —	\$ 6,270,731	\$ (199,449)

Gross Realized Gains and Losses

Gains and losses from the sale of AFS securities are recorded as realized gains (losses) within gain (loss) on investment securities in the Company's condensed consolidated statements of comprehensive income (loss). The following table presents details around sales of AFS securities during the three and nine months ended September 30, 2024 and 2023:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(in thousands)			
Proceeds from sales of available-for-sale securities	\$ 91,115	\$ 119,095	\$ 896,520	\$ 1,694,891
Amortized cost of available-for-sale securities sold	(91,503)	(118,999)	(929,064)	(1,730,866)
Total realized (losses) gains on sales, net	\$ (388)	\$ 96	\$ (32,544)	\$ (35,975)
Gross realized gains	\$ —	\$ 1,348	\$ 627	\$ 15,418
Gross realized losses	(388)	(1,252)	(33,171)	(51,393)
Total realized (losses) gains on sales, net	\$ (388)	\$ 96	\$ (32,544)	\$ (35,975)

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Note 6. Servicing Activities
Mortgage Servicing Rights, at Fair Value

One of the Company's wholly owned subsidiaries, TH MSR Holdings, 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. TH MSR Holdings acquires MSR from third-party originators through flow and bulk purchases, as well as through the recapture of MSR on loans in its MSR portfolio that refinance. TH MSR Holdings does not directly service mortgage loans; instead, it engages its wholly owned subsidiary, RoundPoint, to handle substantially all servicing functions in the name of the servicer for the mortgage loans underlying the Company's MSR. RoundPoint also services mortgage loans underlying MSR owned by third parties. RoundPoint has approvals from Fannie Mae and Freddie Mac to service residential mortgage loans.

The following table summarizes activity related to the Company's MSR portfolio for the three and nine months ended September 30, 2024 and 2023.

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Balance at beginning of period	\$ 3,065,415	\$ 3,273,956	\$ 3,052,016	\$ 2,984,937
Purchases of mortgage servicing rights	43,088	6,756	87,224	305,729
Additions from sales of mortgage loans	166	—	166	—
Sales of mortgage servicing rights	(68,143)	(112,351)	(81,014)	(115,044)
Changes in fair value due to:				
Changes in valuation inputs or assumptions used in the valuation model ⁽¹⁾	(93,828)	111,186	775	213,803
Other changes in fair value ⁽²⁾	(62,481)	(63,999)	(174,239)	(172,177)
Other changes ⁽³⁾	87	(2,435)	(624)	(4,135)
Balance at end of period ⁽⁴⁾	\$ 2,884,304	\$ 3,213,113	\$ 2,884,304	\$ 3,213,113

(1) Includes the impact of acquiring MSR at a cost different from fair value.

(2) Primarily represents changes due to the realization of 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 prior month-end's principal balance of the loans underlying the Company's MSR, increased for current month purchases.

At September 30, 2024, the Company pledged MSR with a carrying value of \$2.9 billion as collateral for repurchase agreements and revolving credit facilities. See Note 13 - *Repurchase Agreements* and Note 14 - *Revolving Credit Facilities*. At December 31, 2023, the Company pledged MSR with a carrying value of \$3.0 billion as collateral for repurchase agreements, revolving credit facilities and term notes payable. See Note 13 - *Repurchase Agreements*, Note 14 - *Revolving Credit Facilities* and Note 16 - *Term Notes Payable*.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)

As of September 30, 2024 and December 31, 2023, 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)	September 30, 2024	December 31, 2023
Weighted average prepayment speed:	6.6 %	6.2 %
Impact on fair value of 10% adverse change	\$ (78,785)	\$ (74,042)
Impact on fair value of 20% adverse change	\$ (153,445)	\$ (146,237)
Weighted average delinquency:	0.8 %	0.9 %
Impact on fair value of 10% adverse change	\$ (5,076)	\$ (4,654)
Impact on fair value of 20% adverse change	\$ (13,037)	\$ (12,376)
Weighted average option-adjusted spread:	5.4 %	5.3 %
Impact on fair value of 10% adverse change	\$ (66,728)	\$ (59,285)
Impact on fair value of 20% adverse change	\$ (130,169)	\$ (119,776)
Weighted average per loan annual cost to service:	\$ 68.56	\$ 68.27
Impact on fair value of 10% adverse change	\$ (28,598)	\$ (24,111)
Impact on fair value of 20% adverse change	\$ (58,941)	\$ (48,985)

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 risks associated with the Company's MSR are changes in interest rates, mortgage spreads and prepayments. The Company economically hedges interest rate and mortgage spread risk primarily with its Agency RMBS portfolio. Prepayment risk is carefully monitored and partially mitigated through the Company's ability to retain the MSR, in certain circumstances, through recapture if the underlying loan is refinanced.

Mortgage Servicing Income and Costs

The following table presents the components of servicing income recorded on the Company's condensed consolidated statements of comprehensive income (loss) for the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Servicing fee income	\$ 126,597	\$ 141,816	\$ 400,278	\$ 415,423
Ancillary and other fee income	3,928	476	12,220	2,236
Float income	41,207	36,333	101,582	89,509
Total	\$ 171,732	\$ 178,625	\$ 514,080	\$ 507,168

Prior to the acquisition of RoundPoint, the Company did not directly service mortgage loans; instead, it contracted with appropriately licensed third-party subservicers to handle substantially all servicing functions in the name of the subservicer for the mortgage loans underlying the Company's MSR. These third-party subservicing costs and other servicing expenses directly related to the Company's MSR portfolio are included within the servicing costs line item on the Company's condensed consolidated statements of comprehensive income (loss). Post-acquisition, all servicing-related expenses incurred by RoundPoint as an operating company are included within the compensation and benefits and other operating expenses line items on the Company's condensed consolidated statements of comprehensive income (loss).

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Notes to the Condensed Consolidated Financial Statements (unaudited)

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 \$92.0 million and \$143.2 million and were included in other assets on the condensed consolidated balance sheets as of September 30, 2024 and December 31, 2023, respectively. At September 30, 2024 and December 31, 2023, mortgage loans in 60+ day delinquent status (whether or not subject to forbearance) accounted for approximately 0.8% and 0.7%, respectively, of the aggregate principal balance of loans for which the Company had servicing advance funding obligations.

The Company has one revolving credit facility to finance its servicing advance obligations. At September 30, 2024 and December 31, 2023, the Company had pledged servicing advances with a carrying value of \$86.6 million and \$79.7 million, respectively, as collateral for this revolving credit facility. See Note 14 - *Revolving Credit Facilities*.

Note 7. Mortgage Loans Held-for-Sale, at Fair Value

The Company originates residential mortgage loans for the purpose of selling to the GSEs or other third-party investors in the secondary market on a servicing-retained basis, typically within 30 days of origination. The Company also holds a small amount of mortgage loans purchased from the collateral underlying its MSR. Mortgage loans held-for-sale are recorded at fair value as a result of a fair value option election. The following table presents the carrying value of Company's mortgage loans held-for-sale as of September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Unpaid principal balance	\$ 3,284	\$ 318
Mark-to-market adjustments	60	14
Total mortgage loans held-for-sale	\$ 3,344	\$ 332

The following table presents a reconciliation of the Company's mortgage loans held-for-sale for the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Balance at beginning of period	\$ 278	\$ 295	\$ 332	\$ 283
Originations and purchases of mortgage loans	22,394	40	22,445	80
Sales and principal collections	(19,378)	(2)	(19,479)	(30)
Unrealized gains (losses) on mortgage loans	50	—	46	—
Balance at end of period	\$ 3,344	\$ 333	\$ 3,344	\$ 333

The Company is subject to credit risk associated with its originated mortgage loans during the period of time prior to the sale of these loans. The Company considers credit risk associated with these loans to be minimal as it holds the loans for a short period of time and the market for these loans continues to be highly liquid.

The Company has one warehouse facility to finance its mortgage loans held-for-sale. At September 30, 2024, the Company had pledged mortgage loans held-for-sale with a carrying value of \$3.1 million as collateral for this warehouse facility. See Note 15 - *Warehouse Facilities*.

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Notes to the Condensed Consolidated Financial Statements (unaudited)

Note 8. 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 September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Restricted cash balances held by trading counterparties:		
For securities trading activity	\$ 450	\$ 450
For derivatives trading activity	26,649	1,669
For servicing activities	47,963	50,345
As restricted collateral for borrowings	13,998	12,575
Total restricted cash balances held by trading counterparties	89,060	65,039
Restricted cash balance pursuant to letter of credit on office lease	65	62
Total	\$ 89,125	\$ 65,101

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported on the Company's condensed consolidated balance sheets as of September 30, 2024 and December 31, 2023 that sum to the total of the same such amounts shown in the statements of cash flows:

(in thousands)	September 30, 2024	December 31, 2023
Cash and cash equivalents	\$ 522,581	\$ 729,732
Restricted cash	89,125	65,101
Total cash, cash equivalents and restricted cash	\$ 611,706	\$ 794,833

Note 9. 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., Overnight Index Swap Rate, or OIS, or Secured Overnight Financing Rate, or SOFR) 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, its cash flows, and its loan origination pipeline, the Company 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, total return swaps and forward mortgage loan sale commitments. In executing on the Company's current risk management strategy, the Company has entered into TBAs, interest rate swap and swaption agreements, futures, options on futures, IRLCs and forward mortgage loan sale commitments. The Company has also entered into a number of non-derivative instruments to manage interest rate risk, principally MSR and interest-only securities (see discussion below).

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

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 qualify 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 September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024			
	Derivative Assets		Derivative Liabilities	
	Fair Value	Notional	Fair Value	Notional
Inverse interest-only securities	\$ 11,842	\$ 142,011	\$ —	\$ —
Interest rate swap agreements	—	—	—	14,197,205
Swaptions, net	—	—	—	—
TBAAs	184	(34,000)	(16,725)	5,098,000
Futures, net	—	—	—	(3,693,900)
Interest rate lock commitments	478	33,381	—	—
Forward mortgage loan sale commitments	68	26,786	(39)	9,612
Total	<u>\$ 12,572</u>	<u>\$ 168,178</u>	<u>\$ (16,764)</u>	<u>\$ 15,610,917</u>

(in thousands)	December 31, 2023			
	Derivative Assets		Derivative Liabilities	
	Fair Value	Notional	Fair Value	Notional
Inverse interest-only securities	\$ 12,292	\$ 163,735	\$ —	\$ —
Interest rate swap agreements	—	—	—	17,788,114
Swaptions, net	19	(200,000)	—	—
TBAAs	72,980	2,979,000	(21,506)	518,000
Futures, net	—	—	—	(6,203,050)
Interest rate lock commitments	—	—	—	—
Forward mortgage loan sale commitments	—	—	—	—
Total	<u>\$ 85,291</u>	<u>\$ 2,942,735</u>	<u>\$ (21,506)</u>	<u>\$ 12,103,064</u>

Comprehensive Income (Loss) 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.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)

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

Derivative Instruments	Location of Gain (Loss) Recognized in Income	Amount of Gain (Loss) Recognized in Income			
		Three Months Ended		Nine Months Ended	
		September 30,		September 30,	
(in thousands)		2024	2023	2024	2023
Interest rate risk management:					
TBAs	(Loss) gain on other derivative instruments	\$ 84,073	\$ (90,662)	\$ (2,438)	\$ (184,909)
Futures	(Loss) gain on other derivative instruments	(119,553)	179,697	16,061	166,533
Options on futures	(Loss) gain on other derivative instruments	—	(779)	(127)	(779)
Interest rate swaps - Payers	(Loss) gain on interest rate swap and swaption agreements	(201,417)	160,099	17,521	211,941
Interest rate swaps - Receivers	(Loss) gain on interest rate swap and swaption agreements	29,155	(47,937)	(69,292)	(125,596)
Swaptions	(Loss) gain on interest rate swap and swaption agreements	—	(253)	31	(57)
Interest rate lock commitments	Gain on mortgage loans held-for-sale	478	—	478	—
Forward mortgage loan sale commitments	Gain on mortgage loans held-for-sale	29	—	29	—
Non-risk management:					
Inverse interest-only securities	(Loss) gain on other derivative instruments	2,758	(2,044)	631	(3,243)
Total		\$ (204,477)	\$ 198,121	\$ (37,106)	\$ 63,890

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Notes to the Condensed Consolidated Financial Statements (unaudited)

For the three and nine months ended September 30, 2024, the Company recognized income of \$17.1 million and \$46.4 million, respectively, for the accrual and/or settlement of the net interest spread associated with its interest rate swaps. The income results from receiving either a floating interest rate (OIS or SOFR) or a fixed interest rate and paying either a fixed interest rate or a floating interest rate (OIS or SOFR) on an average \$13.4 billion and \$13.3 billion notional, respectively. For the three and nine months ended September 30, 2023, the Company recognized income of \$6.9 million and \$13.9 million respectively, for the accrual and/or settlement of the net interest spread associated with its interest rate swaps. The income results from receiving either a floating interest rate (OIS or SOFR) or a fixed interest rate and paying either a fixed interest rate or a floating interest rate (OIS or SOFR) on an average \$8.9 billion and \$6.9 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 nine months ended September 30, 2024 and 2023:

Three Months Ended September 30, 2024

(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	\$ 149,152	\$ —	\$ (7,141)	\$ 142,011	\$ 145,931	\$ —
Interest rate swap agreements	11,739,471	10,354,868	(7,897,134)	14,197,205	13,365,113	(86,310)
Swaptions, net	—	—	—	—	—	—
TBAs, net	4,983,000	14,936,000	(14,855,000)	5,064,000	4,799,826	90,442
Futures, net	(6,308,900)	(3,253,400)	5,868,400	(3,693,900)	(4,975,350)	(117,162)
Interest rate lock commitments	12,879	69,927	(49,425)	33,381	26,775	—
Forward mortgage loan sale commitments	12,879	69,927	(46,408)	36,398	26,872	—
Total	<u>\$ 10,588,481</u>	<u>\$ 22,177,322</u>	<u>\$ (16,986,708)</u>	<u>\$ 15,779,095</u>	<u>\$ 13,389,167</u>	<u>\$ (113,028)</u>

Three Months Ended September 30, 2023

(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	\$ 179,542	\$ —	\$ (8,035)	\$ 171,507	\$ 175,850	\$ —
Interest rate swap agreements	8,977,714	1,307,773	(1,739,522)	8,545,965	8,869,676	(5,096)
Swaptions, net	(200,000)	(200,000)	200,000	(200,000)	(186,957)	(80)
TBAs, net	3,051,000	9,704,000	(10,561,000)	2,194,000	2,713,272	(88,858)
Futures, net	(6,624,550)	(7,617,280)	6,371,380	(7,870,450)	(7,003,084)	143,517
Options on futures, net	—	—	—	—	—	(775)
Interest rate lock commitments	—	—	—	—	—	—
Forward mortgage loan sale commitments	—	—	—	—	—	—
Total	<u>\$ 5,383,706</u>	<u>\$ 3,194,493</u>	<u>\$ (5,737,177)</u>	<u>\$ 2,841,022</u>	<u>\$ 4,568,757</u>	<u>\$ 48,702</u>

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Notes to the Condensed Consolidated Financial Statements (unaudited)
Nine Months Ended September 30, 2024

(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	\$ 163,735	\$ —	\$ (21,724)	\$ 142,011	\$ 153,181	\$ —
Interest rate swap agreements	17,788,114	24,147,143	(27,738,052)	14,197,205	13,290,306	(69,934)
Swaptions, net	(200,000)	(500,000)	700,000	—	(77,372)	(98)
TBAs, net	3,497,000	42,967,000	(41,400,000)	5,064,000	4,046,869	65,576
Futures, net	(6,203,050)	(19,067,500)	21,576,650	(3,693,900)	(5,937,450)	(89,537)
Options on futures, net	—	—	—	—	—	(127)
Interest rate lock commitments	—	82,806	(49,425)	33,381	14,204	—
Forward mortgage loan sale commitments	—	82,806	(46,408)	36,398	14,253	—
Total	\$ 15,045,799	\$ 47,712,255	\$ (46,978,959)	\$ 15,779,095	\$ 11,503,991	\$ (94,120)

Nine Months Ended September 30, 2023

(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	\$ 196,456	\$ —	\$ (24,949)	\$ 171,507	\$ 184,172	\$ —
Interest rate swap agreements	—	11,873,556	(3,327,591)	8,545,965	6,874,280	(23,676)
Swaptions, net	—	(400,000)	200,000	(200,000)	(148,718)	(80)
TBAs, net	3,826,000	35,490,000	(37,122,000)	2,194,000	3,394,330	(194,716)
Futures, net	(18,285,452)	(29,619,130)	40,034,132	(7,870,450)	(9,637,688)	123,547
Options on futures, net	—	—	—	—	—	(779)
Interest rate lock commitments	—	—	—	—	—	—
Forward mortgage loan sale commitments	—	—	—	—	—	—
Total	\$ (14,262,996)	\$ 17,344,426	\$ (240,408)	\$ 2,841,022	\$ 666,376	\$ (95,704)

(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 loss (gain) on interest rate swaps and swaptions, unrealized gains on other derivative instruments and gains on mortgage loans held-for-sale 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 short sales (purchases) of derivative instruments, net; (payments for termination and settlement) proceeds from sales and settlement of derivative instruments, net; and decrease in due to counterparties, net line items within the investing activities section of the condensed consolidated statements of cash flows.

