TWO 2024 ANNUAL REPORT

two

Company Overview

Founded in 2009, Two Harbors Investment Corp. (NYSE: TWO) ("TWO") is a leading MSR-focused REIT and, through our operational platform, RoundPoint Mortgage Servicing LLC, one of the largest servicers of conventional loans in the country. We leverage our core competencies of understanding and managing interest rate and prepayment risk to invest our portfolio of mortgage servicing rights and mortgage-backed securities.

Company Mission

Our mission is to deliver sustainable long-term value to our stakeholders across all market environments by leveraging our deep expertise in the mortgage industry.

Company Vision

To create enduring value for our stakeholders through our dynamic strategy, operational excellence, and a deep commitment to positively impacting communities and lives.

Our Care Values

AIM HIGH

We deliver excellence in everything we do.

STAY FOCUSED

We innovate and evolve by overcoming obstacles.

TAKE ACTION

We are empowered to impact our company's performance.

FOLLOW THROUGH

We hold each other accountable, and we say what we're going to do and do what we say.

ALL IN

We are trusted partners for our customers every step of the way.

WE CARE

We prioritize our people, customers and communities.

TWO At A Glance

Common Stock: **NYSE: TWO**

Preferred Shares: **NYSE: TWO-PRA, TWO-PRB, TWO-PRC**

dollars in billions except per share amounts	2024	2023
Market Capitalization	**$1.4b**	$1.4b
Total Economic Return[(1)]	**7.00%**	-3.20%
Dividends Paid Per Common Share	**$1.80**	$1.95
Average Dividend Yield[(2)]	**14%**	14%
Portfolio Size[(3)]	**$14.8b**	$14.6b
Portfolio Allocation[(4)]		
Servicing	**61%**	62%
Securities	**39%**	38%

(1) Economic return on book value is defined as the increase (decrease) in common book value from the beginning to the end of the given period, plus dividends declared to common stockholders in the period, divided by common book value as of the beginning of the period.

(2) Average dividend yield per common share is calculated based on the dividends declared during the given period, divided by the average daily closing price during the given period.

(3) 2024 portfolio includes $10.4 billion market value in settled securities and MSR and $4.4 billion in bond-equivalent value of TBA contracts. Bond equivalent value is defined as the notional amount multiplied by market price. TBA contracts are accounted for as derivative instruments in accordance with GAAP.

(4) Capital allocated represents management's internal allocation. Certain financing balances and associated interest expenses are allocated between investments based on management's assessment of leverage ratios and capital or liquidity to support the investment.

EMPLOYEES

475+

as of 12/31/24

OFFICES

MN

NY

SC

TX

Dear Fellow Stockholders

2024 was a successful year for our company, as we delivered a total economic return on book value of 7.0%[1], inclusive of dividends declared of $1.80 per common share.

We also developed and launched a new brand, referring to ourselves simply as "TWO," reflecting our evolution as a company into an MSR-focused REIT. Mortgage servicing rights, or MSR, is core to our investment strategy, and we are intently focused on providing high-quality investment returns by extracting the most value that we can from our MSR asset for the benefit of our stockholders.

KEY BUSINESS ACHIEVEMENTS

Throughout 2024, interest rates remained volatile, driven by conflicting economic signals on employment and inflation, and changing perceptions of the Federal Reserve's ("Fed") reaction function. By the third quarter, inflation data showed enough progress towards the Fed's 2 percent target that the Fed cut rates by 50 basis points in September, and another 25 basis points in November and December. The Treasury yield curve steepened as the Fed cut rates, while robust supply of longer-term Treasuries kept longer-end rates stubbornly above 4.5 percent. Mortgage spread volatility declined somewhat as the Fed began to cut rates, though nominal current coupon spreads remained wider than longer-term averages. MSR valuations were well supported throughout the year, with balanced supply and demand and favorable prepayment rates. With this as a background, I am proud of what our team accomplished for the benefit of our stockholders in 2024:

- Generated a total economic return on book value of 7.0%.[1]
- Declared dividends of $1.80 per common share, equivalent to an average dividend yield of 14.0%.[2]
- Concluded a full year of owning our own mortgage servicer, RoundPoint Mortgage Servicing LLC, ("RoundPoint") which has provided increased economies of scale and additional cashflows from the servicing asset.
- Settled $9.2 billion in unpaid principal balance ("UPB") of MSR, or 28,093 loans, through bulk and flow-sale acquisitions and recapture, bringing the total portfolio to $202 billion UPB with a gross coupon rate of 3.46%.
- Launched a direct-to-consumer recapture originations platform, funding $64.3 million UPB in first lien loans and brokering $40.2 million UPB in second lien loans.
- Actively managed capital structure through the repurchase of 485,609 shares[3] of preferred stock and $10.0 million principal amount of convertible senior notes due January 2026.

The TWO Advantage

Our size, expertise, and investment strategy differentiate us from other mREIT peers and investors in MSR.

Market Presence:
Our scale, expertise and ability to leverage our own servicer allows us to find attractive incremental investments in hedged MSR.

Investment Strategy:
Our portfolio is focused on hedged MSR. Ongoing enhancements at RoundPoint uniquely position us to shape our return profile beyond just owning Agency RMBS.

Market Environment:
Our MSR is hundreds of basis points out of the money from being able to refinance, keeping prepayment risk low and generating stable cashflows over a wide range of market scenarios.

Financing and Liquidity:
We have a strong balance sheet and diversified financing for both MSR and Agency RMBS.

THE VALUE IN OWNING A MORTGAGE OPERATING COMPANY: ROUNDPOINT

The acquisition of RoundPoint has gone substantially as we planned, and we have benefitted from improved economics on our MSR asset, including lower costs to service, increased economies of scale, and additional cash flows from the servicing asset, much as we laid out in the rationale for the purchase in 2022. In 2024, we launched, from scratch, a direct-to-consumer ("DTC") mortgage loan originations platform. This effort cost us very little to set up, with no legacy risks, and we made our first loan in June. We envision this effort will predominately serve to protect our current MSR portfolio through recapture of the underlying mortgage loans when a borrower refinances or moves into a new loan product. In particular, we think of our DTC program primarily as being a hedge to faster-than-expected prepayment speeds on our MSR portfolio should interest rates drop precipitously and we enter a refinance environment.

Taken all together, the value of TWO's MSR portfolio benefits from the success of servicing, and directly affects the success of originations, which circles back to a positive value contribution to the MSR portfolio.

OUR PEOPLE ARE THE FOUNDATION TO OUR SUCCESS

We believe that our employees are the foundation of our success. With over 470 employees at the end of 2024, across four office locations, our culture is dynamic, innovative and collaborative. We **aim high**, delivering excellence in everything we do. We **stay focused**, innovating and evolving by overcoming obstacles together. We **take action**, knowing that we are all empowered to impact our company's performance. We **follow through**, holding each other accountable along the way. We are **all in** as trusted partners to each other, our customers and in our communities. Together, our employees are united by a shared commitment to excellence, ethical decision-making, and creating enduring value for all of our stakeholders.

LOOKING AHEAD TO 2025: HEDGED MSR STRATEGY DRIVES HIGH-QUALITY RETURNS IN DYNAMIC MARKETS

We have several strategic initiatives for RoundPoint in 2025, including: additional cost savings in servicing, especially through the use of technology; bringing the direct-to-consumer originations platform fully to scale; and evaluating additional ways to expand the use of the platform as the mortgage finance space evolves. These initiatives are all focused on ensuring that our customers want to stay with RoundPoint and turn to RoundPoint as their trusted homeownership partner.

The market is in the midst of navigating a transition from an extended period of Fed tightening towards a more data-dependent stance. In this interest rate environment, our MSR portfolio, with a low gross coupon rate of 3.46%, should continue to generate relatively stable cashflows while also exhibiting low duration and convexity risks.

With approximately 61%[4] of our capital allocated to a hedged servicing strategy, and the remaining 39%[4] to a hedged securities strategy, our portfolio is constructed to provide more stability than portfolios without MSR across varying market conditions. While 2024 saw Agency RMBS spreads meaningfully tighten, the outlook for Agency RMBS in 2025 is still attractive, but the risks are more balanced. We believe that our unique, hedged MSR-centric strategy will continue to generate attractive levered returns in 2025 and beyond. Our ongoing efforts regarding process improvements and product offerings at RoundPoint allow us to continue to shape our return profile in a way that owning only a portfolio of securities cannot. I'm very proud of what we have accomplished in the past year and I'm tremendously excited about where we are going.

On behalf of our team and our Board of Directors, thank you for your interest in and support of TWO.

William Greenberg
President and Chief Executive Officer

(1) Economic return on book value is defined as the increase (decrease) in common book value from the beginning to the end of the given period, plus dividends declared to common stockholders in the period, divided by common book value as of the beginning of the period.
(2) Average dividend yield is calculated based on the dividends declared in the given period, divided by the average daily closing share price during the given period.
(3) Includes 35,047 Series A, 280,060 Series B and 170,502 Series C preferred shares for the year ended December 31, 2024.
(4) Capital allocated represents management's internal allocation. Certain financing balances and associated interest expenses are allocated between investments based on management's assessment of leverage ratios and required capital or liquidity to support the investment.

2024

10-K

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

FORM 10-K

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

For the Fiscal Year Ended: December 31, 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	**27-0312904**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
1601 Utica Avenue South, Suite 900 **St. Louis Park, Minnesota**	**55416**
(Address of Principal Executive Offices)	(Zip Code)

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

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

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

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2024, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $1.4 billion based on the closing sale price as reported on the NYSE on that date.

As of February 12, 2025, there were 104,022,011 shares of common stock, par value $0.01 per share, issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the 2025 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission under Regulation 14A within 120 days after the end of registrant's fiscal year covered by this Annual Report, are incorporated by reference into Part III.

TWO HARBORS INVESTMENT CORP.
2024 ANNUAL REPORT ON FORM 10-K

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CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K 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 this Annual Report on Form 10-K 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 the 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, including executive orders, 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, warehouse facilities, 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 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 Mortgage Servicing LLC 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.

PART I

Item 1. Business

Overview

Two Harbors Investment Corp. is a Maryland corporation founded in 2009 that invests in, finances and manages mortgage servicing rights, or MSR, and Agency residential mortgage-backed securities, or 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 real estate investment trust, or REIT, and our common stock is listed on the New York Stock Exchange, or NYSE, under the symbol "TWO." The terms "Two Harbors," "we," "our," "us" and the "Company" refer to Two Harbors Investment Corp. and its subsidiaries as a consolidated entity.

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.

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 Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, to engage in such activities, and we may form additional TRSs in the future. 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.