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Notes to the Condensed Consolidated Financial Statements (unaudited)

Interest Rate Sensitive Assets/Liabilities

The Company's Agency RMBS portfolio is generally subject to change in value when interest rates or prepayment speeds decrease or increase, depending on the type of investment. Periods of rising interest rates with corresponding decreasing prepayment speeds generally result in a decline in the value of the Company's fixed-rate Agency principal and interest (P&I) RMBS. The impact of this effect on the Company's fixed-rate Agency P&I RMBS portfolio is partially mitigated by the presence of fixed-rate interest-only Agency RMBS, which generally increase in value when prepayment speeds decrease and MSR, which generally increase in value when prepayment speeds decrease and interest rates increase. As of September 30, 2024 and December 31, 2023, the Company had \$17.4 million and \$41.9 million, respectively, of interest-only securities, and \$2.9 billion and \$3.1 billion, respectively, of MSR. 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., OIS or SOFR) 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, its cash flows and its loan origination pipeline (consisting of IRLCs and mortgage loans held-for-sale), the Company may, at times, enter into various forward contracts, including short securities, TBAs, options, futures, swaps, caps, credit default swaps, total return swaps and forward mortgage loan sale commitments. In executing on the Company's current interest rate risk management strategy, the Company has entered into TBAs, interest rate swap and swaption agreements, futures, options on futures and forward mortgage loan sale commitments.

TBAs. 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 September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024					
	Notional Amount ⁽¹⁾	Cost Basis ⁽²⁾	Market Value ⁽³⁾	Net Carrying Value ⁽⁴⁾		
				Derivative Assets	Derivative Liabilities	
Purchase contracts	\$ 5,098,000	\$ 5,092,267	\$ 5,075,542	\$ —	\$ (16,725)	
Sale contracts	(34,000)	(31,850)	(31,665)	185	—	
TBAs, net	<u>\$ 5,064,000</u>	<u>\$ 5,060,417</u>	<u>\$ 5,043,877</u>	<u>\$ 185</u>	<u>\$ (16,725)</u>	

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Notes to the Condensed Consolidated Financial Statements (unaudited)

(in thousands)	December 31, 2023				
	Notional Amount ⁽¹⁾	Cost Basis ⁽²⁾	Market Value ⁽³⁾	Net Carrying Value ⁽⁴⁾	
				Derivative Assets	Derivative Liabilities
Purchase contracts	\$ 4,194,000	\$ 3,827,271	\$ 3,898,874	\$ 72,980	\$ (1,377)
Sale contracts	(697,000)	(656,723)	(676,852)	—	(20,129)
TBAs, net	<u>\$ 3,497,000</u>	<u>\$ 3,170,548</u>	<u>\$ 3,222,022</u>	<u>\$ 72,980</u>	<u>\$ (21,506)</u>

(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.

Futures. The Company may use a variety of types of futures independently, or in conjunction with other derivative and non-derivative instruments, in order to mitigate risks. The following table summarizes certain characteristics of the Company's futures as of September 30, 2024 and December 31, 2023:

(dollars in thousands)	September 30, 2024			December 31, 2023		
	Notional Amount	Carrying Value	Weighted Average Months to Expiration	Notional Amount	Carrying Value	Weighted Average Months to Expiration
U.S. Treasury futures - 2 year	\$ (2,028,200)	\$ —	3.03	\$ (549,600)	\$ —	2.89
U.S. Treasury futures - 5 year	(749,400)	—	3.03	(1,876,700)	—	2.89
U.S. Treasury futures - 10 year	(561,900)	—	2.63	(983,300)	—	2.60
U.S. Treasury futures - 20 year	425,600	—	2.63	(388,200)	—	2.89
Eris SOFR swap futures - 10 year	(30,000)	—	122.66	—	—	—
SOFR futures						
≤ 1 year	(750,000)	—	7.05	(1,842,750)	—	6.05
> 1 and ≤ 2 years	—	—	—	(562,500)	—	17.56
Total futures	<u>\$ (3,693,900)</u>	<u>\$ —</u>	<u>4.30</u>	<u>\$ (6,203,050)</u>	<u>\$ —</u>	<u>5.10</u>

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 September 30, 2024 and December 31, 2023, 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 (OIS or SOFR):

(notional in thousands)

Swaps Maturities	September 30, 2024			
	Notional Amount ⁽¹⁾	Weighted Average Fixed Pay Rate ⁽²⁾	Weighted Average Receive Rate	Weighted Average Maturity (Years) ⁽²⁾
≤ 1 year	\$ 2,647,671	4.730 %	4.960 %	0.46
> 1 and ≤ 3 years	4,505,979	3.929 %	4.960 %	1.75
> 3 and ≤ 5 years	2,718,767	3.546 %	4.960 %	3.28
> 5 and ≤ 7 years	450,866	— %	— %	0.00
> 7 and ≤ 10 years	285,182	— %	— %	0.00
> 10 years	736,262	3.707 %	4.960 %	13.65
Total	<u>\$ 11,344,727</u>	<u>4.107 %</u>	<u>4.960 %</u>	<u>2.52</u>

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(notional in thousands)

December 31, 2023					
Swaps Maturities	Notional Amount ⁽¹⁾	Weighted Average Fixed Pay Rate ⁽²⁾	Weighted Average Receive Rate	Weighted Average Maturity (Years) ⁽²⁾	
≤ 1 year	\$ —	— %	— %	0.00	
> 1 and ≤ 3 years	6,796,772	4.551 %	5.380 %	1.44	
> 3 and ≤ 5 years	2,040,444	3.800 %	5.380 %	4.07	
> 5 and ≤ 7 years	697,800	4.282 %	5.380 %	6.67	
> 7 and ≤ 10 years	2,125,830	3.606 %	5.380 %	9.32	
> 10 years	466,637	3.753 %	5.380 %	14.57	
Total	<u>\$ 12,127,483</u>	4.245 %	5.380 %	3.87	

(1) Notional amount includes \$2.5 billion and \$1.1 billion in forward starting interest rate swaps as of September 30, 2024 and December 31, 2023, respectively.

(2) Weighted averages exclude forward starting interest rate swaps. As of September 30, 2024 and December 31, 2023, forward starting interest rate swap payers had a weighted average fixed pay rate of 3.3% and 4.0% and weighted average maturities of 5.4 and 6.4 years, respectively.

Additionally, as of September 30, 2024 and December 31, 2023, the Company held the following interest rate swaps that were utilized as economic hedges of interest rate exposure (or duration) risk whereby the Company pays interest at a floating interest rate (OIS or SOFR):

(notional in thousands)

September 30, 2024					
Swaps Maturities	Notional Amount ⁽¹⁾	Weighted Average Pay Rate	Weighted Average Fixed Receive Rate ⁽²⁾	Weighted Average Maturity (Years) ⁽²⁾	
≤ 1 year	\$ 786,641	4.960 %	4.025 %	0.47	
> 1 and ≤ 3 years	925,695	4.960 %	3.326 %	3.00	
> 3 and ≤ 5 years	352,348	4.960 %	3.099 %	4.96	
> 5 and ≤ 7 years	99,607	4.960 %	3.097 %	6.95	
> 7 and ≤ 10 years	194,861	4.960 %	3.633 %	9.83	
> 10 years	493,326	4.960 %	3.384 %	20.38	
Total	<u>\$ 2,852,478</u>	4.960 %	3.571 %	7.12	

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(notional in thousands)

December 31, 2023					
Swaps Maturities	Notional Amount ⁽¹⁾	Weighted Average Pay Rate	Weighted Average Fixed Receive Rate ⁽²⁾	Weighted Average Maturity (Years) ⁽²⁾	
≤ 1 year	\$ —	— %	— %		0.00
> 1 and ≤ 3 years	2,470,819	5.380 %	4.204 %		1.36
> 3 and ≤ 5 years	780,000	5.380 %	3.845 %		1.36
> 5 and ≤ 7 years	988,026	5.380 %	4.023 %		4.03
> 7 and ≤ 10 years	1,161,160	5.380 %	4.013 %		9.57
> 10 years	260,626	5.380 %	3.444 %		20.01
Total	<u>\$ 5,660,631</u>	5.380 %	4.052 %		5.00

(1) Notional amount includes \$665.7 million and \$645.2 million in forward starting interest rate swaps as of September 30, 2024 and December 31, 2023, respectively.

(2) Weighted averages exclude forward starting interest rate swaps. As of September 30, 2024 and December 31, 2023, forward starting interest rate swap receivers had a weighted average fixed receive rate of 3.4% and 4.4% and weighted average maturities of 2.0 and 2.0 years, respectively.

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. The Company did not hold any interest rate swaptions as of September 30, 2024. As of December 31, 2023, the Company had the following outstanding interest rate swaptions:

December 31, 2023							
Swaption	Option			Underlying Swap			
	Expiration	Cost	Fair Value	Average Months to Expiration	Notional Amount	Average Fixed Rate	Average Term (Years)
Purchase contracts:							
Payer	< 6 Months	\$ 480	\$ 22	2.40	\$ 200,000	5.13 %	1.0
Sale contracts:							
Payer	< 6 Months	\$ (332)	\$ (3)	2.40	\$ (400,000)	5.61 %	1.0

Interest Rate Lock Commitments. The Company enters into IRLCs to originate residential mortgage loans at specified interest rates and terms within a specified period of time with customers who have applied for a loan and may meet certain credit and underwriting criteria. IRLCs are subject to changes in mortgage interest rates from the date of the commitment through the date of funding the loan or the cancellation or expiration of the lock commitment, generally ranging between 30 and 90 days. IRLCs are considered freestanding derivatives and are recorded at fair value at inception inclusive of the inherent value of servicing the loan. The Company did not hold any IRLCs as of December 31, 2023. As of September 30, 2024, the Company had outstanding IRLCs of \$33.4 million in principal with a net fair value of \$0.5 million.

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Forward Mortgage Loan Sale Commitments. The Company uses forward mortgage loan sale commitments to manage exposure to interest rate risk and changes in the fair value of IRLCs from the date of the commitment through the date of funding or cancellation or expiration of the lock commitment. Forward mortgage loan sale commitments are also used to manage exposure to interest rate risk and changes in the fair value of the Company's mortgage loans held-for-sale from the date of funding through the date of sale in the secondary market, typically within 30 days of origination. Forward mortgage loan sale commitments are recorded at fair value based on pricing of similar instruments in the secondary market based upon the investor, coupon, and estimated sale or delivery month. The Company's expectation of the amount of IRLCs that will ultimately close is a key factor in determining the notional amount of derivatives used in economically hedging the position. The Company did not hold any forward mortgage loan sale commitments as of December 31, 2023. As of September 30, 2024, the Company had outstanding forward mortgage loan sale commitments of \$36.4 million in principal with a net fair value of \$29 thousand.

Credit Risk

The Company's exposure to credit losses on its Agency RMBS portfolio is limited due to implicit or explicit backing from either a GSE or a U.S. government agency. 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. The Company also has processes and controls in place to monitor, analyze, manage and mitigate its credit risk with respect to non-Agency securities and mortgage loans held-for-sale.

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 September 30, 2024, the fair value of derivative financial instruments as an asset and liability position was \$12.6 million and \$16.8 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 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 and exchange-traded futures and options on futures require the Company to post 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 derivative instrument'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 derivative instrument, 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 centrally cleared or exchange-traded derivative asset or liability.

Note 10. Reverse Repurchase Agreements

As of September 30, 2024 and December 31, 2023, the Company had \$280.5 million and \$286.1 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 \$359.2 million and \$284.1 million, respectively.

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Note 11. 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. 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 and exchange-traded futures and options on futures require the Company to post 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 derivative instrument'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 and exchange-trading activities, the exchange of variation margin is considered a settlement of the derivative instrument, 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 centrally cleared or exchange-traded derivative asset or liability. The receipt or payment of initial margin is accounted for separate from the derivative 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 or exchange-traded derivative instruments) 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 or exchange-traded derivative instruments) 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 or exchange-traded derivative instruments) 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 September 30, 2024 and December 31, 2023:

September 30, 2024						
(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	Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets		Net Amount
				Financial Instruments	Cash Collateral (Received) Pledged	
Assets:						
Derivative assets	\$ 47,468	\$ (34,896)	\$ 12,572	\$ (12,572)	\$ —	\$ —
Reverse repurchase agreements	359,180	—	359,180	—	(280,523)	78,657
Total Assets	\$ 406,648	\$ (34,896)	\$ 371,752	\$ (12,572)	\$ (280,523)	\$ 78,657
Liabilities:						
Repurchase agreements	\$ (8,763,400)	\$ —	\$ (8,763,400)	\$ 8,763,400	\$ —	\$ —
Derivative liabilities	(51,660)	34,896	(16,764)	12,572	—	(4,192)
Total Liabilities	\$ (8,815,060)	\$ 34,896	\$ (8,780,164)	\$ 8,775,972	\$ —	\$ (4,192)

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(in thousands)	Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets					
	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	\$ 228,227	\$ (142,936)	\$ 85,291	\$ (21,506)	\$ —	\$ 63,785
Reverse repurchase agreements	284,091	—	284,091	—	(284,091)	—
Total Assets	\$ 512,318	\$ (142,936)	\$ 369,382	\$ (21,506)	\$ (284,091)	\$ 63,785
Liabilities:						
Repurchase agreements	\$ (8,020,207)	\$ —	\$ (8,020,207)	\$ 8,020,207	\$ —	\$ —
Derivative liabilities	(164,442)	142,936	(21,506)	21,506	—	—
Total Liabilities	\$ (8,184,649)	\$ 142,936	\$ (8,041,713)	\$ 8,041,713	\$ —	\$ —

(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 12. Fair Value
Fair Value Measurements

ASC 820, *Fair Value Measurements and Disclosures*, or 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. The 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.

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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 and non-Agency investment 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 99.95% and 0.05% of its AFS securities as Level 2 and Level 3 fair value assets, respectively, at September 30, 2024.

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, OAS 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 September 30, 2024.

Mortgage loans held-for-sale. The Company's recognizes on its condensed consolidated balance sheets originated mortgage loans held-for-sale that are carried at fair value as a result of a fair value option election. The Company estimates fair value of mortgage loans held-for-sale using a market approach by utilizing either: (i) the fair value of securities backed by similar mortgage loans, adjusted for certain factors to approximate the fair value of a whole mortgage loan, including the value attributable to mortgage servicing and credit risk; (ii) current commitments to purchase loans; or (iii) recent observable market trades for similar loans, adjusted for credit risk and other individual loan characteristics. As these fair values are derived from market observable inputs, the Company classified 100% of its mortgage loans held-for-sale as Level 2 fair value assets at September 30, 2024.

Derivative instruments. The Company may enter into a variety of derivative financial instruments as part of its hedging strategies, including over-the-counter, or OTC, derivative contracts, such as interest rate swaps and swaptions. The Company utilizes third-party brokers to value its OTC derivative instruments. The Company classified 100% of its interest rate swaps reported at fair value as Level 2 at September 30, 2024. The Company did not hold any interest rate swaptions at September 30, 2024.

The Company may also enter into certain other derivative financial instruments, such as inverse interest-only securities, TBAs, futures and options on futures. The Company utilizes third-party pricing vendors to value inverse interest-only securities, as these instruments are similar in form to the Company's AFS securities. The Company classified 100% of its inverse interest-only securities at fair value as Level 2 at September 30, 2024. TBAs, futures and options on futures are considered to be active markets such that participants transact with sufficient frequency and volume to provide transparent pricing information for identical instruments. The Company utilizes third-party pricing vendors to value TBAs, futures and options on futures. The Company reported 100% of its TBAs and futures as Level 1 as of September 30, 2024. The Company did not hold any options on futures at September 30, 2024.

The Company also enters into IRLCs and forward mortgage loan sale commitments in connection with its origination activities. The Company determines fair value of its IRLCs based on valuation models that use the market price for similar loans sold in the secondary market, net of costs to close the loans, subject to the estimated loan funding probability or pull-through rate. Given the significant and unobservable nature of the pull-through rate assumption, the Company classified 100% of its IRLCs as Level 3 at September 30, 2024. The valuation model for forward mortgage loan sale commitments utilizes the fair value of related mortgage loans determined using observable market data, and therefore, the Company reported 100% of its forward mortgage loan sale commitments as Level 2 as of September 30, 2024.

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.

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The Company has netting arrangements in place with all derivative counterparties pursuant to standard documentation developed by ISDA or central clearing exchange agreements. Additionally, both the Company and the counterparty or clearing agency are required to post cash margin based upon the net underlying market value of the Company's open positions with the counterparty. Posting of cash margin typically occurs daily, subject to certain dollar thresholds. Due to the existence of netting arrangements, as well as frequent cash margin 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:

(in thousands)	Recurring Fair Value Measurements September 30, 2024			
	Level 1	Level 2	Level 3	Total
Assets:				
Available-for-sale securities	\$ —	\$ 8,502,243	\$ 3,859	\$ 8,506,102
Mortgage servicing rights	—	—	2,884,304	2,884,304
Mortgage loans held-for-sale	—	3,344	—	3,344
Derivative assets	184	11,910	478	12,572
Total assets	\$ 184	\$ 8,517,497	\$ 2,888,641	\$ 11,406,322
Liabilities:				
Derivative liabilities	\$ 16,725	\$ 39	\$ —	\$ 16,764
Total liabilities	\$ 16,725	\$ 39	\$ —	\$ 16,764

(in thousands)	Recurring Fair Value Measurements December 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets:				
Available-for-sale securities	\$ —	\$ 8,322,999	\$ 4,150	\$ 8,327,149
Mortgage servicing rights	—	—	3,052,016	3,052,016
Mortgage loans held-for-sale	—	332	—	332
Derivative assets	72,980	12,311	—	85,291
Total assets	\$ 72,980	\$ 8,335,642	\$ 3,056,166	\$ 11,464,788
Liabilities:				
Derivative liabilities	\$ 21,506	\$ —	\$ —	\$ 21,506
Total liabilities	\$ 21,506	\$ —	\$ —	\$ 21,506

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 September 30, 2024, 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.