Our Business

Our Investment Strategy

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. We intend to achieve this objective by constructing a well-balanced portfolio consisting of MSR, Agency RMBS, and other financial assets, with a focus on managing various associated risks, including interest rate, prepayment, credit, mortgage spread and financing risk. The preservation of book value is of paramount importance to our ability to generate total return on an ongoing basis.

We make investment decisions based on a rigorous asset selection process that takes into consideration a variety of factors, including expected cash yield, risk-adjusted returns, current and projected credit fundamentals, current and projected macroeconomic considerations, current and projected supply and demand, credit and market risk concentration limits, liquidity, cost of financing and financing availability. It is our intention to select our assets in such a way as to maintain our REIT qualification and our exemption from registration under the 1940 Act.

Our Target Assets

Our portfolio includes assets that are primarily sensitive to changes in interest rates, prepayments and mortgage spreads, including but not limited to Agency RMBS, MSR and related hedging transactions. These assets have minimal exposure to the underlying credit performance of the investments. Our portfolio is managed as a whole and our resources are allocated and financial performance is assessed on a consolidated basis. Our target asset classes are as follows:

Agency RMBS	Agency RMBS, meaning RMBS whose principal and interest payments are guaranteed by a U.S. government agency, such as the Government National Mortgage Association (or Ginnie Mae), or 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), collateralized by fixed rate mortgage loans, adjustable-rate mortgage (or ARM) loans or hybrid mortgage loans, or derivatives thereof, including: • mortgage pass-through certificates; • collateralized mortgage obligations; • uniform mortgage-backed securities; • Freddie Mac gold certificates; • Fannie Mae certificates; • Ginnie Mae certificates; • “to-be-announced” forward contracts, or TBAs, which are pools of mortgages with specific investment terms to be issued by Ginnie Mae, Fannie Mae or Freddie Mac at a future date; and • interest-only and inverse interest-only securities.
MSR	The right to control the servicing of residential mortgage loans, receive the servicing income therefrom and the obligation to service the loans in accordance with applicable laws and requirements.

Other assets may include financial and mortgage-related assets other than our target assets, including non-Agency securities (securities that are not issued or guaranteed by Ginnie Mae, Fannie Mae or Freddie Mac), other Agency securities and certain non-hedging transactions that may produce non-qualifying income for purposes of REIT gross income tests.

Our Investment Activities

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.

One of our wholly owned subsidiaries, TH MSR Holdings LLC (formerly Matrix Financial Services Corporation), 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. Beginning in 2024, TH MSR Holdings also acquires MSR on loans originated by its subsidiary, RoundPoint, through purchases and recapture of MSR. TH MSR Holdings does not directly service mortgage loans; instead, it engages RoundPoint to handle substantially all servicing functions for the mortgage loans underlying our 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. 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.

In making our capital allocation decisions, we take into consideration a number of factors, including the opportunities available in the marketplace, the cost and availability of financing, and the cost of hedging interest rate, prepayment, credit and other portfolio risks. In the ordinary course of 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. Going forward, we expect our capital to be fully allocated to our strategy of pairing MSR and Agency RMBS. We have expertise in mortgage credit and may choose to invest again in those assets should the opportunity arise.

Our Investment Guidelines

Our board of directors has approved the following investment guidelines:

- no investment shall be made that would cause us to fail to qualify as a REIT for U.S. federal income tax purposes;
- no investment shall be made that would cause us to be regulated as an investment company under the 1940 Act;
- we will primarily invest within our target assets, consisting primarily of Agency RMBS, non-Agency securities, residential mortgage loans, MSR and certain types of commercial real estate assets; approximately 5% to 10% of our portfolio may include other financial assets; and

- until appropriate investments can be identified, we will invest available cash in interest-bearing and short-term investments that are consistent with (i) our intention to qualify as a REIT and (ii) our exemption from investment company status under the 1940 Act.

These investment guidelines may be changed from time to time by our board of directors in its discretion without the approval of our stockholders.

Within the constraints of the foregoing investment guidelines, we have broad authority to select, finance and manage our investment portfolio. As a general matter, our investment strategy is designed to enable us to:

- build an investment portfolio consisting of Agency RMBS, MSR and other financial assets that will generate attractive returns while having a moderate risk profile;
- manage financing, interest, prepayment rate, credit and similar risks;
- capitalize on discrepancies in the relative valuations in the mortgage and housing markets; and
- provide regular quarterly dividend distributions to stockholders.

Within the requirements of the investment guidelines, we make determinations as to the percentage of our assets that will be invested in each of our target assets. Our investment decisions depend on prevailing market conditions and may change over time in response to opportunities available in different interest rate, economic and credit environments. As a result, we cannot predict the percentage of our assets that will be invested in any of our target asset classes at any given time. We believe that the diversification of our portfolio across MSR and Agency RMBS, and their related hedges, combined with the expertise of our investment team, will enable us to deliver stable performance, relative to RMBS portfolios without MSR, under a variety of market conditions and economic cycles.

Financing Strategy

We deploy moderate leverage to fund the acquisition of our target assets and increase potential returns to our stockholders. We are not required to maintain any particular leverage ratio. The amount of leverage we deploy for particular investments in our target assets depends upon a variety of factors, including without limitation: general economic, political and financial market conditions; the anticipated liquidity and price volatility of our assets; the gap between the duration of assets and liabilities, including hedges; the availability and cost of financing our assets; our opinion of the credit worthiness of financing counterparties; the health of the U.S. residential mortgage and housing markets; our outlook for the level, slope and volatility of interest rates; the credit quality of the loans underlying our target assets; the rating assigned to securities; and our outlook for asset spreads relative to the Secured Overnight Financing Rate, or SOFR, curve, the Overnight Index Swap Rate, or OIS, the U.S. federal funds rate, and other benchmark rate curves.

Our primary financing sources for Agency RMBS are repurchase agreements. Repurchase agreements are financings pursuant to which one party, the seller/borrower, sells assets to the repurchase agreement counterparty, the buyer/lender, for an agreed price with the obligation to repurchase the assets from the buyer at a future date and at a price different than the original purchase price, with the difference representing the borrowing rate (typically based on an index plus a spread consistent with those demanded in the market). The amount of financing available under a repurchase agreement is limited to a specified percentage of the estimated market value of the assets. The difference between the sale price and repurchase price is the interest expense of financing under a repurchase agreement. Under repurchase agreement financing arrangements, if the value of the collateral decreases, the buyer could require the seller to provide additional cash collateral to re-establish the ratio of value of the collateral to the amount of borrowing (*i.e.*, a margin call). In the current economic climate, lenders under repurchase agreements generally advance approximately 95% to 97% of the market value of the Agency RMBS financed (a discount from market value, generally referred to as a haircut, of 3% to 5%).

To finance MSR assets and related servicing advance obligations, we may enter into repurchase agreements, revolving credit facilities and securitization transactions collateralized by the value of the MSR and/or servicing advances pledged and with borrowing rates typically based on an index plus a spread consistent with those demanded in the market. If the value of our MSR and/or servicing advances pledged as collateral for the agreements decreases, the respective lender could require us to provide additional collateral or cash as collateral to re-establish the ratio of value of the collateral to the amount of the debt outstanding. Due to certain GSE requirements, we may be restricted as to the frequency in which we are able to pledge additional MSR and/or servicing advance collateral to counterparties. As a result, we may choose to over-collateralize certain financing arrangements in order to avoid having to provide cash as additional collateral. Lenders generally advance approximately 60% to 70% of the market value of the MSR financed (*i.e.*, a haircut of 30% to 40%) and 80% to 95% of the value of servicing advances financed (*i.e.,* a haircut of 5% to 20%), depending on the type of advance (*e.g.*, corporate, escrow).

One of our subsidiary trust entities, MSR Issuer Trust, was formed for the purpose of financing MSR through securitization. Through two of our wholly owned subsidiaries, participation certificates representing excess servicing fees are issued and transferred to the MSR Issuer Trust and the related MSR is pledged. In return, MSR Issuer Trust may issue term notes to qualified institutional buyers and variable funding notes, or VFNs, to one of the subsidiaries, in each case secured on a pari passu basis. We have three repurchase facilities in place that are secured by VFNs issued by MSR Issuer Trust which are collateralized by portions of our MSR portfolio.

To finance origination activities, we may enter 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 60 days of origination. Under warehouse facility financing arrangements, if the value of the collateral decreases, the lender could require us to provide additional cash collateral to re-establish the ratio of value of the collateral to the amount of borrowing (*i.e.*, a margin call). In the current economic climate, lenders under warehouse facilities generally advance approximately 80% to 100% of the unpaid principal balance, or UPB, of the mortgage loans financed.

A significant decrease in the advance rate or an increase in the haircut could result in us having to sell assets in order to meet additional margin requirements by the lender. We expect to mitigate our risk of margin calls under financing arrangements by deploying leverage at an amount that is below what could be used under current advance rates.

In order to reduce our exposure to risks associated with lender counterparty concentration, we generally seek to diversify our exposure by entering into repurchase agreements with multiple counterparties. At December 31, 2024, we had $7.8 billion of outstanding balances under repurchase agreements with 19 counterparties, with a maximum net exposure (the difference between the amount loaned to us, including interest payable, and the value of the assets pledged by us as collateral, including accrued interest receivable on such assets) to any single lender of $202.1 million, or 9.5% of stockholders' equity.

Interest Rate Hedging and Risk Management Strategy

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 as well as our cash flows, we may, at times, enter into various forward contracts, including short securities, TBAs, options, futures, swaps, caps, credit default swaps and total return swaps. In executing on our current interest rate risk management strategy, we have entered into TBAs, interest rate swap and swaption agreements, futures and options on futures. 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 reduce the risk of losses on the value of our investments that may result from changes in interest rates in the broader markets, improve risk-adjusted returns and, where possible, obtain a favorable spread between the yield on our assets and the cost of our financing.

Servicing Operations

We service substantially all of the mortgage loans underlying our MSR assets as well as mortgage loans underlying MSR owned by third parties. These servicing activities consist of collecting loan payments, remitting principal and interest payments to investors, managing escrow funds for the payment of mortgage-related expenses, such as taxes and insurance, performing loss mitigation activities on behalf of investors and otherwise administering our mortgage loan servicing portfolio in compliance with applicable laws and requirements.

Servicing Owned MSR. Where we own the right to service loans, we recognize the MSR assets in our consolidated financial statements. We primarily generate recurring revenue through contractual servicing fees and interest income on custodial deposits. As the MSR owner, we are obligated to make servicing advances to fund scheduled principal, interest, tax and insurance payments when the mortgage loan borrower has failed to make the scheduled payments and to cover foreclosure costs and various other items that are required to preserve the assets being serviced. As the MSR owner, we also generally have the right to solicit our customers for refinance opportunities.