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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, are valued by the Company using observable inputs, specifically quotations received from third-party brokers. Exchange-traded derivative instruments, including futures and options on futures, are valued based on quoted prices for identical instruments in active markets.

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

	Three Months Ended September 30, 2024		
	Available-For-Sale Securities	Mortgage Servicing Rights	Interest Rate Lock Commitments
(in thousands)			
Beginning of period level 3 fair value	\$ 3,942	\$ 3,065,415	\$ —
Gains (losses) included in net (loss) income:			
Realized	(147)	(39,521)	—
Unrealized	— ⁽¹⁾	(93,828) ⁽²⁾	478 ⁽³⁾
Reversal of provision for credit losses	11	—	—
Net gains (losses) included in net (loss) income	(136)	(133,349)	478
Other comprehensive income	53	—	—
Purchases/additions	—	43,254	—
Sales	—	(91,103)	—
Settlements	—	87	—
Gross transfers into level 3	—	—	—
Gross transfers out of level 3	—	—	—
End of period level 3 fair value	\$ 3,859	\$ 2,884,304	\$ 478
Change in unrealized gains or losses for the period included in earnings for assets held at the end of the reporting period	\$ — ⁽⁴⁾	\$ (65,594) ⁽⁵⁾	\$ 478 ⁽⁶⁾
Change in unrealized gains or losses for the period included in other comprehensive income (loss) for assets held at the end of the reporting period	\$ 53	\$ —	\$ —

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(in thousands)	Nine Months Ended September 30, 2024		
	Available-For-Sale Securities	Mortgage Servicing Rights	Interest Rate Lock Commitments
Beginning of period level 3 fair value	\$ 4,150	\$ 3,052,016	\$ —
Gains (losses) included in net (loss) income:			
Realized	(438)	(145,969)	—
Unrealized	— ⁽¹⁾	775 ⁽²⁾	478 ⁽³⁾
Reversal of provision for credit losses	(100)	—	—
Net gains (losses) included in net (loss) income	(538)	(145,194)	478
Other comprehensive income	247	—	—
Purchases/additions	—	87,390	—
Sales	—	(109,284)	—
Settlements	—	(624)	—
Gross transfers into level 3	—	—	—
Gross transfers out of level 3	—	—	—
End of period level 3 fair value	<u>\$ 3,859</u>	<u>\$ 2,884,304</u>	<u>\$ 478</u>
Change in unrealized gains or losses for the period included in earnings for assets held at the end of the reporting period	<u>\$ — ⁽⁴⁾</u>	<u>\$ 9,505 ⁽⁵⁾</u>	<u>\$ 478 ⁽⁶⁾</u>
Change in unrealized gains or losses for the period included in other comprehensive income (loss) for assets held at the end of the reporting period	<u>\$ (535)</u>	<u>\$ —</u>	<u>\$ —</u>

- (1) The change in unrealized gains or losses on available-for-sale securities accounted for under the fair value option was recorded in gain (loss) on investment securities on the condensed consolidated statements of comprehensive income (loss).
- (2) The change in unrealized gains or losses on MSR was recorded in (loss) gain on servicing asset on the condensed consolidated statements of comprehensive income (loss).
- (3) The change in unrealized gains or losses on IRLCs was recorded in gain on mortgage loans held-for-sale on the condensed consolidated statements of comprehensive income (loss).
- (4) The change in unrealized gains or losses on available-for-sale securities accounted for under the fair value option that were held at the end of the reporting period was recorded in gain (loss) on investment securities on the condensed consolidated statements of comprehensive income (loss).
- (5) 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 income (loss).
- (6) The change in unrealized gains or losses on IRLCs that were held at the end of the reporting period was recorded in gain on mortgage loans held-for-sale on the condensed consolidated statements of comprehensive income (loss).

No transfers between Level 1, Level 2 or Level 3 were made during the three and nine months ended September 30, 2024 and 2023. 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.

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Notes to the Condensed Consolidated Financial Statements (unaudited)

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 September 30, 2024 and December 31, 2023:

September 30, 2024				
Unobservable Input	Range			Weighted Average ⁽¹⁾
Constant prepayment speed	5.9%	-	7.3%	6.6%
Option-adjusted spread	5.2%	-	8.7%	5.4%
Per loan annual cost to service	\$67.80	-	\$81.74	\$68.56

December 31, 2023				
Unobservable Input	Range			Weighted Average ⁽¹⁾
Constant prepayment speed	5.0%	-	6.9%	6.2%
Option-adjusted spread	4.8%	-	8.6%	5.3%
Per loan annual cost to service	\$66.31	-	\$81.30	\$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.

The Company determines fair value of its Level 3 IRLCs based on valuation models that incorporate the estimated pull-through rate, which is considered a significant unobservable input. The Company did not hold any IRLCs at December 31, 2023. The table below presents information about the pull-through rates used in the valuation of IRLCs at September 30, 2024:

September 30, 2024				
Unobservable Input	Range			Weighted Average ⁽¹⁾
Pull-through rate	59.3%	-	97.0%	80.2%

(1) Calculation utilizes underlying loan principal balance for weighting purposes.

Certain assets are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances, such as when there is evidence of impairment. Upon the occurrence of certain events, the Company re-measures the fair value of long-lived assets, including property, plant and equipment, operating lease right of use assets, intangible assets and goodwill if an impairment or observable price adjustment is recognized in the current period. No instances requiring re-measurement of assets measured at fair value on a nonrecurring basis occurred during the three and nine months ended September 30, 2024 and 2023.

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, mortgage loans held-for-sale 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 12.
- 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.

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Notes to the Condensed Consolidated Financial Statements (unaudited)

- The carrying value of repurchase agreements, revolving credit facilities and warehouse facilities that mature in less than one year generally approximates fair value due to the short maturities. As of September 30, 2024, the Company had outstanding borrowings of \$650.0 million under repurchase agreements and \$1.0 billion under revolving credit facilities that are considered long-term. The Company's long-term repurchase agreements and 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 September 30, 2024. The Company categorizes the fair value measurement of these assets as Level 2.

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 September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024		December 31, 2023	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Available-for-sale securities	\$ 8,506,102	\$ 8,506,102	\$ 8,327,149	\$ 8,327,149
Mortgage servicing rights	\$ 2,884,304	\$ 2,884,304	\$ 3,052,016	\$ 3,052,016
Mortgage loans held-for-sale	\$ 3,344	\$ 3,344	\$ 332	\$ 332
Cash and cash equivalents	\$ 522,581	\$ 522,581	\$ 729,732	\$ 729,732
Restricted cash	\$ 89,125	\$ 89,125	\$ 65,101	\$ 65,101
Derivative assets	\$ 12,572	\$ 12,572	\$ 85,291	\$ 85,291
Reverse repurchase agreements	\$ 359,180	\$ 359,180	\$ 284,091	\$ 284,091
Other assets	\$ 31,283	\$ 31,283	\$ 31,373	\$ 31,373
Liabilities:				
Repurchase agreements	\$ 8,763,400	\$ 8,763,400	\$ 8,020,207	\$ 8,020,207
Revolving credit facilities	\$ 999,171	\$ 999,171	\$ 1,329,171	\$ 1,329,171
Warehouse facilities	\$ 3,017	\$ 3,017	\$ —	\$ —
Term notes payable	\$ —	\$ —	\$ 295,271	\$ 289,653
Convertible senior notes	\$ 259,815	\$ 257,994	\$ 268,582	\$ 254,232
Derivative liabilities	\$ 16,764	\$ 16,764	\$ 21,506	\$ 21,506

Note 13. Repurchase Agreements

As of September 30, 2024 and December 31, 2023, the Company had outstanding \$8.8 billion and \$8.0 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 5.40% and 5.74% and weighted average remaining maturities of 116 and 55 days as of September 30, 2024 and December 31, 2023, respectively.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)

At September 30, 2024 and December 31, 2023, the Company's repurchase agreements had the following characteristics and remaining maturities:

September 30, 2024					
Collateral Type					
(in thousands)	Agency RMBS	Non-Agency Securities	Agency Derivatives	Mortgage Servicing Rights	Total Amount Outstanding
Within 30 days	\$ 2,398,450	\$ —	\$ 4,729	\$ —	\$ 2,403,179
30 to 59 days	2,180,469	—	—	—	2,180,469
60 to 89 days	—	—	—	—	—
90 to 119 days	1,173,329	—	—	—	1,173,329
120 to 364 days	2,355,486	207	730	—	2,356,423
One year and over	—	—	—	650,000	650,000
Total	\$ 8,107,734	\$ 207	\$ 5,459	\$ 650,000	\$ 8,763,400
Weighted average borrowing rate	5.20 %	5.39 %	5.88 %	7.99 %	5.40 %

December 31, 2023					
Collateral Type					
(in thousands)	Agency RMBS	Non-Agency Securities	Agency Derivatives	Mortgage Servicing Rights	Total Amount Outstanding
Within 30 days	\$ 2,772,975	\$ —	\$ 1,615	\$ 58,572	\$ 2,833,162
30 to 59 days	1,918,818	—	—	—	1,918,818
60 to 89 days	2,058,518	233	687	—	2,059,438
90 to 119 days	989,045	—	5,744	—	994,789
120 to 364 days	—	—	—	214,000	214,000
Total	\$ 7,739,356	\$ 233	\$ 8,046	\$ 272,572	\$ 8,020,207
Weighted average borrowing rate	5.64 %	6.36 %	6.14 %	7.08 %	5.74 %

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

(in thousands)	September 30, 2024	December 31, 2023
Available-for-sale securities, at fair value	\$ 8,416,131	\$ 8,126,028
Mortgage servicing rights, at fair value ⁽¹⁾	1,068,467	463,529
Restricted cash	12,497	12,375
Due from counterparties	15,108	36,420
Derivative assets, at fair value	8,148	11,877
Total	\$ 9,520,351	\$ 8,650,229

(1) As of September 30, 2024 and December 31, 2023, MSR repurchase agreements of \$650.0 million and \$214.0 million, respectively, were secured by a VFN issued in connection with the Company's securitization of MSR. The VFN is collateralized by the Company's MSR. As of December 31, 2023, MSR repurchase agreements of \$58.6 million were secured by a portion of the term notes issued in connection with the Company's securitization of MSR and repurchased by the Company. Prior to their maturity and repayment during the nine months ended September 30, 2024, the term notes were collateralized by the Company's MSR.

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.

TWO HARBORS INVESTMENT CORP.**Notes to the Condensed Consolidated Financial Statements (unaudited)**

As of both September 30, 2024 and December 31, 2023, 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 14. 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 September 30, 2024 and December 31, 2023, the Company had outstanding short- and long-term borrowings under revolving credit facilities of \$1.0 billion and \$1.3 billion with a weighted average borrowing rate of 8.11% and 8.66% and weighted average remaining maturities of 1.8 and 1.1 years, respectively.

At September 30, 2024 and December 31, 2023, borrowings under revolving credit facilities had the following remaining maturities:

(in thousands)	September 30, 2024	December 31, 2023
Within 30 days	\$ —	\$ —
30 to 59 days	—	—
60 to 89 days	—	—
90 to 119 days	—	—
120 to 364 days	—	324,300
One year and over	999,171	1,004,871
Total	\$ 999,171	\$ 1,329,171

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 September 30, 2024 and December 31, 2023, MSR with a carrying value of \$1.8 billion and \$2.2 billion, respectively, was pledged as collateral for the Company's future payment obligations under its MSR revolving credit facilities. As of September 30, 2024 and December 31, 2023, servicing advances with a carrying value of \$86.6 million and \$79.7 million, respectively, were pledged as collateral for the Company's future payment obligations under its servicing advance revolving credit facility. Additionally, as of September 30, 2024, \$1.5 million of cash was held in restricted accounts as collateral for the future payment obligations of outstanding revolving credit facility balances. 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 15. Warehouse Facilities

To finance origination activities, the Company has entered into warehouse facilities collateralized by the value of the mortgage loans pledged for a period of up to 90 days or until they are sold to the GSEs or other third-party investors in the secondary market, typically within 30 days of origination. As of September 30, 2024, the Company had outstanding short-term borrowings under warehouse facilities of \$3.0 million with a weighted average borrowing rate of 7.34% and weighted average remaining maturities of 87 days. The Company did not have any outstanding borrowings under warehouse facilities as of December 31, 2023.

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At September 30, 2024 and December 31, 2023, borrowings under warehouse facilities had the following remaining maturities:

(in thousands)	September 30, 2024	December 31, 2023
Within 30 days	\$ —	\$ —
30 to 59 days	—	—
60 to 89 days	3,017	—
90 to 119 days	—	—
120 to 364 days	—	—
One year and over	—	—
Total	\$ 3,017	\$ —

Although the transactions under warehouse 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 September 30, 2024, mortgage loans held-for-sale with a carrying value of \$3.1 million were pledged as collateral for the Company's future payment obligations under its warehouse facilities. Additionally, as of September 30, 2024, \$0.1 million of cash was held in restricted accounts as collateral for the future payment obligations of outstanding warehouse facility balances. The Company does not anticipate any defaults by its warehouse facility counterparties, although there can be no assurance that any such default or defaults will not occur.

Note 16. Term Notes Payable

Prior to its maturity and repayment during the nine months ended September 30, 2024, the debt issued in connection with the Company's on-balance sheet MSR securitization was classified as term notes payable. Term notes payable were carried at outstanding principal balance, net of unamortized deferred debt issuance costs on the Company's condensed consolidated balance sheets. As of December 31, 2023, the outstanding principal balance of the Company's term notes was \$295.8 million and the balance net of unamortized deferred debt issuance costs was \$295.3 million. As of December 31, 2023, the Company's outstanding term notes payable had a weighted average interest rate of 8.27% and weighted average remaining maturity of 0.5 years. At December 31, 2023, the Company pledged MSR with a carrying value of \$397.9 million and weighted average underlying loan coupon of 3.32% as collateral for term notes payable. Additionally, as of December 31, 2023, \$0.2 million of cash was held in restricted accounts as collateral for the future payment obligations of outstanding term notes payable. During the nine months ended September 30, 2024, the Company's outstanding term notes matured and were repaid in full.

Note 17. Convertible Senior Notes

The Company's convertible senior 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 September 30, 2024 and December 31, 2023, the notes had a conversion rate of 33.8752 and 33.8752 shares of common stock per \$1,000 principal amount of the notes, respectively. The notes will mature in January 2026, unless earlier converted or repurchased in accordance with their terms.

The Company does not have the right to redeem its convertible senior 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. During the nine months ended September 30, 2024, the Company repurchased \$10.0 million principal amount of its convertible senior notes in open market transactions for an aggregate cost of \$9.7 million. During the nine months ended September 30, 2023, the Company repurchased \$15.6 million principal amount of its convertible senior notes in open market transactions for an aggregate cost of \$13.2 million. The difference between the consideration transferred and the carrying value of the convertible notes repurchased resulted in a gain of \$0.2 million for the nine months ended September 30, 2024 and \$2.2 million for the nine months ended September 30, 2023 recorded within the other income line item on the condensed consolidated statements of comprehensive income (loss). The Company did not repurchase any of its convertible senior notes during the three months ended September 30, 2024 or 2023.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

As of September 30, 2024 and December 31, 2023, \$261.9 million and \$271.9 million principal amount of convertible senior notes, respectively, remained outstanding. The outstanding amount due on the notes as of September 30, 2024 and December 31, 2023 was \$259.8 million and \$268.6 million, respectively, net of unamortized deferred issuance costs.

Note 18. Commitments and Contingencies

The following represent the material commitments and contingencies of the Company as of September 30, 2024:

Legal and regulatory. The Company and its subsidiaries are routinely involved in numerous legal and regulatory proceedings, including but not limited to judicial, arbitration, regulatory and governmental proceedings related to matters that arise in connection with the conduct of the Company's business. These legal proceedings are at varying stages of adjudication, arbitration or investigation and may consist of a variety of claims, including common law tort and contract claims, consumer protection-related claims and claims under other laws and regulations. Any legal proceedings or actions brought against the Company may result in judgments, settlements, fines, penalties, injunctions, business improvement orders, consent orders, supervisory agreements, restrictions on business activities, or other results adverse to the Company, which could materially and negatively affect its business. The Company seeks to resolve all litigation and regulatory matters in the manner management believes is in the best interest of the Company and contests liability, allegations of wrongdoing, and, where applicable, the amount of damages or scope of any penalties or other relief sought as appropriate in each pending matter. 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 July 15, 2020, the Company provided PRCM Advisers LLC 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, Pine River Domestic Management L.P. and Pine River Capital Management L.P. were added as plaintiffs to the matter. As amended, the complaint, or 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 the plaintiffs in pursuing the action. The Company has filed its answer to the Federal Complaint and made counterclaims against PRCM Advisers and Pine River Capital Management L.P. On May 5, 2022, the plaintiffs filed a motion for judgment on the pleadings, seeking judgment in their favor on all but one of the Company's counterclaims and on one of the Company's affirmative defenses. The Company opposed the motion for judgment on the pleadings. On August 10, 2023, the motion for judgment on the pleadings was granted in part and denied in part. The discovery period has ended. On November 8, 2023, the Company and the plaintiffs filed motions for summary judgment, seeking judgment in their favor on the pending claims and counterclaims. Each party opposed the other party's motion for summary judgment. The motions for summary judgment are fully briefed. 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.

As of September 30, 2024, 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 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 are that the matter is not sufficiently advanced and the outcome of litigation is uncertain. If and when management believes losses associated with the Federal Complaint 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 September 30, 2024.

TWO HARBORS INVESTMENT CORP.**Notes to the Condensed Consolidated Financial Statements (unaudited)****Note 19. 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 September 30, 2024. 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
Series A	March 14, 2017	5,050,221	\$ 121,971	8.125 %	April 27, 2027	April 27, 2027	3M Rate + 5.660%
Series B	July 19, 2017	10,159,200	245,670	7.625 %	July 27, 2027	July 27, 2027	3M Rate + 5.352%
Series C	November 27, 2017	9,661,396	233,826	7.250 %	January 27, 2025	January 27, 2025	3M Rate + 5.011%
Total		<u>24,870,817</u>	<u>\$ 601,467</u>				

(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 in footnote (3) below.

(3) On and after the fixed-to-floating rate conversion date, dividends will accumulate and be payable quarterly at a percentage of the \$25.00 per share liquidation preference equal to a floating base rate plus the spread indicated with respect to each series of preferred stock. The original floating base rate applicable to each preferred series was three-month USD-LIBOR, which ceased to be published on June 30, 2023. Under the Adjustable Interest Rate (LIBOR) Act, and the regulations promulgated thereunder, the replacement reference rate for three-month USD-LIBOR is three-month CME Term SOFR plus a tenor spread adjustment of 0.26161%. As a result, based on the terms of the LIBOR Act, the Company expects that the floating base rate with respect to each series of preferred stock, following the applicable conversion date, will be three-month CME SOFR plus a tenor spread of 0.26161%.

For each series of preferred stock, the Company may redeem the stock on or after the redemption eligible 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 September 30, 2024, the Company had declared and paid all required quarterly dividends on the Company's preferred stock.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

Preferred Share Repurchase Program

In June 2022, the Company's board of directors authorized the repurchase of up to an aggregate of 5,000,000 shares of the Company's preferred stock, which includes each series shown in the table above under the heading Redeemable Preferred Stock. Preferred shares may be repurchased from time to time through privately negotiated transactions or open market transactions, pursuant to trading plans in accordance with Rule 10b5-1 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 preferred share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The preferred 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 preferred share repurchase program does not have an expiration date. As of September 30, 2024, a total of 699,779 shares of the Company's 8.125% Series A Cumulative Redeemable Preferred Stock, 1,340,800 shares of the Company's 7.625% Series B Cumulative Redeemable Preferred Stock and 2,138,604 shares of the Company's 7.25% Series C Cumulative Redeemable Preferred Stock had been repurchased by the Company under the program for an aggregate cost of \$13.3 million, \$25.5 million and \$38.5 million, respectively, of which 35,047, 280,060 and 170,502 shares were repurchased for a total cost of \$0.8 million, \$6.4 million and \$3.9 million, respectively, during the nine months ended September 30, 2024. During the nine months ended September 30, 2023, the Company repurchased 225,886 shares of Series A preferred stock, 215,072 shares of Series B preferred stock and 72,860 shares of Series C preferred stock for a total cost of \$4.5 million, \$4.1 million and \$1.4 million, respectively. The difference between the consideration transferred and the carrying value of the preferred stock repurchased resulted in a gain attributable to common stockholders of \$0.6 million for the nine months ended September 30, 2024 and \$2.5 million for both the nine months ended September 30, 2023. No preferred shares were repurchased during the three months ended September 30, 2024 or 2023.

Common Stock

Public Offerings

On February 6, 2023, the Company completed a public offering of 10,000,000 shares of its common stock. The underwriters purchased the shares from the Company at a price of \$17.59 per share, for net proceeds to the Company of approximately \$175.6 million after deducting offering expenses. The underwriters did not exercise any portion of their 30-day overallotment option to purchase up to 1,500,000 additional shares.

As of September 30, 2024, the Company had 103,650,126 shares of common stock outstanding. The following table presents a reconciliation of the common shares outstanding for the nine months ended September 30, 2024 and 2023:

	Number of common shares
Common shares outstanding, December 31, 2022	86,428,845
Issuance of common stock	10,129,458
Repurchase of common stock	(593,453)
Non-cash equity award compensation ⁽¹⁾	221,575
Common shares outstanding, September 30, 2023	<u>96,186,425</u>
Common shares outstanding, December 31, 2023	103,206,457
Issuance of common stock	12,439
Non-cash equity award compensation ⁽¹⁾	431,230
Common shares outstanding, September 30, 2024	<u>103,650,126</u>

(1) See Note 20 - *Equity Incentive Plans* for further details regarding the Company's equity incentive plans.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Distributions to Stockholders

The following table presents cash dividends declared by the Company on its preferred and common stock during the three and nine months ended September 30, 2024 and 2023:

(dollars in thousands)	Three Months Ended				Nine Months Ended			
	September 30,				September 30,			
	2024		2023		2024		2023	
Class of Stock	Amount	Per Share	Amount	Per Share	Amount	Per Share	Amount	Per Share
Series A Preferred Stock	\$ 2,564	\$ 0.51	\$ 2,588	\$ 0.51	\$ 7,693	\$ 1.53	\$ 7,878	\$ 1.53
Series B Preferred Stock	\$ 4,842	\$ 0.48	\$ 5,003	\$ 0.48	\$ 14,525	\$ 1.44	\$ 15,112	\$ 1.44
Series C Preferred Stock	\$ 4,378	\$ 0.45	\$ 4,524	\$ 0.45	\$ 13,134	\$ 1.35	\$ 13,605	\$ 1.35
Common Stock	\$ 46,946	\$ 0.45	\$ 43,560	\$ 0.45	\$ 140,972	\$ 1.35	\$ 145,501	\$ 1.50

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 937,500 shares of the Company's common stock. As of September 30, 2024, 143,069 shares have been issued under the plan for total proceeds of approximately \$6.4 million, of which 4,414 and 12,439 shares were issued for total proceeds of \$0.1 million and \$0.2 million during the three and nine months ended September 30, 2024, respectively. During the three and nine months ended September 30, 2023, 3,583 and 12,031 shares were issued for a total proceeds of \$48 thousand and \$0.2 million, respectively.

Common Share Repurchase Program

The Company's common share repurchase program allows for the repurchase of up to an aggregate of 9,375,000 shares of the Company's common stock. Common 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 common share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The common 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 common share repurchase program does not have an expiration date. As of September 30, 2024, a total of 3,637,028 shares of common stock had been repurchased by the Company under the program for an aggregate cost of \$208.5 million, of which 593,453 shares were repurchased for a total cost of \$7.1 million during the nine months ended September 30, 2023. No shares of common stock were repurchased during the three and nine months ended September 30, 2024 or the three months ended September 30, 2023.

At-the-Market Offerings

The Company is party to an equity distribution agreement under which the Company is authorized to sell 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. On July 30, 2024, the Company entered into an amendment to the equity distribution agreement, which increased the maximum number of shares of common stock available for sale under the agreement to 15,000,000. During the nine months ended September 30, 2023, 117,427 shares of common stock were sold under the current equity distribution agreement for net proceeds of \$2.1 million. No shares were sold under the "at the market" equity distribution agreements during the three and nine months ended September 30, 2024 or the three months ended September 30, 2023.

TWO HARBORS INVESTMENT CORP.**Notes to the Condensed Consolidated Financial Statements (unaudited)****Accumulated Other Comprehensive Loss**

Accumulated other comprehensive loss at September 30, 2024 and December 31, 2023 was as follows:

(in thousands)	September 30, 2024	December 31, 2023
Available-for-sale securities:		
Unrealized gains	\$ 67,648	\$ 23,305
Unrealized losses	(121,607)	(199,734)
Accumulated other comprehensive loss	\$ (53,959)	\$ (176,429)

Reclassifications out of Accumulated Other Comprehensive Loss

The Company reclassifies unrealized gains and losses on AFS securities in accumulated other comprehensive loss to net (loss) income upon the recognition of any realized gains and losses on sales as individual securities are sold. For the three and nine months ended September 30, 2024 the Company reclassified \$1.8 million and \$17.7 million, respectively, in unrealized losses on sold AFS securities from accumulated other comprehensive loss to gain (loss) on investment securities on the condensed consolidated statements of comprehensive income (loss). For the nine months ended September 30, 2023 the Company reclassified \$63.2 million in unrealized losses on sold AFS securities from accumulated other comprehensive loss to gain (loss) on investment securities on the condensed consolidated statements of comprehensive income (loss). The Company did not sell any AFS securities with unrealized gains and losses included in accumulated other comprehensive loss during the three months ended September 30, 2023.

Note 20. Equity Incentive Plans

The Company's 2021 Equity Incentive Plan, or the Equity Incentive Plan, provides incentive compensation to attract and retain qualified directors, officers, personnel and other parties who may provide significant services to the Company. The Equity Incentive Plan is 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 Plan, 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 Plan), to determine the terms, provisions and conditions of each award (which may not be inconsistent with the terms of the Equity Incentive Plan), 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 Plan 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 Plan provides for 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. The Equity Incentive Plan is subject to a ceiling of 4,250,000 shares of the Company's common stock. The Company's Second Restated 2009 Equity Incentive Plan, or the Prior Plan, was subject to a ceiling of 1,625,000 shares of the Company's common stock; however, following stockholder approval of the Equity Incentive Plan in May 2021, no new awards will be granted under the Prior Plan. All awards previously granted under the Prior Plan, which remained outstanding and valid in accordance with their terms, have since vested or been forfeited.

The Equity Incentive Plan allows for the Company's board of directors to expand the types of awards available under the Equity Incentive Plan to include long-term incentive plan units in the future. If an award granted under the Equity Incentive Plan 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 Plan after the tenth anniversary of the date that the Equity Incentive Plan was approved by the Company's board of directors. No award may be granted under the Equity Incentive Plan 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.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Restricted Stock Units

The following table summarizes the activity related to RSUs for the nine months ended September 30, 2024 and 2023:

	Nine Months Ended September 30,			
	2024		2023	
	Units	Weighted Average Grant Date Fair Market Value	Units	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	613,699	\$ 19.11	468,632	\$ 23.54
Granted	434,428	13.91	371,673	16.19
Vested	(370,453)	(19.30)	(221,575)	(23.56)
Forfeited	(3,739)	(18.52)	(5,031)	(20.20)
Outstanding at End of Period	<u>673,935</u>	<u>\$ 15.65</u>	<u>613,699</u>	<u>\$ 19.11</u>

The estimated fair value of RSUs on grant date is based on the closing market price of the Company's common stock on the NYSE on such date. The shares underlying RSUs granted to independent directors are subject to a one-year vesting period. RSUs granted to certain eligible employees 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.

Performance Share Units

The following table summarizes the activity related to PSUs for the nine months ended September 30, 2024 and 2023:

	Nine Months Ended September 30,			
	2024		2023	
	Target Units	Weighted Average Grant Date Fair Market Value	Target Units	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	485,822	\$ 24.89	265,261	\$ 26.93
Granted	292,000	16.19	222,208	22.47
Vested	(60,777)	(34.68)	—	—
Forfeited	(60,442)	(30.56)	(1,647)	(25.21)
Outstanding at End of Period	<u>656,603</u>	<u>\$ 19.60</u>	<u>485,822</u>	<u>\$ 24.89</u>

The estimated fair value of PSUs on grant date is determined using a Monte Carlo simulation. PSUs 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. All 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.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Restricted Common Stock

The following table summarizes the activity related to restricted common stock for the nine months ended September 30, 2024 and 2023:

	Nine Months Ended September 30,			
	2024		2023	
	Shares	Weighted Average Grant Date Fair Market Value	Shares	Weighted Average Grant Date Fair Market Value
Outstanding at Beginning of Period	—	\$ —	42,884	\$ 60.91
Granted	—	—	—	—
Vested	—	—	(42,884)	(60.91)
Forfeited	—	—	—	—
Outstanding at End of Period	—	\$ —	—	\$ —

The estimated fair value of restricted common stock on grant date is based on the closing market price of the Company's common stock on the NYSE on such date. The shares underlying restricted common stock grants to the Company's executive officers and other eligible individuals vested in three equal annual installments commencing on the first anniversary of the grant date, as long as such grantee complied with the terms and conditions of the applicable restricted stock award agreement.

Non-Cash Equity Compensation Expense

For the three and nine months ended September 30, 2024, the Company recognized compensation related to RSUs and PSUs granted pursuant to the Equity Incentive Plan and/or the Prior Plan of \$1.6 million and \$9.3 million, respectively. For the three and nine months ended September 30, 2023, the Company recognized compensation related to RSUs, PSUs and restricted common stock granted pursuant to the Equity Incentive Plan and/or the Prior Plan of \$1.6 million and \$9.4 million, respectively. As of September 30, 2024, the Company had \$5.7 million of total unrecognized compensation cost related to unvested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.6 years.

Note 21. Interest Income and Interest Expense

The following table presents the components of the Company's interest income and interest expense for the three and nine months ended September 30, 2024 and 2023.

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2024	2023	2024	2023
Interest income:				
Available-for-sale securities	\$ 101,067	\$ 107,827	\$ 300,883	\$ 309,060
Mortgage loans held-for-sale	25	2	29	7
Other	11,550	15,779	45,466	48,896
Total interest income	112,642	123,608	346,378	357,963
Interest expense:				
Repurchase agreements	123,552	129,298	355,982	350,599
Revolving credit facilities	26,873	32,526	87,026	87,866
Warehouse facilities	11	—	11	—
Term notes payable	—	6,634	12,426	22,516
Convertible senior notes	4,495	4,636	13,693	14,164
Total interest expense	154,931	173,094	469,138	475,145
Net interest (expense) income	\$ (42,289)	\$ (49,486)	\$ (122,760)	\$ (117,182)

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

Note 22. Income Taxes

For the nine months ended September 30, 2024 and 2023, 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 and nine months ended September 30, 2024, the Company recognized a benefit from income taxes of \$10.5 million and a provision for income taxes of \$15.7 million, respectively. The benefit recognized for the three months ended September 30, 2024 was primarily due to net losses recognized on MSR and operating expenses, offset by net income from MSR servicing and mortgage loan origination activities incurred in the Company's TRSs. The provision recognized during the nine months ended September 30, 2024 was primarily due to net income from MSR servicing and mortgage loan origination activities, offset by net losses recognized on MSR and operating expenses incurred in the Company's TRSs. During the three and nine months ended September 30, 2023, the Company recognized a provision for income taxes of \$36.4 million and \$52.2 million, respectively, which was primarily due to net income from MSR servicing activities and net gains recognized on MSR, offset by net losses recognized on derivative instruments and operating expenses incurred 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.

TWO HARBORS INVESTMENT CORP.
Notes to the Condensed Consolidated Financial Statements (unaudited)
Note 23. 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 nine months ended September 30, 2024 and 2023.

(in thousands, except share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Basic (Loss) Earnings Per Share:				
Net (loss) income	\$ (238,485)	\$ 306,192	\$ 21,439	\$ 326,829
Dividends on preferred stock	(11,784)	(12,115)	(35,352)	(36,595)
Gain on repurchase and retirement of preferred stock	—	—	644	2,454
Dividends and undistributed earnings allocated to participating restricted stock units	(303)	(1,895)	(940)	(1,936)
Net (loss) income attributable to common stockholders, basic	\$ (250,572)	\$ 292,182	\$ (14,209)	\$ 290,752
Basic weighted average common shares	103,635,455	96,176,287	103,531,431	95,059,856
Basic (loss) earnings per weighted average common share	\$ (2.42)	\$ 3.04	\$ (0.14)	\$ 3.06
Diluted (Loss) Earnings Per Share:				
Net (loss) income attributable to common stockholders, basic	\$ (250,572)	\$ 292,182	\$ (14,209)	\$ 290,752
Reallocation impact of undistributed earnings to participating restricted stock units	—	117	—	5
Interest expense attributable to convertible notes	—	4,636	—	14,164
Net (loss) income attributable to common stockholders, diluted	\$ (250,572)	\$ 296,935	\$ (14,209)	\$ 304,921
Basic weighted average common shares	103,635,455	96,176,287	103,531,431	95,059,856
Effect of dilutive shares issued in an assumed vesting of performance share units	—	241,752	—	316,447
Effect of dilutive shares issued in an assumed conversion	—	9,210,091	—	9,472,715
Diluted weighted average common shares	103,635,455	105,628,130	103,531,431	104,849,018
Diluted (loss) earnings per weighted average common share	\$ (2.42)	\$ 2.81	\$ (0.14)	\$ 2.91

For the three and nine months ended September 30, 2024, excluded from the calculation of diluted earnings per share was the effect of adding undistributed earnings reallocated to 687,140 and 731,953 weighted average participating RSUs, respectively, as their inclusion would have been antidilutive. For the three and nine months ended September 30, 2023, participating RSUs were included in the calculations of basic and diluted earnings per share under the two-class method, as it was more dilutive than the alternative treasury stock method.

For the three and nine months ended September 30, 2024, excluded from the calculation of diluted earnings per share was the effect of adding 424,979 and 454,588 weighted average common share equivalents, respectively, related to the assumed vesting of outstanding PSUs, as their inclusion would have been antidilutive. For the three and nine months ended September 30, 2023, the assumed vesting of outstanding PSUs was included in the calculation of diluted earnings per share under the two-class method, as it was more dilutive than the alternative treasury stock method.