Subservicing. We are a subservicer, which means we service loans on behalf of third party clients who own the underlying MSR. Since we do not own the right to service those loans, we do not recognize an MSR asset for those loans in our consolidated financial statements. We primarily generate servicing revenue based upon a stated fee per loan per month that varies depending upon the loan's delinquency status, and we may earn other fees including late payment, modification, and other ancillary fees. As a subservicer, we may be obligated to make servicing advances; however, advances are generally limited, with recoveries typically following within 30 days. Additionally, our exposure to foreclosure-related costs and losses is generally limited in our subservicing relationships given those risks are retained by the owner of the MSR.

Originations

Late in the second quarter of 2024, RoundPoint began operating its in-house, direct-to-consumer originations platform, which was established primarily to benefit our MSR portfolio through the retention or recapture of existing borrowers by providing them with competitive refinance and purchase mortgage options. The originations platform also originates loans for new borrowers who do not currently have a mortgage loan serviced by RoundPoint and brokers second lien loans to borrowers. For our own MSR portfolio, adding new or recaptured MSR through our originations 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; MSR fair value tends to move opposite to origination volume. For example, the value of MSR typically increases in periods marked by low origination activity and vice versa. Thus, origination activities provide supplementary sources of profitability to our stockholders while also hedging our MSR.

Human Capital

We believe that our people are the foundation of our success. We are dedicated to providing human capital management best practices that evolve with the needs of our business and our people. We are committed to attracting and retaining the industry's top talent by providing competitive wages and benefits and cultivating a workplace environment in which all of our employees can thrive and contribute. As of December 31, 2024, we had 477 full time equivalent employees. We have four office locations in: Minneapolis, Minnesota; Fort Mill, South Carolina; Dallas, Texas; and New York, New York.

Compensation and Benefits. We use market data to benchmark and guide our compensation practices to ensure that our compensation program is industry standard, competitive and rewarding, while at the same time aligning the interests of our employees with those of our stockholders. In addition to competitive wages and salaries, our compensation programs are designed to attract and retain talented professionals with diverse experiences and unique talents. Our overall package includes cash bonus and equity incentive compensation opportunities, a 401(k) plan and matching contribution, competitive health benefits, health savings accounts, generous paid time off, short- and long-term disability insurance, paid parental leave and various other leave options, life-planning, financial and legal resources, emotional well-being support and other voluntary supplemental benefits.

Employee Development and Talent Management. We believe in attracting, developing and retaining the best talent through leadership development training, talent management, career planning and other development opportunities through our educational programming. Employees receive regular business and compliance training to reinforce our culture of compliance and further enhance their career development. We encourage collaboration and teamwork to ensure mutual understanding of responsibilities, priorities and expectations. Succession planning is also a critical component of our business operations. We have established a talent management program that includes career development and ongoing evaluations of the depth of our leadership, focused on assessing succession planning needs and opportunities.

Health, Safety and Well-being. We sponsor a number of programs and events that emphasize the health and well-being of our employees, including relational, financial, emotional and physical. We promote a culture of health and well-being through employee assistance program services, comprehensive health care benefits and resources for preventative health, such as reduced-fee health club memberships.

Workplace Culture. We strive to foster a workplace culture where every individual on our team brings their unique perspectives, abilities and experiences, which contribute to driving our organizational value. We are committed to supporting the engagement and leadership of a well-rounded workforce, and providing opportunities for collaboration, development and career growth that is supportive and free from any form of unlawful discrimination or harassment; selecting and rewarding our employees based on their individual qualifications, results and performance; and respecting the unique characteristics and perspectives of each of our employees. Our employees are united by a shared commitment to excellence, ethical decision-making, and creating enduring value for our stakeholders. We regularly conduct pulse surveys and engage in focus groups to obtain valuable insights from employees on topics involving culture, inclusion, education, benefits and engagement, and pride ourselves on having a strong participation rate. We have a work-life integration and flexibility policy that represents our commitment to supporting our employees in their effort to manage their lives by affording some flexibility on where and when work is performed, while still ensuring that we continue to perform high quality work for the Company.

Charitable Partnerships. We are committed to strengthening our local communities through the support of charitable organizations allied with the housing sector, and in particular those that provide housing support to families and children in need. Examples of our support include partnerships with AEON, Simpson Housing, Supportive Housing Communities and Habitat for Humanity. In addition, we match dollar-for-dollar, up to a cap, the cash donations made by our employees to our charitable partnerships.

Operating and Regulatory Structure

Our business is subject to extensive regulation by U.S. federal and state governmental authorities, and self-regulatory organizations. We are required to comply with numerous federal and state laws, including those described below. The laws, rules and regulations comprising this regulatory framework change frequently, as can the interpretation and enforcement of existing laws, rules and regulations. Some of the laws, rules and regulations to which we are subject are intended primarily to safeguard and protect consumers, rather than stockholders or creditors. On occasion, we may receive requests from U.S. federal and state agencies for records, documents and information regarding our policies, procedures and practices regarding our business activities. We incur significant ongoing costs to comply with these regulations.

REIT Qualification

We elected to be taxed as a REIT under the Internal Revenue Code, commencing with our taxable period ended December 31, 2009. Our qualification as a REIT depends upon our ability to meet on a continuing basis, through actual investment and operating results, various complex requirements under the Internal Revenue Code relating to, among other things, the sources of our gross income, the composition and value of our assets, our distribution levels and the diversity of ownership of our shares. We believe that we are organized in conformity with the requirements for qualification and taxation as a REIT under the Internal Revenue Code, and we conduct our operations in a manner which will enable us to continue to meet the requirements for qualification and taxation as a REIT. Certain activities that we may perform may cause us to earn income that will not be qualifying income for REIT purposes. We have designated certain of our subsidiaries as TRSs to engage in such activities, and we may in the future form additional TRSs.

As long as we continue to qualify as a REIT, we generally will not be subject to U.S. federal income tax on the REIT taxable income we distribute currently to our stockholders. If we fail to qualify as a REIT in any taxable year and do not qualify for certain statutory relief provisions, we will be subject to U.S. federal income tax at regular corporate rates and may be precluded from qualifying as a REIT for the subsequent four taxable years following the year during which we lost our REIT qualification. Even if we qualify for taxation as a REIT, we may be subject to certain U.S. federal, state and local taxes on our income or property.

Investment Company Act of 1940

We conduct our operations so that we are not required to register as an investment company under the 1940 Act. If we were to fall within the definition of an investment company, we would be unable to conduct our business as described in this Annual Report on Form 10-K.

Section 3(a)(1)(A) of the 1940 Act defines an investment company as any issuer that "is or holds itself out as being engaged primarily in the business of investing, reinvesting or trading in securities." Section 3(a)(1)(C) of the 1940 Act also defines an investment company as any issuer that "is engaged or proposes to engage in the business of investing, reinvesting, owning, holding or trading in securities and owns or proposes to acquire investment securities having a value exceeding 40% of the value of the issuer's total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis." Excluded from the term "investment securities," among other things, are U.S. government securities and securities issued by majority-owned subsidiaries that are not themselves investment companies and are not relying on the exclusion from the definition of investment company set forth in Section 3(c)(1) or Section 3(c)(7) of the 1940 Act.

We are organized as a holding company that conducts business primarily through our subsidiaries. Any business conducted through our subsidiaries will be conducted in such a manner as to ensure that we do not meet the definition of "investment company" because less than 40% of the value of our total assets on an unconsolidated basis would consist of "investment securities."

To avoid registration as an investment company, certain of our subsidiaries rely on certain exemptions from the 1940 Act, including Section 3(c)(5)(C), which exempts entities that are "primarily engaged in the business of purchasing or otherwise acquiring mortgages and other liens on and interests in real estate." Under the SEC staff's current guidance, to qualify for this exemption, we must maintain (i) at least 55% of our assets in qualifying interests (referred to as the 55% Test) and (ii) at least 80% of our assets in qualifying interests plus other real estate related assets (referred to as the 80% Test). Qualifying interests for this purpose include mortgage loans and other assets, such as whole pool Agency and non-Agency RMBS, which are considered the functional equivalent of mortgage loans for the purposes of the 1940 Act. We expect each of our subsidiaries that may rely on Section 3(c)(5)(C) to invest at least 55% of its assets in qualifying interests in accordance with SEC staff guidance, and an additional 25% of its assets in either qualifying interests or other types of real estate related assets that do not constitute qualifying interests. We believe that we conduct our business so that we are exempt from the 1940 Act under Section 3(c)(5)(C), but rapid changes in the values of our assets could disrupt prior efforts to conduct our business to meet the 55% Test and the 80% Test. Our efforts to comply with the 55% Test and the 80% Test could require us to acquire or dispose of certain assets at unfavorable prices and limit our ability to pursue certain investment opportunities.

Mortgage Industry Regulation

As an owner of MSR and servicer and originator of residential mortgage loans, we must comply with various federal and state laws, rules and regulations. These rules generally focus on consumer protection and include, among others, rules promulgated under the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, and the Gramm-Leach-Bliley Financial Modernization Act of 1999, or the Gramm-Leach-Bliley Act. We are also required to maintain qualifications, registrations and licenses in certain states in order to own and service certain of our assets. These requirements can and do change as statutes and regulations are enacted, promulgated or amended, or as regulatory guidance or interpretations evolve or change, and the trend in recent years among federal and state lawmakers and regulators has been toward increasing laws, regulations and investigative proceedings in relation to the mortgage industry generally.

The Dodd-Frank Act significantly changed the regulation of financial institutions and the financial services industry, including the mortgage industry. The Dodd-Frank Act tasked many agencies with issuing a variety of new regulations, including rules related to mortgage origination, mortgage servicing, securitization transactions and derivatives. The Dodd-Frank Act also created the Consumer Financial Protection Bureau, or the CFPB, which has broad rulemaking authority with respect to many of the federal consumer protection laws applicable to the mortgage industry. In addition to its rulemaking authority, the CFPB has supervision, examination and enforcement authority over consumer financial products and services by certain non-depository institutions, including our Company. The CFPB has issued a series of rules and related guidance as part of ongoing efforts to enhance consumer protections and create uniform standards for the mortgage lending and servicing industries. These rules include requirements addressing how lenders must evaluate a consumer's ability to repay a mortgage loan, specific disclosures and communications that must be made to consumers at various stages in the mortgage lending and servicing processes, and specific actions servicers must take at various stages in a loan's life cycle, including providing assistance to consumers who encounter financial hardship and struggle to make their mortgage payment. These rules have led to increased costs to originate and service loans across the mortgage industry, greater regulatory scrutiny of originators, servicers and other mortgage industry participants from federal and state regulators and increased litigation and complaints against these participants from both consumers and government officials.

The Gramm-Leach-Bliley Act imposes obligations on us to safeguard the information we maintain on mortgage loan borrowers and imposes restrictions on our ability to share that information with third parties and affiliates. In addition, a growing number of states have passed or enhanced laws to further protect borrower information, including laws that regulate the use and storage of personally identifiable information, require notifications to borrowers if the security of their personal information is breached, or require us to encrypt personal information when it is transmitted and stored electronically. These evolving federal and state laws require the ongoing review of our operations, increase our compliance costs, and affect our ability to use and share information with third parties as part of our business.

We have implemented and will continue to implement policies, procedures and, as applicable, information technology systems in order to ensure ongoing compliance with the laws, rules and regulations applicable to our business. We have incurred and expect to incur significant ongoing operational costs to comply with such laws, rules and regulations.

Competition

Our comprehensive income depends, in large part, on our ability to acquire assets at favorable spreads over our borrowing costs. In acquiring our target assets, we compete with other REITs, specialty finance companies, savings and loan associations, banks, mortgage bankers, insurance companies, mutual funds, institutional investors, investment banking firms, financial institutions, governmental agencies, mortgage loan servicers, asset management firms and other entities. Some of these entities may not be subject to the same regulatory constraints that we are (*e.g.*, REIT compliance or maintaining an exemption under the 1940 Act). Many of our competitors are significantly larger than us, have access to greater capital and other resources and may have other advantages over us. In addition, some of our competitors may have higher risk tolerances or different risk assessments, which could allow them to consider a wider variety of investments and establish different counterparty relationships than us. Further, we may from time-to-time face competition from government agencies, such as the Federal Reserve, in connection with initiatives designed to stimulate the U.S. economy or the mortgage market. Market conditions may from time to time attract more competitors for certain of our target assets, which will not only affect the supply of assets but may also increase the competition for sources of financing for these assets. An increase in the competition for sources of funding could adversely affect the availability and cost of financing, and thereby adversely affect our financial results.

As we grow our subservicing business, we will also compete with bank and non-bank servicers for third-party subservicing clients. The subservicing market in which we operate is highly competitive and we face competition related to the pricing and services we offer. We intend to compete by delivering meaningful value to homeowners through building lasting relationships by treating our customers with respect and professionalism, and providing resources and ancillary products and services for our customers to help manage and protect their mortgages, homes and related assets. For our MSR third-party subservicing clients, we believe we can successfully compete because we offer experience and expertise in MSR investing, with institutional quality controls and a strong compliance focus, and we are well-capitalized to withstand today's evolving risks and to invest in necessary infrastructure to support our business. Our inability to attract subservicing clients may adversely impact our ability to grow our servicing platform, which could in turn result in an inability to achieve economies of scale, reduce costs and adversely affect our financial results.

Available Information

Our website can be found at *www.twoinv.com*. We make available, free of charge on our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as are filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as well as our proxy statement with respect to our annual meeting of stockholders, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our Exchange Act reports filed with, or furnished to, the SEC are also available at the SEC's website at *www.sec.gov*. The content of any website referred to in this Annual Report on Form 10-K is not incorporated by reference into this Form 10-K unless expressly noted.

We also make available, free of charge on our website, the charters for our Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee and Risk Oversight Committee, as well as our Corporate Governance Guidelines, Code of Business Conduct and Ethics, Whistleblowing Procedures and Stockholder Communications Policy. Within the time period required by the SEC and the NYSE, we will post on our website any amendment to the Code of Ethics and any waiver applicable to any executive officer, director or senior officer (as defined in the Code of Ethics).

Our Investor Relations Department can be contacted at:

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Item 1A. Risk Factors

The following is a summary of the significant risk factors known to us that we believe could have a material adverse effect on our business, financial condition and results of operations. In addition to understanding the key risks described below, investors should understand that it is not possible to predict or identify all risk factors and, consequently, the following is not a complete discussion of all potential risks or uncertainties.

Risks Related to Our Business and Operations

Difficult conditions in the residential mortgage and real estate markets, the financial markets and the economy generally may adversely impact our business, results of operations and financial condition.

Our results of operations are materially affected by conditions in the residential mortgage and real estate markets, the financial markets and the economy generally. In past years, concerns about the COVID-19 pandemic, unemployment, the availability and cost of credit, rising government debt levels, inflation, energy costs, global supply chain disruptions, climate change, global economic lethargy, warfare, geopolitical unrest across various regions worldwide, European sovereign debt issues, U.S. budget debates, federal government shutdowns and international trade disputes, the imposition of sanctions or new or increased tariffs, have from time to time contributed to increased volatility and uncertainty in the economy and financial markets. Adverse developments with respect to any of these factors may have an impact on new demand for homes and on homeowners' ability to make their mortgage payments, which may compress home ownership rates and weigh heavily on future home price performance. There is a strong correlation between home price growth rates (or losses) and mortgage loan delinquencies. Any stagnation in or deterioration of the residential mortgage or real estate markets may limit our ability to acquire our target assets on attractive terms or cause us to experience losses related to our assets.

Our business model depends in part upon the continuing viability of Fannie Mae and Freddie Mac, or similar institutions, and any changes to their structure or creditworthiness could have an adverse impact on us.

We purchase Agency RMBS that are protected from the risk of default on the underlying mortgages by guarantees from Fannie Mae, Freddie Mac or, in the case of Ginnie Mae securities, the U.S. government. In 2008, the U.S. government and U.S. Treasury undertook a series of actions designed to stabilize these GSEs, including placing them into a federal conservatorship. In December 2009, the U.S. government committed virtually unlimited capital to ensure the continued existence of Fannie Mae and Freddie Mac. There is no assurance that such capital will continue to be available or that the GSEs will honor their guarantees or other obligations. If these GSEs fail to honor their guarantees, the value of any Agency RMBS guaranteed by the GSEs that we hold would decline.

The continued flow of residential mortgage-backed securities from the GSEs is essential to the operation of the mortgage markets in their current form. A number of legislative proposals have been introduced in the past that would phase out or reform the GSEs. It is not possible to predict the scope and nature of the actions that the U.S. government could ultimately take with respect to the GSEs, including in light of recent changes in administration and executive offices of the U.S. government. Although any phase out or reform may take several years to implement, if the structure of Fannie Mae or Freddie Mac were altered, or if they were eliminated altogether, the amount and type of Agency RMBS and other mortgage-related assets available for investment would be significantly affected. A reduction in supply of Agency RMBS and other mortgage-related assets would result in increased competition for those assets and likely lead to a significant increase in the price for our target assets. Additionally, market uncertainty with respect to the treatment of the GSEs could have the effect of reducing the actual or perceived quality of, and therefore the market value for, the Agency RMBS that we currently hold in our portfolio.

We operate in a highly regulated environment and may be adversely affected by changes in federal and state laws and regulations.

We operate in a highly regulated environment and are subject to the rules, regulations, approvals, licensing, reporting and examination requirements of various federal, state and local authorities. Any change in applicable federal, state or local laws, rules and regulations, including as a result of executive orders, or the interpretation or enforcement thereof, could have a substantial impact on our assets, operating expenses, business strategies and results of operations. Our inability or failure to comply with the rules, regulations or reporting requirements, to obtain or maintain approvals and licenses applicable to our businesses, or to satisfy annual or periodic examinations may impact our ability to do business and expose us to fines, penalties or other claims and, as a result, could harm our business.

Federal and state regulation of the mortgage industry is complex and constantly evolving, and changes to applicable rules, regulations and guidance may adversely impact our business.

As a licensed servicer and owner of MSR, we are required to comply with numerous federal, state and local laws and regulations that control the manner in which we conduct our business and operations. In addition, given we are not a federally chartered depository institution, we must comply with applicable state licensing and compliance requirements in all jurisdictions in which we operate. These requirements can and do change as statutes and regulations are enacted, promulgated or amended, or as regulatory guidance or interpretations evolve or change.

Federal and state laws, regulations and guidance that govern mortgage servicing and originations combine to create a complex and constantly evolving regulatory environment, and the failure to comply with these requirements may result in fines or the suspension or revocation of the qualifications, registrations and licenses necessary to operate as a servicer and owner of MSR and as a mortgage originator. New or modified regulations at the federal or state level to address concerns on a variety of fronts, including potential impacts from climate change, fair and equitable access to housing and consumer data privacy and security concerns, could increase our operational expenses or otherwise enhance regulatory supervision and enforcement efforts. Ongoing efforts to enhance cooperation between federal and state regulators could also contribute to increased industry scrutiny.

We expect to continue to incur the operational and system costs necessary to maintain the processes that are needed to ensure our compliance with applicable rules and regulations as well as to monitor compliance by our business partners. Additional rules and regulations implemented by the CFPB and state regulators, as well as any changes to existing rules, could lead to changes in the way we conduct our business and increased costs of compliance.

We operate in a highly competitive market and we may not be able to compete successfully.

We operate in a highly competitive market. Our profitability depends, in large part, on our ability to acquire a sufficient supply of our target assets at favorable prices. In acquiring assets, we compete with a variety of investors, including other mortgage REITs, specialty finance companies, public and private investment funds, asset managers, commercial and investment banks, broker-dealers, commercial finance and insurance companies, the GSEs, mortgage servicers and other financial institutions. In addition, the Federal Reserve has in the past committed to purchase unlimited amounts of Agency RMBS and other assets in order to stabilize the financial markets. Many of our competitors are substantially larger and may have greater financial, technical, marketing and other resources than we do. Competition for our target assets may lead to the price of such assets increasing and their availability decreasing, which may limit our ability to generate desired returns, reduce our earnings and, in turn, decrease the cash available for distribution to our stockholders.

In addition, as we seek to grow our subservicing business, we will compete with bank and non-bank servicers for third-party subservicing clients. The subservicing market is highly competitive, and we expect to face competition related to the pricing and services we offer. There can be no assurance that we will be able to attract and retain subservicing clients, which may adversely impact our ability to grow our servicing platform and achieve economies of scale.

Finally, as we seek to expand our mortgage loan origination business, we will compete with bank and non-bank originators to provide various residential mortgage loan and real estate services products. The mortgage loan origination market remains highly competitive. There can be no assurance that we will be able to recapture or identify, attract, and fund new or additional mortgage loan originations, which may adversely impact our ability to grow our mortgage loan origination business.

Our business could suffer if we fail to attract and retain a skilled management team and workforce.

We operate in a specialized and highly regulated industry and our success is dependent upon the efforts, experience, diligence, skill and deep knowledge of our industry and operations of our executive officers and our employees. Competition for employee talent can be significant, and the companies with which we compete for employees may have greater resources than we do and may be able to offer more attractive terms of employment. The departure of an executive officer, key employee or a significant and sudden turnover of employees in a key operational area of our Company could have a material adverse effect on our ability to conduct our operations and to comply with contractual and regulatory obligations, which could adversely impact our business, results of operations and financial condition.