For the three and nine months ended September 30, 2024, excluded from the calculation of diluted earnings per share was the effect of adding back \$4.5 million and \$13.7 million of interest expense and 8,871,339 and 9,108,945 weighted average common share equivalents, respectively, related to the assumed conversion of the Company's convertible senior notes, as their inclusion would have been antidilutive. For the three and nine months ended September 30, 2023, the assumed conversion of the Company's convertible senior notes was included in the calculation of diluted earnings per share under the if-converted method.

TWO HARBORS INVESTMENT CORP.

Notes to the Condensed Consolidated Financial Statements (unaudited)

Note 24. Segment Reporting

The Company generally derives its revenues from its investment portfolio of MSR and Agency RMBS, which includes servicing fee income, float income, ancillary and other fee income, and interest income, net of premium amortization and discount accretion, and mortgage loan origination activities established primarily as a MSR portfolio defense strategy. The Company's investment portfolio is subject to market risks, primarily interest rate risk, basis risk and prepayment risk. Management seeks to offset a portion of its Agency pool market value exposure through its investment in MSR and interest-only Agency RMBS. The Company's strategy of pairing Agency RMBS with MSR, with a focus on managing various associated risks, including interest rate, basis, prepayment, and credit and financing risk, is intended to generate more stable performance, relative to an investment portfolio of Agency RMBS without MSR, across changing market environments.

The Company's investment portfolio is managed as a whole and resources are allocated and financial performance is assessed by the Company's Chief Investment Officer, its chief operating decision maker, or the CODM, based on total assets reported on the consolidated balance sheet and comprehensive income (loss) reported on the consolidated statement of comprehensive income (loss). The Company's CODM views consolidated expense information related to interest expenses, compensation and benefits, other operating expenses and tax expenses to be significant. Consolidated comprehensive income (loss) is also used by the CODM to monitor actual results and benchmarking to that of its peers, the results of which are used to establish management's compensation. Investment and hedging decisions are assessed collectively by the CODM, based on the inputs discussed above. Accordingly, the Company consists of a single operating and reportable segment and the condensed consolidated financial statements and notes thereto are presented as a single reportable segment.

Note 25. Subsequent Events

Events subsequent to September 30, 2024 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, 2023.

General

We are a Maryland corporation that invests in, finances and manages MSR and Agency RMBS, and, through our operational platform, RoundPoint Mortgage Servicing LLC, or RoundPoint, we are one of the largest servicers of conventional loans in the country. We are structured as an internally-managed REIT and our common stock is listed on the NYSE under the symbol "TWO". We seek to leverage our core competencies of understanding and managing interest rate and prepayment risk to invest in our portfolio of MSR and Agency RMBS. Our objective is to deliver more stable performance, relative to RMBS portfolios without MSR, across changing market environments, and we are acutely focused on creating sustainable stockholder value over the long term.

Effective September 30, 2023, one of our wholly owned subsidiaries, TH MSR Holdings LLC (formerly Matrix Financial Services Corporation), acquired RoundPoint from Freedom Mortgage Corporation after the completion of customary closing conditions and receiving the required regulatory and GSE approvals. Upon closing, all servicing and origination licenses and operational capabilities remained with RoundPoint, and RoundPoint became a wholly owned subsidiary of TH MSR Holdings. Management believes this acquisition will add value for stakeholders of Two Harbors through cost savings achieved by bringing the servicing of our MSR portfolio in-house, greater control over our MSR portfolio and the associated cash flows, and the ability to participate more fully in the mortgage finance space as opportunities arise.

TH MSR Holdings holds the requisite approvals from Fannie Mae and Freddie Mac to own and manage MSR, which represent a contractual right to control the servicing of a mortgage loan, the obligation to service the loan in accordance with applicable laws and requirements and the right to collect a fee for the performance of servicing activities, such as collecting principal and interest from a borrower and distributing those payments to the owner of the loan. TH MSR Holdings acquires MSR from third-party originators through flow and bulk purchases, as well as through the recapture of MSR on loans in its MSR portfolio that refinance. TH MSR Holdings does not directly service mortgage loans; instead, it engages its wholly owned subsidiary, RoundPoint, to handle substantially all servicing functions for the mortgage loans underlying our MSR. Our MSR business leverages our core competencies in prepayment and interest rate risk analytics, and the MSR assets may provide offsetting risks to our Agency RMBS, hedging both interest rate and mortgage spread risk.

RoundPoint has approvals from Fannie Mae and Freddie Mac to service residential mortgage loans, and services mortgage loans underlying TH MSR Holdings' MSR as well as MSR owned by third parties. Late in the second quarter, RoundPoint began operating its in-house, direct-to-consumer originations platform, which was established primarily as a MSR portfolio defense strategy to retain or recapture existing borrowers by providing them with competitive refinance and purchase mortgage options. The originations platform also originates loans for new borrowers that do not currently have a mortgage loan serviced by RoundPoint and also brokers second lien loans to our borrowers. For our own MSR portfolio, adding new or recaptured MSR through our origination platform is intended to hedge faster than expected MSR prepayment speeds in a refinance environment, and requires less capital relative to acquiring MSR through flow and bulk purchases from third-party originators. In addition, origination activities are generally counter-cyclical to MSR, which provides supplementary sources of profitability to our stockholders while also hedging our MSR. RoundPoint also intends to offer a suite of ancillary and home equity products to our customers, including second lien mortgage loans.

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, or Ginnie Mae mortgage pass-through certificates, which are backed by the guarantee of the U.S. government. The majority of our Agency RMBS portfolio is comprised of whole pool certificates.

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

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. Certain of our subsidiaries have obtained the requisite licenses and approvals to own and manage MSR and to originate and directly service residential mortgage loans.

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, 2023, 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;
- 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 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 we have pursued or may in the future pursue;
- our ability to recognize the benefits of our acquisition of RoundPoint and to manage the risks associated with operating a mortgage loan servicer and originator;
- our decision to terminate our Management Agreement with PRCM Advisers LLC and the ongoing litigation 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 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 subsidiaries;
- 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.

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, and mortgage loans held-for-sale. Net interest income, as well as our servicing income, net of servicing costs, 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.

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 income (loss) are significantly affected by fluctuations in market prices. At September 30, 2024, approximately 88.5% of our total assets, or \$11.4 billion, consisted of financial instruments recorded at fair value. See Note 12 - *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 AFS securities for which we have elected the fair value option, is recorded as a component of accumulated other comprehensive loss and does not impact our reported income (loss) for U.S. GAAP purposes, or GAAP net income (loss). However, 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 and swaption agreements and certain other derivative instruments (*i.e.*, Agency to-be-announced securities, or TBAs, options on TBAs, futures, options on futures, inverse interest-only securities, interest rate lock commitments and forward loan sale commitments), which are accounted for as derivative trading instruments under U.S. GAAP, fair value option elected AFS securities, MSR and mortgage loans held-for-sale.

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 MSR and Agency RMBS 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 Agency P&I RMBS, and generally receive multiple broker or vendor quotes on all other securities, including interest-only and inverse interest-only Agency RMBS. We also receive multiple 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 servicing fee, ancillary income, and earnings rate on escrow as observable inputs. Unobservable or model-driven inputs include forecast per loan annual cost to service, 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 on available-for-sale securities not accounted for under the fair value option, any economic effect of this would be reflected in accumulated other comprehensive loss.

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 September 30, 2024, 22.4% of our total assets were classified as Level 3 fair value assets.

Critical Accounting Estimates

The preparation of financial statements in accordance with U.S. GAAP requires us to make certain judgments and assumptions, based on information available at the time of our preparation of the financial statements, in determining accounting estimates used in preparation of the statements. Accounting estimates are considered critical if the estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made and if different estimates reasonably could have been used in the reporting period or changes in the accounting estimate are reasonably likely to occur from period to period that would have a material impact on our financial condition, results of operations or cash flows. Our significant accounting policies are described in Note 2 to the consolidated financial statements, included under Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023. Our most critical accounting policies involve our fair valuation of AFS securities, MSR and derivative instruments.

The methods used by us to estimate fair value for AFS securities, MSR and derivative instruments may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair value. Furthermore, while we believe that our valuation methods are appropriate and consistent with other market participants, the use of different methodologies, or assumptions, to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date. We use prices obtained from third-party pricing vendors or broker quotes deemed indicative of market activity and current as of the measurement date, which in periods of market dislocation, may have reduced transparency. For more information on our fair value measurements, see Note 12 - *Fair Value* to the condensed consolidated financial statements, included under Item 1 of this Quarterly Report on Form 10-Q. Additionally, the key economic assumptions and sensitivity of the fair value of MSR to immediate adverse changes in these assumptions are presented in Note 6 - *Servicing Activities* to the condensed consolidated financial statements, included under Item 1 of this Quarterly Report on Form 10-Q.

Market Conditions and Outlook

Interest rates fell and the yield curve steepened in the third quarter of 2024 with the Federal Reserve, or the Fed, cutting rates by 50 basis points at their September 2024 meeting. Reports on inflation showed further progress towards the Fed's two percent target and signs of gradual cooling of the labor market gave the Fed enough evidence to cut rates for the first time in this cycle. Prior to the September meeting, Fed Chairman Jerome Powell had characterized rates as being clearly restrictive, and a 50 basis point cut, in Powell's words, was "a good strong start" in getting rates back to neutral in order to avoid a rapid deterioration in the labor market. Updated Fed projections showed another 50 basis points in cuts for 2024 (for a total of 100 basis points), followed by another 100 basis points in 2025. At the start of the third quarter, market expectations were for 50 basis points in cuts for all of 2024, marking another quarter of rapidly changing forecasts for the short-end of the yield curve. Ultimately, the 10-year Treasury yield finished the quarter 62 basis points lower at 3.75% while the 2-year Treasury yield fell by 111 basis points to 3.64%, resulting in the first positively sloped curve between 2-year and 10-year Treasury notes since 2022.

Against a backdrop of the Fed guiding the economy towards a soft landing scenario together with lower interest rates, risk assets performed well over the quarter. The S&P 500 was higher by about 5.5%, and with interest rates falling and the yield curve steepening, demand remained high for fixed-income assets. Our preferred implied volatility gauge, 2-year options on 10-year rates, decreased from 104 to 94 basis points on an annualized basis, close to its lowest level for 2024. The nominal spread on current coupon RMBS finished 20 basis points tighter at +107 to the Treasury curve, while the option-adjusted spread finished 6 basis points tighter at +18. Current coupon nominal spreads remained wide compared to the longer-term non-QE average of 83 basis points, while option-adjusted spreads finished tighter to the longer-term average of 29 basis points. Hedged mortgage performance varied across coupons, with longer duration lower coupons outperforming while higher coupons were negatively impacted by the rapid decline in rates and increased concerns over prepayments. With regard to supply, projected 2024 net supply of Agency RMBS is running at approximately a \$200 billion pace, similar to 2023.

Primary mortgage rates dropped about 75 basis points in the third quarter to just above 6%, which garnered attention from the media and spurred an uptick in prepayments for high coupon originations from the last two years. Overall constant prepayment rates, or CPRs, for 30-year Agency RMBS increased 8% quarter-on-quarter to 6.5% CPR in the October 2024 report (reflecting September 2024 activity). Prepayments have begun to display a bifurcated pattern: they are speeding up for those newer high coupon mortgages but they continue to be very slow for the locked-in, low coupon COVID-era borrowers. Because of this, our MSR portfolio has not noticeably responded to the decrease in mortgage rates as the quarterly prepayment rate was unchanged at 5.3%.

The housing market remains in a state of gridlock. Exiting home sales have slowed, running behind the pace of 2023 and projected to be the weakest year in almost two decades. Inventory has begun to climb off of very low levels and homes are sitting on the market longer. Many sellers withdraw listings that don't sell and are content to keep their low rate mortgages rather than sell for a price below market. Home prices appear to be headed toward a small gain for 2024 compared to 2023.

RMBS funding markets remained stable and liquid throughout the quarter with ample financing being readily available. Spreads for repurchase agreements widened with financing for RMBS between SOFR plus 24 to 28 basis points. The widening was primarily due to the uncertainty of the Fed's actions in September. At quarter-end, bank balance sheets were temporarily tight owing to a number of factors that included settlements of auctioned Treasury securities as well as banks managing quarter-end reporting metrics. Post quarter-end, liquidity and balance sheet room quickly returned easing financing conditions. Similar effects may occur at year-end and we will seek to minimize our exposure to year-end funding pressures.

The volume of MSR sales continued to normalize from the record volumes of the past few years. This quarter brought approximately \$40 billion UPB of supply, bringing the year-to-date total to about \$305 billion, about 70% of the pace of 2023. Traded prices have held steady with the supply being easily absorbed by a deep pool of buyers including both banks and non-banks. The number of banks offering MSR financing has broadened and the increased competition has led to a compression in financing spreads. Additionally, we saw the first MSR financing securitizations of the past two years as spreads for the securities returned to sub-300 basis point spreads to SOFR.

Looking ahead, we continue to see attractive levered returns on our portfolio composed of Agency MSR and RMBS. Despite the recent tightening of RMBS spreads, nominal spreads are still wider than long-term history, reflecting continued higher than average implied volatility. On an option-adjusted spread basis, RMBS look less compelling, which indicates that spread tightening will need to be driven by increased demand (most likely by depository institutions) and/or further declines in volatility. Both of these factors will be most influenced by the quantity and timing of more cuts in rates by the Fed, which themselves remain data dependent. We expect that the MSR market will continue to be stable and well supported given the overall demand for the asset class. Despite mortgage rates declining, our MSR portfolio, with an average mortgage rate of 3.43% remains far out of the money with only 1% of the underlying mortgage loans 50 basis points or more below current mortgage rates. Barring a significant decline in mortgage rates, housing turnover will remain the key driver for prepayments of our MSR. Turnover typically slows in the fall and winter months, hence we expect prepayment speeds to decline modestly over the fourth quarter, providing a tailwind for our MSR performance. For the small population of loans that can be refinanced, RoundPoint is now offering refinance opportunities to mortgagors on our platform which should mitigate the impact of rising prepayment rates and protect the MSR's asset value.

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

(dollars in thousands)	September 30, 2024		December 31, 2023			
Agency RMBS	\$	8,514,041	74.7 %	\$	8,335,245	73.2 %
Mortgage servicing rights		2,884,304	25.3 %		3,052,016	26.8 %
Other		3,859	— %		4,150	— %
Total	\$	<u>11,402,204</u>		\$	<u>11,391,411</u>	

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. Average prepayment speeds for our overall portfolio remained relatively consistent with the prior quarter due primarily to the bifurcated pattern discussed above. In addition to changes in interest rates, changes in home price performance, key employment metrics and government programs, among other macroeconomic factors, can affect prepayment speeds. We believe our active portfolio management approach, including our asset selection process, positions us to respond to a variety of market scenarios. Although we are unable to predict future interest rate movements, our strategy of pairing MSR with Agency RMBS, with a focus on managing various associated risks, including interest rate, prepayment, credit, mortgage spread and financing risk, is intended to generate stable performance, relative to RMBS portfolios without MSR, with a low level of sensitivity to changes in the yield curve, prepayments and interest rate cycles.

The following table provides the three-month average CPR experienced by our Agency RMBS and MSR during the three months ended September 30, 2024, and the four immediately preceding quarters:

	Three Months Ended				
	September 30, 2024	June 30, 2024	March 31, 2024	December 31, 2023	September 30, 2023
Agency RMBS	7.2 %	7.3 %	4.8 %	5.2 %	6.5 %
Mortgage servicing rights	5.3 %	5.3 %	3.9 %	3.8 %	4.9 %

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 \$300,000 in initial principal balance), higher LTVs (securities collateralized by loans with LTVs greater than or equal to 80%), certain geographic concentrations, loans secured by investor-owned properties 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 portfolio 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. Accordingly, our 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:

September 30, 2024										
(dollars in thousands)	Principal/ Current Face	Carrying Value	Weighted Average CPR ⁽¹⁾	% 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%	\$ —	\$ —	— %	— %	— %	\$ —	\$ —	—		—
3.0%	225,307	203,422	6.3 %	85.6 %	3.7 %	200,225	—			35
3.5%	61,984	57,791	3.4 %	71.8 %	4.2 %	54,562	—			33
4.0%	598,568	577,359	6.3 %	100.0 %	4.6 %	590,109	—			52
4.5%	2,176,867	2,160,730	7.0 %	100.0 %	5.1 %	2,225,267	—			49
5.0%	1,800,755	1,813,816	6.3 %	100.0 %	5.8 %	1,834,228	—			30
5.5%	1,170,088	1,190,085	5.2 %	99.8 %	6.4 %	1,180,221	—			27
6.0%	1,091,580	1,122,918	14.0 %	96.0 %	6.9 %	1,115,566	—			23
≥ 6.5%	751,112	782,336	7.5 %	100.0 %	7.5 %	772,628	—			8
	7,876,261	7,908,457	7.6 %	98.8 %	5.9 %	7,972,806	—			33
Other P&I	560,987	569,874	0.1 %	— %	5.4 %	557,577	—			12
Interest-only	501,846	23,912	7.0 %	— %	5.4 %	29,209	(2,546)			169
Agency Derivatives	142,011	11,798	8.3 %	— %	6.6 %	15,161	—			233
Total Agency RMBS	<u>\$ 9,081,105</u>	<u>\$ 8,514,041</u>		<u>91.8 %</u>		<u>\$ 8,574,753</u>	<u>\$ (2,546)</u>			

	December 31, 2023								
(dollars in thousands)	Principal/ Current Face	Carrying Value	Weighted Average CPR ⁽¹⁾	% 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%	\$ 420,720	\$ 359,801	3.6 %	— %	3.3 %	\$ 359,188	\$ —	30	
3.0%	237,874	211,852	2.6 %	85.4 %	3.7 %	210,850	—	26	
3.5%	125,647	115,675	2.0 %	84.9 %	4.3 %	113,092	—	22	
4.0%	503,451	479,715	5.2 %	100.0 %	4.6 %	508,294	—	49	
4.5%	2,331,021	2,281,535	5.2 %	100.0 %	5.1 %	2,384,460	—	40	
5.0%	2,084,422	2,078,510	3.6 %	100.0 %	5.8 %	2,125,950	—	21	
5.5%	1,358,288	1,370,920	5.4 %	99.8 %	6.4 %	1,371,534	—	18	
6.0%	779,560	795,963	6.1 %	99.8 %	6.9 %	799,184	—	17	
≥ 6.5%	8,448	8,853	7.4 %	97.8 %	7.8 %	9,084	—	249	
	7,849,431	7,702,824	4.7 %	94.7 %	5.5 %	7,881,636	—	28	
Other P&I	572,302	569,077	0.8 %	— %	5.3 %	564,336	—	9	
Interest-only	840,723	51,098	5.3 %	— %	4.3 %	58,567	(3,619)	100	
Agency Derivatives	163,735	12,246	8.0 %	— %	6.7 %	17,814	—	225	
Total Agency RMBS	\$ 9,426,191	\$ 8,335,245		87.5 %		\$ 8,522,353	\$ (3,619)		

(1) Weighted average actual one-month CPR released at the beginning of the following month based on RMBS held as of the preceding month-end.