We may change any of our strategies, policies or procedures without stockholder consent.

We may change any of our strategies, policies or procedures with respect to investments, asset allocation, growth, operations, indebtedness, financing strategy and distributions at any time without the consent of stockholders. Changes in strategy could also result in the elimination of certain investments and business activities that we no longer view as attractive or in alignment with our business model. Shifts in strategy may increase our exposure to credit risk, interest rate risk, financing risk, default risk, regulatory risk and real estate market fluctuations. We also cannot assure you that we will be able to effectively execute on or realize the potential benefits of changes in strategy. Any such changes could adversely affect our financial condition, risk profile, results of operations, the market price of our common stock and our ability to make distributions to stockholders.

Our risk management policies and procedures may not be effective.

We have established and maintain various risk management policies and procedures designed to identify, monitor and mitigate financial risks, such as credit risk, interest rate risk, prepayment risk and liquidity risk, as well as operational, information security and compliance risks related to our business, assets and liabilities. These policies and procedures may not sufficiently identify all of the risks to which we are or may become exposed or mitigate the risks we have identified. Any expansion of our business activities, such as the recent launch of our originations platform through our wholly-owned subsidiary, RoundPoint, may result in our being exposed to risks to which we have not previously been exposed or may increase our exposure to certain types of risks. Alternatively, any narrowing of our business activities may increase the concentration of our exposure to certain types of risk. Any failure to effectively identify and mitigate the risks to which we are exposed could have an adverse effect on our business, results of operations and financial condition.

Maintaining our exemptions from registration as an investment company under the 1940 Act imposes limits on our operations.

We intend to conduct our operations so as not to become required to register as an investment company under the 1940 Act. Section 3(a)(1)(A) of the 1940 Act defines an investment company as any issuer that is or holds itself out as being engaged primarily in the business of investing, reinvesting or trading in securities. We are organized as a holding company that conducts its businesses primarily through our subsidiaries. We intend to conduct the operations of Two Harbors and its subsidiaries so that they do not come within the definition of an investment company, either because less than 40% of the value of their total assets on an unconsolidated basis will consist of "investment securities" or because they meet certain other exceptions or exemptions set forth in the 1940 Act based on the nature of their business purpose and activities.

Certain of our subsidiaries may rely upon the exemption set forth in Section 3(c)(5)(C) of the 1940 Act, which is available for entities “primarily engaged in the business of purchasing or otherwise acquiring mortgages and other liens on and interests in real estate.” This exemption generally means that at least 55% of each such subsidiary’s portfolio must be comprised of qualifying assets and at least 80% of its portfolio must be comprised of qualifying assets and real estate-related assets under the 1940 Act. Qualifying assets for this purpose include mortgage loans and other assets, such as whole pool Agency and non-Agency RMBS, which are considered the functional equivalent of mortgage loans for the purposes of the 1940 Act. We expect each of our subsidiaries relying on Section 3(c)(5)(C) to invest at least 55% of its assets in whole pool Agency RMBS and other interests in real estate that constitute qualifying assets in accordance with SEC staff guidance and an additional 25% of its assets in either qualifying assets and other types of real estate related assets that do not constitute qualifying assets.

As a result of the foregoing restrictions, we may be limited in our ability to make or dispose of certain investments. To the extent the SEC publishes new or different guidance with respect to these matters, we may be required to adjust our strategy accordingly. Although we monitor the portfolios of our subsidiaries that may rely on the Section 3(c)(5)(C) exemption periodically, there can be no assurance that such subsidiaries will be able to maintain this exemption.

Loss of our 1940 Act exemptions would adversely affect us, the market price of shares of our common stock and our ability to distribute dividends, and could result in the termination of certain of our financing or other agreements.

As described above, we intend to conduct operations so that we are not required to register as an investment company under the 1940 Act. Although we monitor our portfolio and our activities periodically, there can be no assurance that we will be able to maintain our exemption from investment company registration under the 1940 Act. Furthermore, any modifications to the 1940 Act exemption rules or interpretations may require us to change our business and operations in order for us to continue to rely on such exemption. If we were no longer able to qualify for exemptions from registration under the 1940 Act, we could be required to restructure our activities or the activities of our subsidiaries, including effecting sales of assets in a manner that, or at a time when, we would not otherwise choose, which could negatively affect the value of our common stock, the sustainability of our business model, and our ability to make distributions. Such sales could occur during adverse market conditions, and we could be forced to accept prices below that which we believe are appropriate. The loss of our 1940 Act exemptions may also result in a default under or permit certain of our counterparties to terminate the many repurchase agreements, financing facilities or other agreements we have in place.

The lack of liquidity of our assets may adversely affect our business, including our ability to value, finance and sell our assets.

We have and may in the future acquire assets or other instruments with limited or no liquidity, including securities, MSR and other instruments that are not publicly traded. Market conditions could also significantly and negatively affect the liquidity of our assets. It may be difficult or impossible to obtain third-party pricing on such illiquid assets and validating third-party pricing for illiquid assets may be more subjective than more liquid assets. Illiquid assets typically experience greater price volatility, as a ready market may not exist for such assets, and such assets can be more difficult to value.

Any illiquidity in our assets may make it difficult for us to sell such assets if the need or desire arises. The ability to quickly sell certain of our target assets, such as certain securities and MSR, may be constrained by a number of factors, including a small number of willing buyers, lack of transparency as to current market terms and price, and time delays resulting from the buyer’s desire to conduct due diligence on the assets, negotiation of a purchase and sale agreement, compliance with any applicable contractual or regulatory requirements, and for certain assets like MSR, operational and compliance considerations. Consequently, even if we identify a buyer for certain of our securities and MSR, there is no assurance that we would be able to sell such assets in a timely manner if the need or desire arises.

Assets that are illiquid are typically more difficult and costly to finance. As a result, we may be required to finance the assets at unattractive rates or hold them on our balance sheet without the use of leverage. Assets tend to become less liquid during times of financial stress, which is often the time that liquidity is most needed. To the extent that we use leverage to finance assets that later become illiquid, we may lose that leverage if the financing counterparty determines that the collateral is no longer sufficient to secure the financing, or the counterparty could reduce the amount of money that it is willing to lend against the asset.

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 to benefit our MSR portfolio through the retention or recapture of 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, elevated or 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 use leverage in executing our business strategy, which may adversely affect the return on our assets and may reduce cash available for distribution to our stockholders, as well as increase losses when economic conditions are unfavorable.

We use leverage to finance many of our investments and to enhance our financial returns. Through the use of leverage, we may acquire positions with market exposure significantly greater than the amount of capital committed to the transaction. It is not uncommon for investors in Agency RMBS to obtain leverage equal to ten or more times equity through the use of repurchase agreement financing. Subject to market conditions, we anticipate that we may deploy, on a debt-to-equity basis, up to ten times leverage on our Agency RMBS; however, there is no specific limit on the amount of leverage that we may use.

Leverage will magnify both the gains and the losses of our positions. Leverage will increase our returns as long as we earn a greater return on investments purchased with borrowed funds than our cost of borrowing such funds. However, if we use leverage to acquire an asset and the value of the asset decreases, the leverage will increase our losses. Even if the asset increases in value, if the asset fails to earn a return that equals or exceeds our cost of borrowing, leverage will decrease our returns.

We may be required to post large amounts of cash as collateral or margin to secure our leveraged positions, including on our MSR financing facilities. In the event of a sudden, precipitous drop in value of our financed assets, we might not be able to liquidate assets quickly enough to repay our borrowings, further magnifying losses. Even a small decrease in the value of a leveraged asset may require us to post additional margin or cash collateral. This may adversely affect our financial condition and results of operations and decrease the cash available to us for distributions to stockholders.

We depend on repurchase agreements and other credit facilities to execute our business plan and any limitation on our ability to access funding through these sources could have a material adverse effect on our business, results of operations and financial condition.

Our ability to purchase and hold assets and execute our business strategy is affected by our ability to secure repurchase agreements and other credit facilities on acceptable terms. We currently have repurchase agreements, revolving credit facilities, a warehouse facility and other credit facilities in place with numerous counterparties, but we can provide no assurance that lenders will continue to provide us with sufficient financing through the repurchase markets or otherwise. In addition, with respect to MSR financing, there can be no assurance that the GSEs will consent to such transactions or consent on terms consistent with prior MSR financing transactions. Because repurchase agreements and similar credit facilities are generally short-term commitments of capital, changing conditions in the financing markets may make it more difficult for us to secure continued financing during times of market stress.

Our ability to efficiently access financing through our repurchase agreements or otherwise may be adversely impacted by counterparty requirements regarding the type of assets that may be sold and the timing and process for such sales. Counterparty review and approval processes may delay the timing in which funding may be provided, or preclude funding altogether. For MSR, delays may also occur due to the need to obtain GSE approval of the collateral to be posted or the need for third-party valuations of the MSR collateral. Our lenders also may revise their eligibility requirements for the types of assets they are willing to finance or the terms of such financings, based on, among other factors, the regulatory environment and their management of perceived risk.

Changes in the financing markets could adversely affect the marketability of the assets in which we invest, and this could negatively affect the value of our assets. If our lenders are unwilling or unable to provide us with financing, or if the financing is only available on terms that are uneconomical or otherwise not satisfactory to us, we could be forced to sell assets when prices are depressed. The amount of financing we receive under our repurchase agreements, revolving credit facilities or other credit facilities will be directly related to the lenders' valuation of the assets that secure the outstanding borrowings. If a lender determines that the value of the assets has decreased, it typically has the right to initiate a margin call, requiring us to transfer additional assets to such lender, or repay a portion of the outstanding borrowings. We may be forced to sell assets at significantly depressed prices to meet margin calls and to maintain liquidity at levels satisfactory to the counterparty, which could cause us to incur losses. Moreover, to the extent that we are forced to sell assets because of the availability of financing or changes in market conditions, other market participants may face similar pressures, which could exacerbate a difficult market environment and result in significantly greater losses on the sale of such assets. In an extreme case of market duress, a market may not exist for certain of our assets at any price.

Although we generally seek to reduce our exposure to lender concentration-related risk by entering into financing relationships with multiple counterparties, we are not required to observe specific diversification criteria, except as may be set forth in the investment guidelines adopted by our board of directors. To the extent that the number of or net exposure under our lending arrangements may become concentrated with one or more lenders, the adverse impacts of defaults or terminations by such lenders may be significantly greater.

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 a warehouse facility 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 one or more 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.

Our inability to meet certain financial covenants related to our repurchase agreements, revolving credit facilities or other credit facilities could adversely affect our financial condition, results of operations and cash flows.