Our MSR portfolio offers attractive spreads and has many risk reducing characteristics when paired with our Agency RMBS portfolio. The following table summarizes activity related to the unpaid principal balance, or UPB, of loans underlying our MSR portfolio for the three months ended September 30, 2024, and the four immediately preceding quarters:

(in thousands)	Three Months Ended				
	September 30, 2024	June 30, 2024	March 31, 2024	December 31, 2023	September 30, 2023
UPB at beginning of period	\$ 209,389,409	\$ 213,596,880	\$ 215,647,172	\$ 218,662,270	\$ 222,622,177
Purchases of mortgage servicing rights	3,287,735	327,750	3,116,814	829,133	472,154
Origination and recapture of mortgage servicing rights	17,359	—	—	—	—
Sales of mortgage servicing rights	(6,247,585)	—	(1,430,294)	(61,612)	—
Scheduled payments	(1,640,591)	(1,639,278)	(1,645,501)	(1,639,884)	(1,639,871)
Prepaid	(2,779,533)	(2,872,850)	(2,110,763)	(2,127,341)	(2,786,904)
Other changes	25,390	(23,093)	19,452	(15,394)	(5,286)
UPB at end of period	\$ 202,052,184	\$ 209,389,409	\$ 213,596,880	\$ 215,647,172	\$ 218,662,270

Counterparty exposure and leverage ratio

We monitor counterparty exposure amongst 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 September 30, 2024, we had entered into repurchase agreements with 36 counterparties, 19 of which had outstanding balances. In addition, we held short- and long-term borrowings under revolving credit facilities, warehouse facilities and unsecured convertible senior notes. As of September 30, 2024, the debt-to-equity ratio funding our Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, which includes unsecured borrowings under convertible senior notes, was 4.6:1.0.

As of September 30, 2024, we held \$522.6 million in cash and cash equivalents, approximately \$4.8 million of unpledged Agency RMBS and \$3.5 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on our unpledged securities of approximately \$6.1 million. As of September 30, 2024, we held approximately \$19.6 million of unpledged MSR and \$5.4 million of unpledged servicing advances. Overall, on September 30, 2024, we had \$60.1 million unused committed and \$550.0 million unused uncommitted borrowing capacity on MSR financing facilities, and \$90.7 million in unused committed borrowing capacity on servicing advance financing facilities. As of September 30, 2024, all of our mortgage loans were pledged for financing and we had \$4.0 million unused committed borrowing capacity on our warehouse facilities. 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.

Summary of Results of Operations and Financial Condition

Our book value per common share for U.S. GAAP purposes was \$14.93 at September 30, 2024, a decrease from \$15.19 per common share at June 30, 2024, and a decrease from \$15.21 per common share at December 31, 2023. The decline in book value for both the three and nine months ended September 30, 2024 was primarily driven by losses recognized on MSR and derivatives and dividends declared, offset by net servicing income and unrealized gains recognized on AFS securities. Our comprehensive income attributable to common stockholders was \$19.4 million and comprehensive loss attributable to common stockholders was \$34.7 million for the three and nine months ended September 30, 2024, respectively, as compared to comprehensive loss attributable to common stockholders of \$56.8 million and \$34.1 million for the three and nine months ended September 30, 2023, respectively.

The following table presents the components of our comprehensive income (loss) for the three and nine months ended September 30, 2024 and 2023:

(in thousands, except share data)

Income Statement Data:	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2024	2023	2024	2023
	(unaudited)		(unaudited)	
Net interest income (expense):				
Interest income	\$ 112,642	\$ 123,608	\$ 346,378	\$ 357,963
Interest expense	154,931	173,094	469,138	475,145
Net interest expense	(42,289)	(49,486)	(122,760)	(117,182)
Net servicing income:				
Servicing income	171,732	178,625	514,080	507,168
Servicing costs	3,900	29,903	15,494	83,459
Net servicing income	167,832	148,722	498,586	423,709
Other (loss) income:				
Gain (loss) on investment securities	1,383	(471)	(32,029)	12,499
(Loss) gain on servicing asset	(133,349)	67,369	(145,194)	60,969
(Loss) gain on interest rate swap and swaption agreements	(172,263)	111,909	(51,741)	86,288
(Loss) gain on other derivative instruments	(32,722)	86,212	14,127	(22,398)
Gain on mortgage loans held-for-sale	927	—	924	—
Other income	123	2,903	349	5,103
Total other (loss) income	(335,901)	267,922	(213,564)	142,461
Expenses:				
Compensation and benefits	20,180	8,617	67,953	31,568
Other operating expenses	18,405	15,984	57,156	38,354
Total expenses	38,585	24,601	125,109	69,922
(Loss) income before income taxes	(248,943)	342,557	37,153	379,066
(Benefit from) provision for income taxes	(10,458)	36,365	15,714	52,237
Net (loss) income	(238,485)	306,192	21,439	326,829
Dividends on preferred stock	(11,784)	(12,115)	(35,352)	(36,595)
Gain on repurchase and retirement of preferred stock	—	—	644	2,454
Net (loss) income attributable to common stockholders	\$ (250,269)	\$ 294,077	\$ (13,269)	\$ 292,688
Basic (loss) earnings per weighted average common share	\$ (2.42)	\$ 3.04	\$ (0.14)	\$ 3.06
Diluted (loss) earnings per weighted average common share	\$ (2.42)	\$ 2.81	\$ (0.14)	\$ 2.91
Dividends declared per common share	\$ 0.45	\$ 0.45	\$ 1.35	\$ 1.50
Comprehensive income (loss):				
Net (loss) income	\$ (238,485)	\$ 306,192	\$ 21,439	\$ 326,829
Other comprehensive income (loss):				
Unrealized gain (loss) on available-for-sale securities	269,621	(350,922)	122,470	(381,297)
Other comprehensive income (loss)	269,621	(350,922)	122,470	(381,297)
Comprehensive income (loss)	31,136	(44,730)	143,909	(54,468)
Dividends on preferred stock	(11,784)	(12,115)	(35,352)	(36,595)
Gain on repurchase and retirement of preferred stock	—	—	644	2,454
Comprehensive income (loss) attributable to common stockholders	\$ 19,352	\$ (56,845)	\$ 109,201	\$ (88,609)

(in thousands)

Balance Sheet Data:	September 30, 2024	December 31, 2023
Available-for-sale securities	\$ 8,506,102	\$ 8,327,149
Mortgage servicing rights	\$ 2,884,304	\$ 3,052,016
Total assets	\$ 12,887,842	\$ 13,138,800
Repurchase agreements	\$ 8,763,400	\$ 8,020,207
Revolving credit facilities	\$ 999,171	\$ 1,329,171
Term notes payable	\$ —	\$ 295,271
Convertible senior notes	\$ 259,815	\$ 268,582
Total stockholders' equity	\$ 2,169,374	\$ 2,203,390

Results of Operations

Interest Income

Interest income decreased from \$123.6 million and \$358.0 million for the three and nine months ended September 30, 2023, respectively, to \$112.6 million and \$346.4 million for the same periods in 2024 due to a decrease in Agency RMBS portfolio size, offset by lower amortization recognized on Agency RMBS due to lower unamortized premium and higher interest on reverse repurchase agreements and cash balances as a result of the higher interest rate environment.

Interest Expense

Interest expense decreased from \$173.1 million and \$475.1 million for the three and nine months ended September 30, 2023 to \$154.9 million and \$469.1 million for the same periods in 2024 due to lower borrowing balances on both AFS securities and MSR, offset by increases in interest rates throughout the first half of 2024.

Net Interest Income

The following tables present the components of interest income and average net asset yield earned by asset type, the components of interest expense and average cost of funds on borrowings incurred by collateral type, and net interest income and average net interest spread for the three and nine months ended September 30, 2024 and 2023:

(dollars in thousands)	Three Months Ended September 30, 2024			Nine Months Ended September 30, 2024		
	Average Balance ⁽¹⁾	Interest Income/Expense	Net Yield/Cost of Funds	Average Balance ⁽¹⁾	Interest Income/Expense	Net Yield/Cost of Funds
Interest-earning assets:						
Available-for-sale securities	\$ 8,394,436	\$ 101,067	4.8 %	\$ 8,419,589	\$ 300,883	4.8 %
Mortgage loans held-for-sale	1,468	25	6.8 %	684	29	5.7 %
Reverse repurchase agreements	354,230	4,780	5.4 %	350,063	14,139	5.4 %
Other		6,770			31,327	
Total interest income/net asset yield	\$ 8,750,134	\$ 112,642	5.1 %	\$ 8,770,336	\$ 346,378	5.3 %
Interest-bearing liabilities:						
Borrowings collateralized by:						
Available-for-sale securities	\$ 7,954,332	\$ 109,966	5.5 %	\$ 7,891,809	\$ 329,429	5.6 %
Agency Derivatives ⁽²⁾	5,408	82	6.1 %	6,587	303	6.1 %
Mortgage servicing rights and advances ⁽³⁾	1,808,411	40,370	8.9 %	1,957,477	125,683	8.6 %
Mortgage loans held-for-sale	497	11	8.9 %	166	11	8.8 %
U.S. Treasuries ⁽⁴⁾	—	—	— %	—	—	— %
Unsecured borrowings:						
Convertible senior notes	259,677	4,495	6.9 %	264,813	13,693	6.9 %
Other		7			19	
Total interest expense/cost of funds	\$ 10,028,325	\$ 154,931	6.2 %	\$ 10,120,852	\$ 469,138	6.2 %
Net interest expense/spread		\$ (42,289)	(1.1)%		\$ (122,760)	(0.9)%

(dollars in thousands)	Three Months Ended September 30, 2023			Nine Months Ended September 30, 2023		
	Average Balance	Interest Income/Expense	Net Yield/Cost of Funds	Average Balance	Interest Income/Expense	Net Yield/Cost of Funds
Interest-earning assets:						
Available-for-sale securities	\$ 9,284,380	\$ 107,827	4.6 %	\$ 8,964,101	\$ 309,060	4.6 %
Mortgage loans held-for-sale	313	2	2.6 %	306	7	3.1 %
Reverse repurchase agreements	284,142	3,833	5.4 %	464,744	16,050	4.6 %
Other		11,946			32,846	
Total interest income/net asset yield	\$ 9,568,835	\$ 123,608	5.2 %	\$ 9,429,151	\$ 357,963	5.1 %
Interest-bearing liabilities:						
Borrowings collateralized by:						
Available-for-sale securities	\$ 8,757,647	\$ 122,746	5.6 %	\$ 8,490,795	\$ 325,859	5.1 %
Agency Derivatives ⁽²⁾	11,679	173	5.9 %	12,146	507	5.6 %
Mortgage servicing rights and advances ⁽³⁾	2,021,279	45,539	9.0 %	1,967,497	127,986	8.7 %
Mortgage loans held-for-sale	—	—	— %	—	—	— %
U.S. Treasuries ⁽⁴⁾	—	—	— %	192,060	6,629	4.6 %
Unsecured borrowings:						
Convertible senior notes	268,043	4,636	6.9 %	274,508	14,164	6.9 %
Other		—			—	
Total interest expense/cost of funds	\$ 11,058,648	\$ 173,094	6.3 %	\$ 10,937,006	\$ 475,145	5.8 %
Net interest income/spread		\$ (49,486)	(1.1)%		\$ (117,182)	(0.7)%

- (1) Average asset balance represents average amortized cost on AFS securities and average unpaid principal balance on mortgage loans held-for-sale and reverse repurchase agreements.
- (2) Yields on Agency Derivatives not shown as interest income is included in (loss) gain on other derivative instruments in the condensed consolidated statements of comprehensive income (loss).
- (3) Yields on mortgage servicing rights and advances not shown as these assets do not earn interest.
- (4) U.S. Treasury securities effectively borrowed under reverse repurchase agreements.

The increase in yields on AFS securities for the three and nine months ended September 30, 2024, as compared to the same periods in 2023 was driven by net purchases of AFS securities with lower unamortized premiums. The decrease in cost of funds associated with the financing of AFS securities for the three months ended September 30, 2024, as compared to the same period in 2023, was due to declining interest rates. The increase in cost of funds associated with the financing of AFS securities for the nine months ended September 30, 2024, as compared to the same period in 2023, was due to rising interest rates throughout the first half of 2024.

Yields on reverse repurchase agreements remained consistent for the three months ended September 30, 2024, as compared to the same period in 2023. The increase in yields on reverse repurchase agreements for the nine months ended September 30, 2024, as compared to the same period in 2023, was the result of rising interest rates throughout the first half of 2024. However, for the nine months ended September 30, 2023, these yields were offset by the cost of financing the associated repurchase agreements collateralized by U.S. Treasury securities. We did not hold any repurchase agreements collateralized by U.S. Treasury securities during the three and nine months ended September 30, 2024 or the three months ended September 30, 2023.

The slight decrease in cost of funds associated with the financing of MSR assets and related servicing advance obligations for the three and nine months ended September 30, 2024, as compared to the same periods in 2023, was primarily the result of a greater portion of MSR financing from repurchase agreements versus revolving credit facilities. Our repurchase agreements, on average, carry lower floating rate spreads than our revolving credit facilities. We have one revolving credit facility in place to finance our servicing advance obligations, which are included in other assets on our condensed consolidated balance sheets.

Late in the second quarter of 2024, RoundPoint began operating its in-house, direct-to-consumer originations platform. Prior to the launch of originations, our mortgage loans held-for-sale consisted of a handful of loans purchased from the collateral underlying our MSR, which were not pledged for any form of financing.

The cost of funds associated with our convertible senior notes for the three and nine months ended September 30, 2024, as compared to the same periods in 2023, was consistent.

The following table presents 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 nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Gross yield/stated coupon	5.0 %	4.9 %	4.9 %	4.9 %
Net (premium amortization) discount accretion	(0.2)%	(0.3)%	(0.1)%	(0.3)%
Net yield	4.8 %	4.6 %	4.8 %	4.6 %

Net Servicing Income

The following table presents the components of net servicing income for the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Servicing fee income	\$ 126,597	\$ 141,816	\$ 400,278	\$ 415,423
Ancillary and other fee income	3,928	476	12,220	2,236
Float income	41,207	36,333	101,582	89,509
Total servicing income	171,732	178,625	514,080	507,168
Total servicing costs	3,900	29,903	15,494	83,459
Net servicing income	\$ 167,832	\$ 148,722	\$ 498,586	\$ 423,709

The decrease in total servicing income for the three months ended September 30, 2024, as compared to the same period in 2023, was primarily due to lower servicing fee income on a smaller MSR portfolio as a result of sales and runoff, offset by higher float income as a result of the higher interest rate environment and higher ancillary and other fee income as a result of the acquisition of RoundPoint. The increase in total servicing income for the nine months ended September 30, 2024, as compared to the same period in 2023, was primarily due to higher float income as a result of the higher interest rate environment and higher ancillary and other fee income as a result of the acquisition of RoundPoint, offset by lower servicing fee income on a smaller MSR portfolio as a result of sales and runoff.

Prior to the acquisition of RoundPoint, we did not directly service mortgage loans; instead, we contracted with appropriately licensed subservicers to handle substantially all servicing functions in the name of the subservicer for the mortgage loans underlying our MSR. These third-party subservicing costs and other servicing expenses directly related to our MSR portfolio are included within the servicing costs line item on our condensed consolidated statements of comprehensive income (loss). Post-acquisition, all servicing-related expenses incurred by RoundPoint as an operating company are included within the other operating expenses line item on our condensed consolidated statements of comprehensive income (loss). The decrease in servicing costs during the three and nine months ended September 30, 2024, as compared to the same periods in 2023, was the result of lower third-party subservicing fees due to the acquisition of RoundPoint.

Gain (Loss) On Investment Securities

The following table presents the components of gain (loss) on investment securities for the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Proceeds from sales	\$ 91,115	\$ 119,095	\$ 896,520	\$ 1,694,891
Amortized cost of securities sold	(91,503)	(118,999)	(929,064)	(1,730,866)
Total realized (losses) gains on sales	(388)	96	(32,544)	(35,975)
Reversal of (provision for) credit losses	276	98	25	217
Other	1,495	(665)	490	48,257
Gain (loss) on investment securities	\$ 1,383	\$ (471)	\$ (32,029)	\$ 12,499

In the ordinary course of our business, we make investment decisions and allocate capital in accordance with our views on the changing risk/reward dynamics in the market and in our portfolio. 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.