In connection with certain of our repurchase agreements, warehouse facilities, revolving credit facilities and other credit facilities, we are required to comply with certain financial covenants, the most restrictive of which are disclosed within Item 7, "*Management's Discussion and Analysis of Financial Conditions and Results of Operations*" of this Annual Report on Form 10-K. Compliance with these financial covenants will depend on market factors and the strength of our business and operating results. Failure to comply with our financial covenants could result in an event of default, termination of the lending facility, acceleration of all amounts owing under the lending facility, and may give the counterparty the right to exercise certain other remedies under the lending agreement, including without limitation the sale of the collateral securing the facility at the time of default, unless the counterparty granted a waiver. In addition, we may be subject to cross-default provisions under certain financing facilities that could cause an event of default under such financing facilities to be triggered by events of default under other financing arrangements.

If a counterparty to a repurchase agreement defaults on its obligation to resell the underlying security back to us at the end of the repurchase agreement term, or if we default on our obligations under the repurchase agreement, we may incur losses.

When we enter into repurchase agreements, we sell the assets to lenders and receive cash from the lenders. The lenders are obligated to resell the same assets back to us at the end of the term of the repurchase agreement. Because the cash that we receive from the lender when we initially sell the assets to the lender is less than the value of those assets (the difference being the "haircut"), if the lender defaults on its obligation to resell the same assets back to us, we would incur a loss on the repurchase agreement equal to the amount of the haircut (assuming there was no change in the value of the securities). Further, if we default on our obligations under a repurchase agreement, the lender will be able to terminate the repurchase agreement and may cease entering into any other repurchase agreements with us. If a default occurs under any of our repurchase agreements and a lender terminates one or more of its repurchase agreements, we may need to enter into replacement repurchase agreements with different lenders. There can be no assurance that we will be successful in entering into such replacement repurchase agreements on the same terms as the repurchase agreements that were terminated or at all.

Our rights under our repurchase agreements are subject to the effects of bankruptcy laws in the event of the bankruptcy or insolvency of us or our lenders under the repurchase agreements.

In the event of our insolvency or bankruptcy, certain repurchase agreements may qualify for special treatment under the U.S. Bankruptcy Code, the effect of which, among other things, would be to allow the lender under the applicable repurchase agreement to avoid the automatic stay provisions of the U.S. Bankruptcy Code and to foreclose on the collateral agreement without delay. In the event of the insolvency or bankruptcy of a lender during the term of a repurchase agreement, the lender may be permitted, under applicable insolvency laws, to repudiate the contract, and our claim against the lender for damages may be treated simply as an unsecured creditor claim. In addition, if the lender is a broker or dealer subject to the Securities Investor Protection Act of 1970, or an insured depository institution subject to the Federal Deposit Insurance Act, our ability to exercise our rights to recover our assets under a repurchase agreement or to be compensated for any damages resulting from the lender's insolvency may be further limited by those statutes. These claims would be subject to significant delay and, if and when received, may be substantially less than the damages we actually incur.

The impairment or negative performance of other financial institutions could adversely affect us.

We have exposure to and routinely execute transactions with numerous counterparties in the financial services industry, including broker-dealers, commercial banks, investment banks, investment funds and other institutions. The operations of U.S. and global financial services institutions are highly interconnected and a decline in the financial condition of one or more financial services institutions may expose us to credit losses or defaults, limit our access to liquidity or otherwise disrupt the operation of our businesses. While we regularly assess our exposure to different counterparties, the performance and financial strength of specific institutions are subject to rapid change, the timing and extent of which cannot be known.

We may not have the ability to raise funds necessary to pay principal amounts owed upon maturity of our outstanding convertible senior notes or to purchase such notes upon a fundamental change.

We have issued and have outstanding $261.9 million aggregate principal amount of 6.25% convertible senior notes due January 2026. To the extent these notes are not converted into common stock by the noteholders prior to their maturity date, we will be obligated to repay the principal amount of all outstanding notes upon maturity. In addition, if a fundamental change occurs (as described in the supplemental indenture governing the notes), noteholders have the right to require us to purchase for cash any or all of their notes. We may not have sufficient funds available at the time we are required to repay principal amounts or to purchase the notes upon a fundamental change, and we may not be able to raise additional capital or arrange necessary financing in order to make such payments on terms that are acceptable to us, if at all.

An increase in our borrowing costs relative to the interest that we receive on our leveraged assets may adversely affect our profitability.

As our repurchase agreements and other short-term borrowings mature, we must enter into new borrowings, find other sources of liquidity or sell assets. An increase in short-term interest rates at the time that we seek to enter into new borrowings would reduce the spread between the returns on our assets and the cost of our borrowings. This would adversely affect the returns on our assets, which might reduce earnings and, in turn, cash available for distribution to stockholders.

We are highly dependent on information technology, and system failures or security breaches could disrupt our business.

Our business is highly dependent on information technology and our ability to process, record and monitor many complex transactions and large amounts of data efficiently and accurately. In the ordinary course of our business, we store sensitive data, including our proprietary business information and that of our business partners, and non-public personally identifiable information of mortgage borrowers, on our networks. The secure maintenance and transmission of this information is critical to our operations. Computer malware, viruses, ransomware and phishing attacks remain widespread and are increasingly sophisticated. We are from time to time the target of attempted cyber threats. We continuously monitor and develop our information technology networks and infrastructure to prevent, detect, address and mitigate the risk of unauthorized access, misuse, computer viruses and other events that could have a security impact. Despite these security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee or service provider error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties, disruption to our operations, or disruption to our trading activities or damage our reputation, which could have a material adverse effect on our financial results and negatively affect the market price of our common stock and our ability to pay dividends to stockholders.

The resources required to protect our information technology and infrastructure, and to comply with the laws and regulations related to data and privacy protection, are continuously evolving. Even in circumstances where we are able to successfully protect such technology and infrastructure from attacks, we may incur significant expenses in connection with our responses to such attacks. Government and regulatory scrutiny of the measures taken by companies to protect against cybersecurity attacks has resulted in heightened cybersecurity requirements and additional regulatory oversight. Any of the foregoing issues may adversely impact our results of operations and financial condition.

We enter into hedging transactions that expose us to contingent liabilities in the future, which may adversely affect our financial results or cash available for distribution to stockholders.

We engage in transactions intended to hedge against various risks to our portfolio, including the exposure to changes in interest rates. The extent of our hedging activity varies in scope based on, among other things, the level and volatility of interest rates, the type of assets held and other market conditions. Although these transactions are intended to reduce our exposure to various risks, hedging may fail to adequately protect or could adversely affect us because, among other things: available hedges may not correspond directly with the risks for which protection is sought; the duration of the hedge may not match the duration of the related liability; the amount of income that a REIT may earn from certain hedging transactions is limited by U.S. federal income tax provisions; the credit quality of a hedging counterparty may be downgraded to such an extent that it impairs our ability to sell or assign our side of the hedging transaction; and the hedging counterparty may default on its obligations.

Subject to maintaining our qualification as a REIT and satisfying the criteria for no-action relief from the Commodity Futures Trading Commission’s commodity pool operator registration rules, there are no current limitations on the hedging transactions that we may undertake. Our hedging transactions could require us to fund large cash payments in certain circumstances (*e.g.*, the early termination of the hedging instrument caused by an event of default or other early termination event, or a demand by a counterparty that we make increased margin payments). Our ability to fund these obligations will depend on the liquidity of our assets and our access to capital at the time. The need to fund these obligations could adversely affect our financial condition. Further, hedging transactions, which are intended to limit losses, may actually result in losses, which would adversely affect our earnings and could in turn reduce cash available for distribution to stockholders.

Our financial results may experience greater fluctuations due to our decision not to elect hedge accounting treatment on our derivative instruments.

We have elected to not qualify for hedge accounting treatment under Accounting Standards Codification (ASC) 815, *Derivatives and Hedging,* or ASC 815, for our current derivative instruments. The economics of our derivative hedging transactions are not affected by this election; however, our earnings (losses) for U.S. generally accepted accounting principles, or U.S. GAAP, purposes may be subject to greater fluctuations from period to period as a result of this accounting treatment for changes in fair value of derivative instruments or for the accounting of the underlying hedged assets or liabilities in our financial statements, as it does not necessarily align with the accounting used for derivative instruments.

We are subject to risks associated with the use of third-party service providers.

We have engaged numerous third parties to provide us with financial, technology and other services to support our servicing and originations operations, as well as for general corporate purposes. If a service provider’s activities do not comply with the applicable legal, regulatory or contractual requirements, we could be exposed to liability, which could negatively impact our relationships with our customers or regulators, among others. In addition, if our current service providers were to stop providing services to us on acceptable terms, including as a result of one or more bankruptcies due to poor economic conditions, we may be unable to procure alternative services from other service providers in a timely and efficient manner and on acceptable terms, or at all. If a service provider fails to comply with applicable legal or regulatory requirements on our behalf, or provide to us the services we are contractually owed, we may incur significant costs to resolve any such disruptions in service and this could adversely affect our business, financial condition and results of operations.

In addition, in connection with our servicing and origination activities and ownership of MSR, we possess non-public personally identifiable information that is shared with third-party service providers as required or permitted by law. In the event the information technology networks and infrastructure of a third-party service provider is breached, we may be liable for losses suffered by individuals whose personal information is stolen as a result of such breach and any such liability could be material. Even if we are not liable for such losses, any breach of these third-party systems could expose us to material costs related to notifying affected individuals or other parties and providing credit monitoring services, as well as to regulatory fines or penalties.

Our ability to own and manage MSR and service mortgage loans is subject to terms and conditions established by the GSEs, which are subject to change.

Our subsidiaries’ continued approval from the GSEs to own and manage MSR and service mortgage loans is subject to compliance with each of their respective selling and servicing guidelines, minimum capital requirements and other conditions they may impose from time to time at their discretion. Failure to meet such guidelines and conditions could result in the unilateral termination of our subsidiaries’ approved status by one or more GSEs, the acceleration and termination of our MSR financing facilities or the assessment of fines and loss of reimbursement of loan-related advances, expenses, interest and servicing fees. In addition, the implementation of more restrictive or operationally intensive guidance may increase the costs associated with owning and managing MSR, our ability to finance MSR and our ability to generate revenue from servicing mortgage loans.

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 may 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.

We are directly subject to risks associated with mortgage servicing, including risks related to previous mortgage loan servicers.

Through our operational platform, RoundPoint, we directly service a portion of the mortgage loans underlying our MSR assets as well as mortgage loans underlying MSR owned by third parties in accordance with requirements set forth by regulatory agencies and GSEs. This exposes us to risks inherent in mortgage loan servicing more directly than engaging third-party mortgage loan servicers, including legal or regulatory investigations or actions, adverse operational and reputational impacts resulting from a failure to comply with GSE rules and guidelines, additional servicing costs or servicing advance obligations resulting from payment delinquencies and mortgage defaults, and cybersecurity failures or breaches. Any of the foregoing risks could have a material adverse effect on our business, financial condition, results of operations and liquidity.