We use a discounted cash flow method to estimate and recognize an allowance for credit losses on AFS securities. 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 gain (loss) on investment securities).

The majority of the “other” component of gain (loss) on investment securities is related to changes in unrealized gains (losses) on certain AFS securities for which we have elected the fair value option. Fluctuations in this line item are primarily driven by the reclassification of unrealized gains and losses to realized gains and losses upon sale, as well as changes in fair value assumptions.

(Loss) Gain On Servicing Asset

The following table presents the components of (loss) gain on servicing asset for the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Changes in fair value due to changes in valuation inputs or assumptions used in the valuation model	\$ (93,828)	\$ 111,186	\$ 775	\$ 213,803
Changes in fair value due to realization of cash flows (runoff)	(62,481)	(63,999)	(174,239)	(172,177)
Gains on sales	22,960	20,182	28,270	19,343
(Loss) gain on servicing asset	\$ (133,349)	\$ 67,369	\$ (145,194)	\$ 60,969

The increase in loss (decrease in gain) on servicing asset for the three months ended September 30, 2024, as compared to the same period in 2023, was driven by unfavorable change in valuation assumptions used in the fair valuation of MSR, particularly faster prepayment speeds, offset by slightly lower portfolio run-off and higher realized gains on sales of MSR. The increase in loss (decrease in gain) on servicing asset for the nine months ended September 30, 2024, as compared to the same period in 2023, was driven by lower favorable change in valuation assumptions used in the fair valuation of MSR and slightly higher portfolio run-off, offset by higher realized gains on sales of MSR.

(Loss) Gain 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 nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Net interest spread	\$ 17,059	\$ 6,851	\$ 46,369	\$ 13,914
Early termination, agreement maturation and option expiration losses	(86,310)	(5,176)	(70,032)	(23,756)
Change in unrealized (loss) gain on interest rate swap and swaption agreements, at fair value	(103,012)	110,234	(28,078)	96,130
(Loss) gain on interest rate swap and swaption agreements	\$ (172,263)	\$ 111,909	\$ (51,741)	\$ 86,288

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 (OIS or SOFR) or a fixed interest rate and paying either a fixed interest rate or a floating interest rate (OIS or SOFR) 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. The change in fair value of interest rate swaps and swaptions during the three and nine months ended September 30, 2024 and 2023 was a result of changes to floating interest rates (OIS or SOFR), the swap curve and corresponding counterparty borrowing rates. Swaps and swaptions are used for purposes of hedging our interest rate exposure, and therefore, 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) generally offset a portion of the unrealized losses and gains recognized on our Agency RMBS AFS portfolio, which are recorded either directly to stockholders' equity through other comprehensive income (loss) or to gain (loss) on investment securities, in the case of certain AFS securities for which we have elected the fair value option.

(Loss) Gain 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, futures, options on futures, and inverse interest-only securities during the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2024	2023	2024	2023
TBAs	\$ 84,073	\$ (90,662)	\$ (2,438)	\$ (184,909)
Futures	(119,553)	179,697	16,061	166,533
Options on futures	—	(779)	(127)	(779)
Inverse interest-only securities	2,758	(2,044)	631	(3,243)
(Loss) gain on other derivative instruments	\$ (32,722)	\$ 86,212	\$ 14,127	\$ (22,398)

For further details regarding our use of derivative instruments and related activity, refer to Note 9 - *Derivative Instruments and Hedging Activities* to the condensed consolidated financial statements, included in this Quarterly Report on Form 10-Q.

Gain On Mortgage Loans Held-For-Sale

The following table provides a summary of the total net realized and unrealized gains (losses) recognized on mortgage loans held-for-sale and the related derivative instruments used to manage exposure to market risks primarily associated with fluctuations in interest rate risks related to our origination pipeline during the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2024	2023	2024	2023
Mortgage loans held-for-sale	\$ 420	\$ —	\$ 417	\$ —
Interest rate lock commitments	478	—	478	—
Forward mortgage loan sale commitments	29	—	29	—
Gain on mortgage loans held-for-sale	\$ 927	\$ —	\$ 924	\$ —

Late in the second quarter of 2024, RoundPoint began operating its in-house, direct-to-consumer originations platform. Prior to the launch of originations, our mortgage loans held-for-sale consisted of a handful of loans purchased from the collateral underlying our MSR.

Expenses

The following table presents the components of expenses for the three and nine months ended September 30, 2024 and 2023:

(dollars in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Compensation and benefits:				
Non-cash equity compensation expenses	\$ 1,610	\$ 1,576	\$ 9,336	\$ 9,363
All other compensation and benefits	18,570	7,041	58,617	22,205
Total compensation and benefits	\$ 20,180	\$ 8,617	\$ 67,953	\$ 31,568
Other operating expenses:				
Certain operating expenses ⁽¹⁾	\$ 101	\$ 10,396	\$ 675	\$ 22,948
All other operating expenses	18,304	5,588	56,481	15,406
Total other operating expenses	\$ 18,405	\$ 15,984	\$ 57,156	\$ 38,354
Annualized operating expense ratio	7.0 %	4.5 %	7.5 %	4.2 %
Annualized operating expense ratio, excluding non-cash equity compensation and certain operating expenses ⁽¹⁾	6.7 %	2.3 %	6.9 %	2.2 %

(1) Certain operating expenses predominantly consists of expenses incurred in connection with the Company's ongoing litigation with PRCM Advisers, as discussed within Note 18 to the condensed consolidated financial statements, included under Item 1 of this Quarterly Report on Form 10-Q. It also includes certain transaction expenses incurred in connection with the Company's acquisition of RoundPoint.

The increase in total operating expenses during the three and nine months ended September 30, 2024, as compared to the same periods in 2023, was driven by the addition of RoundPoint's compensation, benefits, operating and loan level expenses, offset by lower expenses incurred in connection with the Company's ongoing litigation with PRCM Advisers.

Income Taxes

During the three and nine months ended September 30, 2024, we recognized a benefit from income taxes of \$10.5 million and a provision for income taxes of \$15.7 million, respectively. The benefit recognized for the three months ended September 30, 2024 was primarily due to net losses recognized on MSR and operating expenses, offset by net income from MSR servicing and mortgage loan origination activities incurred in our TRSs. The provision recognized during the nine months ended September 30, 2024 was primarily due to net income from MSR servicing and mortgage loan origination activities, offset by net losses recognized on MSR and operating expenses incurred in our TRSs. During the three and nine months ended September 30, 2023, we recognized a provision for income taxes of \$36.4 million and \$52.2 million, respectively, which was primarily due to net income from MSR servicing activities and net gains recognized on MSR, offset by net losses recognized on derivative instruments and operating expenses incurred in our TRSs.

Other Comprehensive Income (Loss)

The following table provides a summary of the components of other comprehensive income (loss) during the three and nine months ended September 30, 2024 and 2023:

(in thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Unrealized gains (losses) on available-for-sale securities	\$ 267,864	\$ (350,922)	\$ 104,740	\$ (444,519)
Realized losses on sales of available-for-sale securities reclassified to gain (loss) on investment securities	1,757	—	17,730	63,222
Other comprehensive income (loss)	\$ 269,621	\$ (350,922)	\$ 122,470	\$ (381,297)

With our accounting treatment for AFS securities, unrealized fluctuations in the market values of AFS securities, excluding certain AFS securities for which we have elected the fair value option and securities with an allowance for credit losses, are recorded directly to stockholders' equity through other comprehensive income (loss). Additionally, we reclassify unrealized gains and losses on AFS securities in accumulated other comprehensive loss to net (loss) income upon the recognition of any realized gains and losses on sales as individual securities are sold. Fluctuations in other comprehensive income (loss) are driven by changes in fair value assumptions and the reclassification of unrealized gains and losses to realized gains and losses upon sale.

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 \$3.9 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, or Ginnie Mae mortgage pass-through certificates, which are backed by the guarantee of the U.S. government. The majority of our Agency RMBS portfolio is comprised of whole pool certificates.

The tables below summarize certain characteristics of our Agency RMBS AFS at September 30, 2024:

September 30, 2024									
(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	\$ 8,437,248	\$ 93,135	\$ 8,530,383	\$ —	\$ 67,110	\$ (119,162)	\$ 8,478,331	5.05 %	\$ 101.39
Interest-only securities	501,846	29,209	29,209	(2,546)	817	(3,568)	23,912	2.08 %	\$ 24.03
Total	<u>\$ 8,939,094</u>	<u>\$ 122,344</u>	<u>\$ 8,559,592</u>	<u>\$ (2,546)</u>	<u>\$ 67,927</u>	<u>\$ (122,730)</u>	<u>\$ 8,502,243</u>		

Mortgage Servicing Rights, at Fair Value

One of our wholly owned subsidiaries, TH MSR Holdings, 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. TH MSR Holdings acquires MSR from third-party originators through flow and bulk purchases, as well as through the recapture of MSR on loans in its MSR portfolio that refinance. As of September 30, 2024, our MSR had a fair market value of \$2.9 billion.

As of September 30, 2024, our MSR portfolio included MSR on 806,162 loans with an unpaid principal balance of approximately \$202.1 billion. The following table summarizes certain characteristics of the loans underlying our MSR by gross weighted average coupon rate types and ranges at September 30, 2024:

September 30, 2024										
(dollars in thousands)	Number of Loans	Unpaid Principal Balance	Weighted Average Gross Coupon Rate	Weighted Average Current Loan Size	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%	293,608	\$ 90,891,958	2.8 %	\$ 366	44	768	70.2 %	0.4 %	4.2 %	25.1
> 3.25 - 3.75%	141,377	35,969,775	3.4 %	323	57	753	72.9 %	0.9 %	5.4 %	25.2
> 3.75 - 4.25%	101,689	20,743,881	3.9 %	269	79	752	74.9 %	1.1 %	6.0 %	25.5
> 4.25 - 4.75%	56,951	10,322,842	4.4 %	260	77	739	75.7 %	1.8 %	6.4 %	25.3
> 4.75 - 5.25%	39,889	9,340,305	4.9 %	354	46	746	77.5 %	1.5 %	6.0 %	25.2
> 5.25%	47,196	14,626,142	6.0 %	416	24	750	76.9 %	2.1 %	8.9 %	26.9
	680,710	181,894,903	3.5 %	344	51	759	72.5 %	0.8 %	5.2 %	25.3
15-Year Fixed:										
≤ 2.25%	22,190	5,429,086	2.0 %	290	41	777	57.3 %	0.2 %	4.3 %	25.0
> 2.25 - 2.75%	37,253	7,311,967	2.4 %	243	44	772	58.2 %	0.2 %	5.0 %	25.0
> 2.75 - 3.25%	32,178	3,991,140	2.9 %	179	69	765	60.1 %	0.3 %	7.1 %	25.3
> 3.25 - 3.75%	17,941	1,621,428	3.4 %	140	82	756	62.7 %	0.4 %	8.5 %	25.4
> 3.75 - 4.25%	8,393	654,150	3.9 %	133	77	741	62.8 %	0.7 %	9.0 %	25.3
> 4.25%	5,929	701,918	4.9 %	229	39	741	62.5 %	1.3 %	10.7 %	27.0
	123,884	19,709,689	2.6 %	230	53	769	59.0 %	0.3 %	5.9 %	25.2
Total ARMs	1,568	447,591	4.4 %	375	53	762	70.7 %	1.1 %	13.2 %	25.4
Total	806,162	\$ 202,052,183	3.4 %	\$ 333	51	760	71.2 %	0.8 %	5.3 %	25.3

Financing

Our borrowings consist primarily of repurchase agreements, revolving credit facilities, warehouse facilities and convertible senior notes. Repurchase agreements and revolving credit facilities 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 for repurchase agreements. Additionally, a substantial portion of our MSR is currently pledged as collateral for repurchase agreements and revolving credit facilities, and a portion of our servicing advances have been pledged as collateral for revolving credit facilities. Warehouse facilities are collateralized by our pledge of mortgage loans for a period of up to 90 days or until they are sold to the GSEs or other third-party investors in the secondary market, typically within 30 days of origination. Substantially all of our funded mortgage loans held-for-sale are currently pledged as collateral for warehouse facilities. In connection with our securitization of MSR, a variable funding note, or VFN, was issued to one of our subsidiaries. We have one repurchase facility that is secured by the VFN, which is collateralized by our MSR. Finally, our convertible senior notes due 2026 are unsecured and pay interest semiannually at a rate of 6.25% per annum.

At September 30, 2024, borrowings under repurchase agreements, revolving credit facilities, warehouse facilities and convertible senior notes had the following characteristics:

(dollars in thousands)

Borrowing Type	September 30, 2024		
	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Years to Maturity
Repurchase agreements	\$ 8,763,400	5.40 %	0.3
Revolving credit facilities	999,171	8.11 %	1.8
Warehouse facilities	3,017	7.34 %	0.2
Convertible senior notes ⁽¹⁾	259,815	6.25 %	1.3
Total	<u>\$ 10,025,403</u>	5.69 %	0.5

(dollars in thousands)

Collateral Type	September 30, 2024		
	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Haircut on Collateral Value
Agency RMBS	\$ 8,107,734	5.20 %	3.7 %
Non-Agency securities	207	5.39 %	44.2 %
Agency Derivatives	5,459	5.88 %	17.2 %
Mortgage servicing rights	1,589,871	8.08 %	31.1 %
Mortgage servicing advances	59,300	7.74 %	12.9 %
Mortgage loans held-for-sale	3,017	7.34 %	— %
Other ⁽¹⁾	259,815	6.25 %	N/A
Total	<u>\$ 10,025,403</u>	5.69 %	8.0 %

(1) Includes unsecured convertible senior notes due 2026 paying interest semiannually at a rate of 6.25% per annum on the aggregate principal amount of \$261.9 million.

As of September 30, 2024, the debt-to-equity ratio funding our Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, which includes unsecured borrowings under convertible senior notes, was 4.6:1.0. 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 risk, utilize lower levels of leverage. Generally, our debt-to-equity ratio is directly correlated to the composition of our portfolio; typically, the higher the percentage of Agency RMBS we hold, the higher our debt-to-equity ratio will be. However, in addition to portfolio mix, our debt-to-equity ratio is a function of many other 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. 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. 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 (excluding those collateralized by U.S. Treasuries), revolving credit facilities, warehouse facilities, term notes payable and convertible senior notes and our debt-to-equity ratios for the three months ended September 30, 2024, 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 Cost Basis	End of Period Net Payable (Receivable) for Unsettled RMBS	End of Period Economic Debt-to-Equity Ratio ⁽¹⁾
September 30, 2024	\$ 10,028,325	\$ 10,025,403	\$ 10,061,801	4.6:1.0	\$ 5,060,417	\$ 85,366	7.0:1.0
June 30, 2024	\$ 9,893,287	\$ 9,973,593	\$ 9,973,593	4.5:1.0	\$ 4,950,762	\$ —	6.8:1.0
March 31, 2024	\$ 10,153,275	\$ 10,283,782	\$ 10,352,896	4.6:1.0	\$ 3,421,932	\$ (213,264)	6.0:1.0
December 31, 2023	\$ 10,449,060	\$ 9,913,231	\$ 10,984,022	4.5:1.0	\$ 3,170,548	\$ 196,644	6.0:1.0
September 30, 2023	\$ 11,058,648	\$ 11,087,145	\$ 11,138,859	5.2:1.0	\$ 2,147,540	\$ —	6.3:1.0

(1) Defined as total borrowings under repurchase agreements (excluding those collateralized by U.S. Treasuries), revolving credit facilities, warehouse facilities, term notes payable and convertible senior notes, plus implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity.

Equity

The following table provides details of our changes in stockholders' equity from June 30, 2024 to September 30, 2024.

(in millions, except per share amounts)	Book Value	Common Shares Outstanding	Common Book Value Per Share
Common stockholders' equity at June 30, 2024	\$ 1,573.5	103.6	\$ 15.19
Net loss	(238.5)		
Other comprehensive income	269.6		
Comprehensive income	31.1		
Dividends on preferred stock	(11.8)		
Comprehensive income attributable to common stockholders	19.3		
Dividends on common stock	(46.9)		
Other	1.6		
Balance before capital transactions	1,547.5	103.6	
Issuance of common stock, net of offering costs	0.1		
Common stockholders' equity at September 30, 2024	\$ 1,547.6	103.6	\$ 14.93
Total preferred stock liquidation preference	621.8		
Total stockholders' equity at September 30, 2024	\$ 2,169.4		

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, warehouse facilities, 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 September 30, 2024, we held \$522.6 million in cash and cash equivalents available to support our operations; \$11.4 billion of AFS securities, MSR, mortgage loans held-for-sale and derivative assets held at fair value; and \$10.0 billion of outstanding debt in the form of repurchase agreements, borrowings under revolving credit facilities and warehouse facilities and convertible senior notes. During the three months ended September 30, 2024, the debt-to-equity ratio funding our Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, which includes unsecured borrowings under convertible senior notes, increased from 4.5:1.0 to 4.6:1.0, which was predominantly driven by an increase in financing on Agency RMBS as a result of purchases, offset by a decrease in MSR financing as a result of MSR sales and portfolio runoff. During the nine months ended September 30, 2024, the debt-to-equity ratio funding our Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, which includes unsecured borrowings under convertible senior notes, also increased from 4.5:1.0 to 4.6:1.0, which was primarily due to a decrease in equity as a result of our financial results. During the three and nine months ended September 30, 2024, our economic debt-to-equity ratio funding our Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, which includes unsecured borrowings under convertible senior notes, implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, increased from 6.8:1.0 to 7.0:1.0 and 6.0:1.0 to 7.0:1.0, respectively.