In addition, when the servicing of a mortgage loan is assumed either through the purchase of MSR or through a subservicing arrangement, such loan may have been previously serviced in a manner that could interfere with our ability to meet certain applicable requirements. If not remediated by a prior servicer, such events may lead to the eventual realization of a loss to us. The recovery process against a prior servicer can be prolonged and amounts ultimately recovered from prior servicers may differ from our estimated recoveries recorded based on the prior servicer’s interpretation of responsibility for loss, which could lead to our realization of additional losses.

Our servicing and origination activities expose us to risk of litigation, which may materially and adversely affect our business and financial condition.

We are obligated to comply with numerous federal and state laws and regulations in connection with our mortgage loan originations and servicing businesses including the Fair Housing Act and Equal Credit Opportunity Act, which are intended to provide protection from intentional and unintentional discriminatory practices to applicants and borrowers. If these anti-discrimination initiatives continue to expand, we could experience increased administrative burdens and incur additional related compliance costs and expenses. If our loan origination or mortgage servicing practices are found to be discriminatory, we may be found liable, experience reputational harm and incur expenses and costs in connection with disputing these allegations or settling claims.

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.

We may be subject to representation and warranty risk in our capacity as an owner of MSR as well as in connection with our prior securitization transactions and our sales of MSR and other assets.

The MSR we acquire may be subject to existing representations and warranties made to the applicable investor (including, without limitation, the GSEs) regarding, among other things, the origination and prior servicing of those mortgage loans, as well as future servicing practices following our acquisition of such MSR. If such representations and warranties are inaccurate, we may be obligated to repurchase certain mortgage loans or indemnify the applicable investor for any losses suffered as a result of the origination or prior servicing of the mortgage loans. As such, the applicable investor may have direct recourse to us for such origination and/or prior servicing issues depending upon the terms and conditions approved by such investor in connection with our purchase of the related MSR.

In connection with our prior securitization transactions and with the sales of our MSR and other assets from time to time, we may have been or may be required to make certain disclosures, representations and warranties to the purchasers of the assets regarding certain characteristics of those assets. If our disclosures or representations and warranties are alleged or found to contain inaccuracies or omissions, we may be obligated to repurchase the assets or indemnify the applicable purchaser or be liable under federal or state securities laws or other applicable laws for damages to third parties. This may result in a loss or cause us to incur additional costs and expenses in connection with disputing these allegations or settling claims. Even if we obtain representations and warranties from the parties from whom we acquired the asset, as applicable, they may not correspond with the representations and warranties we make or may otherwise not protect us from losses. Additionally, the loan originator or other parties from whom we acquired the MSR may be insolvent or otherwise unable to honor their respective indemnification or repurchase obligations for breaches of representation and warranties.

Legal matters related to the termination of our Management Agreement with PRCM Advisers may adversely affect our business, results of operations, and/or financial condition.

On August 14, 2020, our Management Agreement with PRCM Advisers terminated and we thereafter became a self-managed company. In connection with the termination of our Management Agreement, PRCM Advisers filed a complaint in federal court that 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 complaint seeks, among other things, an order enjoining the Company from making any use of or disclosing PRCM Advisers' trade secret, proprietary, or confidential information; damages in an amount to be determined at a hearing and/or trial; disgorgement of the Company's wrongfully obtained profits; and fees and costs incurred by PRCM Advisers in pursuing the action. Our board of directors believes the complaint is without merit and that the Company has complied with the terms of the Management Agreement. However, the results of litigation are inherently uncertain. It is possible that a court could enjoin us from using certain intellectual property. In addition, any damages or costs and fees that may be awarded to PRCM Advisers related to the litigation may be significant. While we dispute and intend to vigorously defend against the claims set forth in the complaint, it is possible that the results of the litigation with PRCM Advisers may adversely affect our business, results of operations and financial condition.

Risks Related To Our Assets

Declines in the market values of our assets may adversely affect our results of operations and financial condition.

A substantial portion of our assets are classified for accounting purposes as "available-for-sale." Changes in the market values of those assets will be directly charged or credited to stockholders' equity. As a result, a decline in values may result in connection with factors that are out of our control and adversely affect our book value. Moreover, if the decline in value of an available-for-sale security is other than temporary, such decline will reduce our earnings.

In addition, some of the assets in our portfolio are not publicly traded. The fair value of securities and other assets that are not publicly traded may not be readily determinable. We value these assets quarterly at fair value, as determined in accordance with ASC 820, *Fair Value Measurements and Disclosures*, which may include unobservable inputs. Because such valuations are subjective, the fair value of certain of our assets may fluctuate over short periods of time and our determinations of fair value may differ materially from the values that would have been used if a ready market for these securities existed. We may be adversely affected if our determinations regarding the fair value of these assets are materially higher than the values that we ultimately realize upon their disposal.

Changes in mortgage prepayment rates may adversely affect the value of our assets.

The value of our assets is affected by prepayment rates on mortgage loans, and our investment strategy includes making investments based on our expectations regarding prepayment rates. A prepayment rate is the measurement of how quickly borrowers pay down the unpaid principal balance of their loans or how quickly loans are otherwise brought current, modified, liquidated or charged off. With respect to our securities portfolio, typically the value of a mortgage-backed security includes market assumptions regarding the speed at which the underlying mortgages will be prepaid. Faster than expected prepayments could adversely affect our profitability, including in the following ways:

- We may purchase securities that have a higher interest rate than the market interest rate at the time. In exchange for this higher interest rate, we may pay a premium over the par value to acquire the security. In accordance with U.S. GAAP, we may amortize this premium over the estimated term of the security. If the security is prepaid in whole or in part prior to its maturity date, however, we may be required to expense the premium that was prepaid at the time of the prepayment.
- A substantial portion of our adjustable-rate Agency RMBS may bear interest rates that are lower than their fully indexed rates, which are equivalent to the applicable index rate plus a margin. If an adjustable-rate security is prepaid prior to or soon after the time of adjustment to a fully-indexed rate, we will have held that security while it was least profitable and lost the opportunity to receive interest at the fully indexed rate over the remainder of its expected life.
- If we are unable to acquire new Agency RMBS similar to the prepaid security, our financial condition, results of operations and cash flows could suffer.

Changes in prepayment rates may also significantly affect the value of MSR. If the prepayment rate is significantly greater than expected, the fair value of the MSR could decline and we may be required to record a non-cash charge, which would have a negative impact on our financial results. Furthermore, a significant increase in the prepayment rate could materially reduce the ultimate cash flows we receive from MSR, and we could ultimately receive substantially less than what we paid for such assets.

Prepayment rates may be affected by a number of factors including mortgage rates, the availability of mortgage credit, the relative economic vitality of the area in which the related properties are located, the remaining life of the loans, the size of the remaining loans, the servicing of mortgage loans, changes in tax laws, other opportunities for investment, homeowner mobility and other economic, social, geographic, demographic and legal factors. Consequently, prepayment rates cannot be predicted with certainty. If we make erroneous assumptions regarding prepayment rates in connection with our investment decisions, we may experience significant losses.

Our delayed delivery transactions, including TBAs, subject us to certain risks, including price risks and counterparty risks.

We may purchase Agency RMBS through delayed delivery transactions, including TBAs. In a delayed delivery transaction, we enter into a forward purchase agreement with a counterparty to purchase either (i) an identified Agency RMBS, or (ii) a to-be-issued (or "to-be-announced") Agency RMBS with certain terms. As with any forward purchase contract, the value of the underlying Agency RMBS may decrease between the contract date and the settlement date. Furthermore, a transaction counterparty may fail to deliver the underlying Agency RMBS at the settlement date.

It may be uneconomical to roll our TBA dollar roll transactions or we may be unable to meet margin calls on our TBA contracts, which could negatively affect our financial condition and results of operations.

We utilize TBA dollar roll transactions as a means of investing in and financing Agency RMBS. TBA contracts enable us to purchase or sell, for future delivery, Agency RMBS with certain principal and interest terms and certain types of collateral, but the specific securities to be delivered are not identified until shortly before the TBA settlement date. Prior to settlement of the TBA contract we may choose to move the settlement of the securities to a later date by entering into an offsetting position (referred to as a "pair off"), net settling the paired off positions for cash, and simultaneously purchasing a similar TBA contact for a later settlement date, collectively referred to as a "dollar roll." The Agency RMBS purchased for a forward settlement date under the TBA contracts are typically priced at a discount to Agency RMBS for settlement in the current month. This difference (or discount) is referred to as the "price drop." The price drop is the economic equivalent of net interest carry income on the underlying Agency RMBS over the roll period (interest income less implied financing cost) and is commonly referred to as a "dollar roll income." Consequently, dollar roll transactions and such forward purchase of Agency RMBS represent a form of financing and increase our "at-risk" leverage.

Under certain market conditions, TBA dollar roll transactions may result in negative carry income whereby the Agency RMBS purchased for a forward settlement date under TBA contract are priced at a premium to Agency RMBS for settlement in the current month. Under such conditions, it may be uneconomical to roll our TBA positions prior to the settlement date, and we may have to take physical delivery of the underlying securities and settle our obligations for cash. We may not have sufficient funds or alternative financing sources available to settle such obligations. In addition, pursuant to the margin provisions established by the Mortgage-Backed Securities Division, or MBSD, of the Fixed Income Clearing Corporation, or FICC, we are subject to margin calls on our TBA contracts. Further, our prime brokerage agreements may require us to post additional margin above the levels established by the MBSD. Any failure to procure adequate financing to settle our obligations or meet margin calls under our TBA contracts could result in defaults or force us to sell assets under adverse market conditions or through foreclosure and adversely affect our results of operations and financial condition.

Increases in interest rates could adversely affect the value of our assets and cause our interest expense to increase.

Our operating results depend in large part on the difference between the income from our assets and financing costs. We anticipate that, in many cases, the income from our assets will respond more slowly to interest rate fluctuations than the cost of our borrowings. Consequently, changes in interest rates, particularly short-term interest rates, may significantly influence our financial results.

Interest rates are highly sensitive to many factors, including governmental monetary and tax policies, domestic and international economic and political considerations and other factors beyond our control. We cannot predict the impact that any future actions or non-actions by the Federal Reserve with respect to the federal funds rate or otherwise may have on the markets or the economy. Interest rate fluctuations present a variety of risks, including the risk of a narrowing of the difference between asset yields and borrowing rates, flattening or inversion of the yield curve and fluctuating prepayment rates. We endeavor to hedge our exposure to changes in interest rates, but there can be no assurances that our hedges will be successful, or that we will be able to enter into or maintain such hedges.