As of September 30, 2024, we held approximately \$4.8 million of unpledged Agency RMBS and \$3.5 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on unpledged securities of approximately \$6.1 million. As of September 30, 2024, we held approximately \$19.6 million of unpledged MSR and \$5.4 million of unpledged servicing advances. Overall, on September 30, 2024, we had \$60.1 million unused committed and \$550.0 million unused uncommitted borrowing capacity on MSR financing facilities, and \$90.7 million in unused committed borrowing capacity on servicing advance financing facilities. As of September 30, 2024, all of our mortgage loans were pledged for financing and we had \$4.0 million unused committed borrowing capacity on our warehouse facilities. 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.

During the nine months ended September 30, 2024, we did not experience any material issues accessing our funding sources. We expect ongoing sources of financing to be primarily repurchase agreements, revolving credit facilities, warehouse facilities, 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 September 30, 2024, we had master repurchase agreements in place with 36 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.

In addition to our master repurchase agreements that fund our Agency and non-Agency securities, we have one repurchase facility and two 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 and one warehouse facility that provides short-term financing for our mortgage loans held-for-sale. A summary of our MSR, servicing advance and warehouse facilities is provided in the table below:

(dollars in thousands)

September 30, 2024						
Expiration Date ⁽¹⁾	Amount Outstanding	Unused Committed Capacity ⁽²⁾	Unused Uncommitted Capacity	Total Capacity	Eligible Collateral	
March 31, 2026	\$ 647,731	\$ 2,269	\$ 250,000	\$ 900,000	Mortgage servicing rights	
March 8, 2027	\$ 292,140	\$ 57,860	\$ 150,000	\$ 500,000	Mortgage servicing rights ⁽³⁾	
May 22, 2026	\$ 650,000	\$ —	\$ 150,000	\$ 800,000	Mortgage servicing rights ⁽⁴⁾	
June 14, 2026	\$ 59,300	\$ 90,700	\$ —	\$ 150,000	Mortgage servicing advances	
August 19, 2025	\$ 3,017	\$ 6,983	\$ —	\$ 10,000	Mortgage loans held-for-sale	

(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) The revolving period of this facility ceases on March 8, 2026, at which time the facility starts a 12-month amortization period.

(4) This repurchase facility is secured by a VFN issued in connection with our previous securitization of MSR, which is collateralized by our MSR. During the three months ended September 30, 2024, this repurchase facility was amended to prescribe a reduction in the total capacity to \$550.0 million starting December 30, 2024.

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 September 30, 2024:

- Total indebtedness to tangible net worth must be less than 8.0:1.0. As of September 30, 2024, our total indebtedness to tangible net worth, as defined, was 4.9:1.0.
- Cash liquidity must be greater than \$200.0 million. As of September 30, 2024, our liquidity, as defined, was \$522.6 million.
- 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. As of September 30, 2024, 50% of the highest net worth during the 24 calendar months prior, as defined, was \$1.2 billion and our net worth, as defined, was \$2.2 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, warehouse facilities, term notes payable and derivative instruments at September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Available-for-sale securities, at fair value	\$ 8,416,131	\$ 8,126,028
Mortgage servicing rights, at fair value	2,864,729	3,047,890
Mortgage loans held-for-sale, at fair value	3,067	—
Restricted cash	13,998	12,575
Due from counterparties	15,108	36,420
Derivative assets, at fair value	8,148	11,877
Other assets	86,646	79,749
Total	\$ 11,407,827	\$ 11,314,539

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 and mortgage loans held-for-sale, 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 and mortgage loans, may be limited by delays encountered while obtaining certain Agency 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 Agency requirements regarding the transfer of such assets before settlement may occur. Consequently, even if we identify a buyer for our MSR and mortgage loans, 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 warehouse facilities, 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, warehouse facilities, term notes payable and convertible senior notes as of September 30, 2024 and December 31, 2023:

(in thousands)	September 30, 2024	December 31, 2023
Within 30 days	\$ 2,403,179	\$ 2,833,162
30 to 59 days	2,180,469	1,918,818
60 to 89 days	3,017	2,059,438
90 to 119 days	1,173,329	994,789
120 to 364 days	2,356,423	833,571
One to three years	1,908,986	1,273,453
Total	\$ 10,025,403	\$ 9,913,231

For the three months ended September 30, 2024, our restricted and unrestricted cash balance decreased approximately \$175.1 million to \$611.7 million at September 30, 2024. The cash movements can be summarized by the following:

- *Cash flows from operating activities.* For the three months ended September 30, 2024, operating activities increased our cash balances by approximately \$87.1 million, primarily driven by our financial results for the quarter.
- *Cash flows from investing activities.* For the three months ended September 30, 2024, investing activities decreased our cash balances by approximately \$254.9 million, driven by net purchases of AFS securities and net short sales of derivative instruments, offset by net sales of MSR.
- *Cash flows from financing activities.* For the three months ended September 30, 2024, financing activities decreased our cash balance by approximately \$7.3 million, primarily driven by paydowns on our revolving credit facilities and the payment of third quarter dividends, offset by an increase in both AFS securities and MSR repurchase agreement financing.

Inflation

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. Additionally, rising interest rates are likely to have an adverse impact on the operational efficiency and, thus profitability, of our loan originations platform.

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.*, OIS or SOFR) 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, our cash flows, and our loan origination pipeline (consisting of IRLCs and mortgage loans held-for-sale), we may, at times, enter into various forward contracts, including short securities, TBAs, options, futures, swaps, caps, credit default swaps, total return swaps and forward mortgage loan sale commitments. In executing on our current interest rate risk management strategy, we have entered into TBAs, interest rate swap and swaption agreements, futures, options on futures, and forward mortgage loan sale commitments. In addition, because MSR are negative duration assets, they may provide a hedge to interest rate exposure on our Agency RMBS portfolio. In hedging interest rate risk, we seek to mitigate the impact of changing interest rates on the value of our investments, improve risk-adjusted returns and, where possible, obtain a favorable spread between the yield on our assets and the cost of our financing. Our hedging methods are based on many factors, including, but not limited to, our estimates with regard to future interest rates.

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 TRSSs, 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 and mortgage loans held-for-sale 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.

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 September 30, 2024 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 (for example, the assumption for prepayment speeds for Agency RMBS and MSR 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 September 30, 2024. 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.

(dollars in thousands)	Changes in Interest Rates			
	-50 bps	-25 bps	+25 bps	+50 bps
Change in annualized net interest income ⁽¹⁾:	\$ (6,779)	\$ (3,377)	\$ 3,333	\$ 6,685
<i>% change in net interest income ⁽¹⁾</i>	(4.4)%	(2.2)%	2.2 %	4.3 %
Change in value of financial position:				
Available-for-sale securities	\$ 167,461	\$ 87,034	\$ (92,847)	\$ (190,941)
<i>As a % of common equity</i>	10.8 %	5.6 %	(6.0)%	(12.4)%
Mortgage servicing rights ⁽²⁾	\$ (139,605)	\$ (71,966)	\$ 64,487	\$ 115,636
<i>As a % of common equity ⁽²⁾</i>	(9.0)%	(4.7)%	4.2 %	7.5 %
Mortgage loans held-for-sale	\$ 35	\$ 19	\$ (24)	\$ (52)
<i>As a % of common equity</i>	— %	— %	— %	— %
Derivatives, net	\$ (38,935)	\$ (16,031)	\$ 9,391	\$ 12,354
<i>As a % of common equity</i>	(2.5)%	(1.0)%	0.6 %	0.8 %
Reverse repurchase agreements	\$ 75	\$ 37	\$ (37)	\$ (75)
<i>As a % of common equity</i>	— %	— %	— %	— %
Repurchase agreements	\$ (7,191)	\$ (3,596)	\$ 3,596	\$ 7,191
<i>As a % of common equity</i>	(0.5)%	(0.2)%	0.2 %	0.5 %
Revolving credit facilities	\$ (236)	\$ (117)	\$ 117	\$ 235
<i>As a % of common equity</i>	— %	— %	— %	— %
Warehouse facilities	\$ (3)	\$ (2)	\$ 2	\$ 3
<i>As a % of common equity</i>	— %	— %	— %	— %
Convertible senior notes	\$ (1,006)	\$ (501)	\$ 498	\$ 994
<i>As a % of common equity</i>	(0.1)%	— %	— %	0.1 %
Total Net Assets	\$ (19,405)	\$ (5,123)	\$ (14,817)	\$ (54,655)
<i>As a % of total assets</i>	(0.2)%	— %	(0.1)%	(0.4)%
<i>As a % of common equity</i>	(1.3)%	(0.3)%	(1.0)%	(3.5)%

(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 or U.S. Treasury futures income, 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 September 30, 2024. 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 the principal amount of a mortgage loan 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 on the mortgage loans underlying the MSR would result in a decline in value of the MSR as the prepayment acts to cut short the anticipated life of the servicing income stream.

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 certain AFS securities for which we have elected the fair value option reflected in accumulated other comprehensive loss. 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.

Our mortgage loans held-for-sale are reflected at their estimated fair value. The estimated fair value fluctuates primarily due to changes in interest rates, market valuation of credit risks and other factors. Generally in a rising rate environment, we would expect the fair value of these loans to decrease; conversely, in a decreasing rate environment, we would expect the fair value of these loans to increase.

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 impacts of climate change, 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 impact the value of our Agency RMBS due to changes in voluntary and involuntary prepayment speeds, and/or 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 and warehouse 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, revolving credit facility or warehouse facility counterparties chose not to provide ongoing funding, our ability to finance would decline or exist at possibly less favorable terms. As such, we cannot provide assurance that we will always be able to roll over our repurchase agreements, revolving credit facilities and warehouse 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 Form 10-Q for further information about our liquidity and capital resource management.

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 our mortgage loans held-for-sale and all of the loans underlying our 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 Interim 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 Interim CFO have concluded that our current disclosure controls and procedures, as designed and implemented, were effective as of September 30, 2024. Although our CEO and Interim 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 September 30, 2024 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, we may be involved in various legal and regulatory matters that arise in the ordinary course of business. As previously disclosed, on July 15, 2020, we provided PRCM Advisers with a notice of termination of the Management Agreement for “cause” in accordance with Section 15(a) of the Management Agreement. We 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 us in the United States District Court for the Southern District of New York, or the Court. Subsequently, Pine River Domestic Management L.P. and Pine River Capital Management L.P. were added as plaintiffs to the matter. As amended, the complaint, or 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 us 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 our wrongfully obtained profits; and fees and costs incurred by the plaintiffs in pursuing the action. We have filed our answer to the Federal Complaint and made counterclaims against PRCM Advisers and Pine River Capital Management L.P. On May 5, 2022, the plaintiffs filed a motion for judgment on the pleadings, seeking judgment in their favor on all but one of our counterclaims and on one of our affirmative defenses. We opposed the motion for judgment on the pleadings. On August 10, 2023, the motion for judgment on the pleadings was granted in part and denied in part. The discovery period has ended. On November 8, 2023, the Company and the plaintiffs filed motions for summary judgment, seeking judgment in their favor on the pending claims and counterclaims. Each party opposed the other party’s motion for summary judgment. The motions for summary judgment are fully briefed. Our board of directors believes the Federal Complaint is without merit and that we fully complied with the terms of the Management Agreement.

Item 1A. Risk Factors

Except as set forth below, 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, 2023. 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 Annual Report on 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.

We may not be able to grow or realize the benefits of our direct-to-consumer loan origination platform, which could adversely impact our business, results of operations and financial condition.

Late in the second quarter of 2024, through our wholly owned subsidiary, RoundPoint, we began operating an in-house, direct-to-consumer residential mortgage loan originations platform, which was established primarily as a MSR portfolio defense strategy to retain or recapture our existing borrowers. The originations platform also originates loans for borrowers that do not currently have a mortgage loan serviced by RoundPoint and also brokers second lien loans to our borrowers. For our own MSR portfolio, adding new or recaptured MSR through our origination platform is intended to hedge faster than expected MSR prepayment speeds in a refinance environment, and requires less capital relative to acquiring MSR through flow and bulk purchases from third-party originators. In addition, origination activities are generally counter-cyclical to MSR, which provides supplementary sources of profitability to our stockholders while also hedging our MSR. It is possible that the full benefits of the originations platform may not be realized as expected, or at all. Our ability to grow our mortgage loan originations business may be adversely affected by a variety of factors, including without limitation competition from new and existing market participants, rising interest rates, reductions in the overall level of refinancing activity or a decline in our brand and reputation. Any failure to achieve the anticipated benefits of our originations platform could adversely affect our business, results of operations and financial condition.

We depend on the accuracy and completeness of information about mortgage loan borrowers and any misrepresented information could adversely affect our business, results of operations and financial condition.

In deciding whether to approve loans through our originations platform, we may rely on information furnished to us by or on behalf of borrowers, including financial statements and other information. We also may rely on representations of borrowers as to the accuracy and completeness of financial and other information provided. If any of this information is intentionally or negligently misrepresented and such misrepresentation is not detected prior to loan funding, the fair value of the loan may be significantly lower than expected. Whether a misrepresentation is made by the loan applicant, another party or one of our employees, we generally bear the risk of loss associated with the misrepresentation and the loan may be unsalable or subject to repurchase. Our controls and processes may not have detected or may not detect all misrepresented information in our loan originations. Any such misrepresented information could have a material adverse effect on our business, results of operations and financial condition.

If our warehouse facilities are terminated or reduced, we may be unable to find replacement financing on favorable terms, or at all, which could adversely affect our business, results of operations and financial condition.

To finance our origination activities, we have entered into warehouse facilities collateralized by the value of the mortgage loans pledged until they are sold to the GSEs or other third-party investors in the secondary market. Our borrowings are generally repaid with the proceeds we receive from mortgage loan sales. We depend upon multiple lenders to provide warehouse lines of credit for our loans. In the event that any of our warehouse facilities are terminated or not renewed, or if the principal amount that may be drawn under our funding agreements were to decrease significantly, we may be unable to find replacement financing on commercially favorable terms, or at all, which could limit our ability to maintain or grow our originations business.

If our ability to sell loans in the secondary market is impaired, it could affect our volume and margins and we may not be able to continue to originate mortgage loans.

We originate residential mortgage loans and sell them to the GSEs or other third-party investors in the secondary market. There can be no assurance that we will be able to continue to sell our loans into the secondary market at attractive prices, or at all. If we are unable to sell our mortgage loans to the GSEs or other third-party investors, or the prices for such loans decline, our liquidity may be negatively impacted, we may be unable to continue to fund such loans, our revenues and margins on new loan originations could be reduced and our ability to repay our warehouse facilities could be impaired.

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

(a) None.

(b) None.

(c) Our preferred share repurchase program allows for the repurchase of up to an aggregate of 5,000,000 shares of the company's preferred stock, which includes the 8.125% Series A Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, 7.625% Series B Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock and 7.25% Series C Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock. Preferred shares may be repurchased from time to time through privately negotiated transactions or open market transactions, pursuant to trading plans in accordance with Rule 10b5-1 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 preferred share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The preferred 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 preferred share repurchase program does not have an expiration date. As of September 30, 2024, we had repurchased an aggregate of 4,179,183 preferred shares under the program for a total cost of \$77.3 million. We did not repurchase preferred shares during the three months ended September 30, 2024.

Our common share repurchase program allows for the repurchase of up to an aggregate of 9,375,000 shares of the company's common stock. Common 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 common share repurchases are subject to a variety of factors, including market conditions and applicable SEC rules. The common 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 common share repurchase program does not have an expiration date. As of September 30, 2024, we had repurchased 3,637,028 common shares under the program for a total cost of \$208.5 million. We did not repurchase common shares during the three months ended September 30, 2024.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

(a) None.

(b) None.

(c) During the three months ended September 30, 2024, no director or officer of the Company adopted, modified or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 10b5-1 trading arrangement,” as each term is defined in Item 408(a) of Regulation S-K.

Item 6. Exhibits

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

<u>Exhibit Number</u>	<u>Exhibit Description</u>
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 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, 2022 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 2, 2022).
3.7	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, 2022 (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed with the SEC on November 2, 2022).
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 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).
3.9	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).
3.10	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).
3.11	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).
3.12	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).
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (furnished herewith)
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (furnished herewith)

Exhibit Number	Exhibit Description
101	Financial statements from the Quarterly Report on Form 10-Q of Two Harbors Investment Corp. for the three months ended September 30, 2024, filed with the SEC on October 29, 2024, formatted in Inline XBRL: (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statements of Comprehensive Income (Loss), (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)

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.

Dated:	October 29, 2024	By:	TWO HARBORS INVESTMENT CORP. <u>/s/ William Greenberg</u> William Greenberg President and Chief Executive Officer (Principal Executive Officer)
Dated:	October 29, 2024	By:	<u>/s/ William Dellal</u> William Dellal Interim Chief Financial Officer (Principal Financial Officer)
Dated:	October 29, 2024	By:	<u>/s/ Jillian Halm</u> Jillian Halm Chief Accounting Officer (Principal Accounting Officer)

**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: October 29, 2024

/s/ William Greenberg
William Greenberg
President and Chief Executive Officer

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

I, William Dellal, 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: October 29, 2024

/s/ William Dellal
William Dellal
Interim Chief Financial Officer

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 months ended September 30, 2024 (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: October 29, 2024

/s/ William Greenberg

William Greenberg

President and Chief Executive 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.

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 months ended September 30, 2024 (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: October 29, 2024

/s/ William Dellal

William Dellal

Interim 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.