An increase in interest rates may cause a decrease in the availability of certain of our target assets, which could adversely affect our ability to acquire target assets that satisfy our investment objectives and to generate income and pay dividends.

Rising interest rates generally reduce the demand for mortgage loans due to the higher cost of borrowing. A reduction in the volume of mortgage loans originated may affect the volume of certain target assets available to us, which could adversely affect our ability to acquire assets that satisfy our investment and business objectives. Rising interest rates may also cause certain target assets that were issued prior to an interest rate increase to provide yields that are below prevailing market interest rates. If rising interest rates cause us to be unable to acquire a sufficient volume of our target assets with a yield that is above our borrowing cost, our ability to satisfy our investment objectives and to generate income and pay dividends may be materially and adversely affected.

The value of our Agency RMBS and MSR may be adversely affected by deficiencies in servicing and foreclosure practices, as well as related delays in the foreclosure process.

Deficiencies in servicing and foreclosure practices among servicers of residential mortgage loans have raised and may in the future raise concerns relating to such practices. The integrity of servicing and foreclosure processes is critical to the value of our Agency RMBS and MSR, and our financial results could be adversely affected by deficiencies in the conduct of those processes. For example, delays in the foreclosure process that may result from improper servicing practices may adversely affect the values of, and our losses on, our mortgage-related assets. Foreclosure delays may also result in the curtailment of payments to the GSEs, thereby resulting in additional expense and reducing the amount of funds available for distribution to investors. We continue to monitor and review the issues raised by improper servicing practices. While we cannot predict exactly how servicing, loss mitigation and foreclosure matters or any resulting litigation, regulatory actions or settlement agreements will affect our business, there can be no assurance that these matters will not have an adverse impact on our results of operations and financial condition.

We are required to make servicing advances that can be subject to delays in recovery or may not be recoverable.

During any period in which a borrower is not making payments on a loan underlying our MSR, we may be required under our servicing agreements with the GSEs to advance our own funds to meet some combination of contractual principal and interest remittance requirements, property taxes and insurance premiums, legal expenses and other protective advances. We may also be required under these agreements to advance funds to maintain, repair and market real estate properties. In certain situations, our contractual obligations may require us to make certain advances for which we may not be reimbursed. In addition, in the event a loan underlying our MSR defaults or becomes delinquent, or the mortgagor is allowed to enter into a forbearance, the repayment of advances may be delayed, which may adversely affect our liquidity. Any significant increase in required servicing advances, material delays in our receipt of advance reimbursements or the ineligibility of advances for reimbursement could have an adverse impact on our financial condition and cash flows.

Risks Related to Our Organization and Structure

Certain provisions of Maryland law could inhibit changes in control.

Certain provisions of the Maryland General Corporation Law, or MGCL, may have the effect of deterring a third party from making a proposal to acquire us or of impeding a change in control under circumstances that otherwise could provide the holders of shares of our common stock with the opportunity to realize a premium over the then-prevailing market price of such shares. We are subject to the “business combination” provisions of the MGCL that, subject to limitations, prohibit certain business combinations between our Company and an “interested stockholder” (as defined under the MGCL) or an affiliate thereof for five years after the most recent date on which the stockholder becomes an interested stockholder. In addition, the “unsolicited takeover” provisions of the MGCL (Title 3, Subtitle 8 of the MGCL) permit our board of directors, without stockholder approval and regardless of what is currently provided in our charter or bylaws, to implement takeover defenses, some of which we do not currently have. These provisions may have the effect of inhibiting a third party from making an acquisition proposal for our Company or of delaying, deferring or preventing a change in control of our Company.

Our authorized but unissued shares of common and preferred stock and the ownership limitations contained in our charter may prevent a change in control.

Our charter authorizes Two Harbors to issue additional authorized but unissued shares of common or preferred stock. In addition, our board of directors may, without stockholder approval, amend our charter to increase or decrease the aggregate number of shares of our stock or the number of shares of stock of any class or series that Two Harbors has the authority to issue and classify or reclassify any unissued shares of common or preferred stock and set the terms of the classified or reclassified shares. As a result, our board may establish a series of shares of common or preferred stock that could delay or prevent a transaction or a change in control that might be in the best interests of stockholders.

In addition, our charter contains restrictions limiting the ownership and transfer of shares of our common stock and other outstanding shares of capital stock. The relevant sections of our charter provide that, subject to certain exceptions, ownership of shares of our common stock by any person is limited to 9.8% by value or by number of shares, whichever is more restrictive, of our outstanding shares of common stock (the common share ownership limit), and no more than 9.8% by value or number of shares, whichever is more restrictive, of our outstanding capital stock (the aggregate share ownership limit). The common share ownership limit and the aggregate share ownership limit are collectively referred to herein as the “ownership limits.” These charter provisions will restrict the ability of persons to purchase shares in excess of the relevant ownership limits.

Our charter contains provisions that make removal of our directors difficult, which could make it difficult for stockholders to effect changes in management.

Our charter provides that, subject to the rights of any series of preferred stock, a director may be removed only by the affirmative vote of at least two-thirds of all the votes entitled to be cast generally in the election of directors. Our charter and bylaws provide that vacancies generally may be filled only by a majority of the remaining directors in office, even if less than a quorum. These requirements make it more difficult to change management by removing and replacing directors and may prevent a change in control that is in the best interests of stockholders.

Our rights and stockholders’ rights to take action against directors and officers are limited, which could limit recourse in the event of actions not in the best interests of stockholders.

As permitted by Maryland law, our charter eliminates the liability of its directors and officers to Two Harbors and its stockholders for money damages, except for liability resulting from: actual receipt of an improper benefit or profit in money, property or services; or a final judgment based upon a finding of active and deliberate dishonesty by the director or officer that was material to the cause of action adjudicated.

In addition, pursuant to our charter we have agreed contractually to indemnify our present and former directors and officers for actions taken by them in those capacities to the maximum extent permitted by Maryland law. Further, our bylaws require us to indemnify each present or former director or officer, to the maximum extent permitted by Maryland law, who is made, or threatened to be made, a party to any proceeding because of his or her service to Two Harbors. As part of these indemnification obligations, we may be obligated to fund the defense costs incurred by our directors and officers.

Our amended and restated bylaws designate certain Maryland courts as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders.

Our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Circuit Court for Baltimore City, Maryland, or, if that Court does not have jurisdiction, the United States District Court for the District of Maryland, Baltimore Division, shall be the sole and exclusive forum for the following: any derivative action or proceeding brought on behalf of the Company; any action asserting a claim of breach of any duty owed by any of our directors, officers or other employees to the Company or to our stockholders; any action asserting a claim against the Company or any of our directors, officers or other employees arising pursuant to any provision of the MGCL or our charter or bylaws; or any action asserting a claim against the Company or any of our directors, officers or other employees that is governed by the internal affairs doctrine. This choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that the stockholder believes is favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and employees.

Risks Related to Our Securities

Future issuances and sales of shares of our common stock may depress the market price of our common stock or have adverse consequences for our stockholders.

We may issue additional shares of our common stock in public offerings, private placements as well as through equity awards to our directors, officers and employees pursuant to our 2021 Equity Incentive Plan. Additionally, shares of our common stock have also been reserved for issuance in connection with the conversion of our 6.25% convertible senior notes due January 2026 and our Series A, Series B and Series C preferred stock. We cannot predict the effect, if any, of future issuances or sales of our common stock on the market price of our common stock. We also cannot predict the amounts and timing of equity awards to be issued pursuant to our equity incentive plans, nor can we predict the amount and timing of any conversions of our convertible senior notes due January 2026 or our Series A, Series B and Series C preferred stock into shares of our common stock. Any stock offerings, awards or conversions resulting in the issuance of substantial amounts of common stock, or the perception that such awards or conversions could occur, may adversely affect the market price for our common stock.

Any future offerings of our securities could dilute our existing stockholders and may rank senior for purposes of dividend and liquidating distributions.

We may from time to time issue securities which may rank senior and/or be dilutive to our stockholders. For example, our senior unsecured notes due January 2026 are convertible into shares of our common stock at the election of the noteholder, and our Series A, Series B and Series C preferred shares may be converted into shares of our common stock following the occurrence of certain events, as set forth in the articles supplementary for each series. Any election by noteholders or preferred stockholders to convert their notes or preferred shares into shares of our common stock will dilute the interests of other common stockholders.

In the future, we may again elect to raise capital through the issuance of convertible or non-convertible debt or common or preferred equity securities. Upon liquidation, holders of our debt securities and preferred stock, if any, and lenders with respect to other borrowings will be entitled to our available assets prior to the holders of our common stock. Convertible debt and convertible preferred stock may have anti-dilution provisions which are unfavorable to our common stockholders. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings. Thus, our stockholders bear the risk of our future offerings reducing the market price of our common stock and diluting the value of their holdings.

We have not established a minimum distribution payment level and we cannot assure you of our ability to pay distributions in the future.

We intend to continue to pay quarterly distributions and to make distributions to our stockholders in an amount such that we distribute all or substantially all of our REIT taxable income in each year. We have not established a minimum distribution payment level and our ability to pay distributions may be adversely affected by a number of factors, including the risk factors described herein. All distributions will be made, subject to Maryland law, at the discretion of our board of directors and will depend on our earnings, our financial condition, any debt covenants, maintenance of our REIT qualification and other factors as our board of directors may deem relevant. We cannot assure you that we will achieve results that will allow us to make a specified level of cash distributions and distributions in future periods may be significantly lower than in prior periods.

The market price of our common stock could fluctuate and could cause you to lose a significant part of your investment.

The market price of our common stock may be highly volatile. In addition, the trading volume in our common stock may fluctuate and cause significant price variations to occur. If the market price of our common stock declines significantly, you may be unable to resell your shares of our common stock at a gain. We cannot assure you that the market price of our common stock will not fluctuate or decline significantly in the future.

The market price of our common stock may be influenced by many factors, including without limitation: changes in financial estimates by analysts; fluctuations in our results of operations or financial condition or the results of operations or financial condition of companies perceived to be similar to us; general economic and financial and real estate market conditions; changes in market valuations of similar companies; monetary policy and regulatory developments in the U.S.; and additions or departures of key personnel.

Tax Risks

Our failure to qualify as a REIT would subject us to U.S. federal income tax and potentially increased state and local taxes, which would reduce the amount of our income available for distribution to our stockholders.

We operate in a manner that will enable us to qualify as a REIT and have elected to be taxed as a REIT for U.S. federal income tax purposes commencing with our taxable year ended December 31, 2009. We have not requested and do not intend to request a ruling from the Internal Revenue Service, or IRS, that we qualify as a REIT. The U.S. federal income tax laws governing REITs and the assets they hold are complex, and judicial and administrative interpretations of the U.S. federal income tax laws governing REIT qualification are limited. To continue to qualify as a REIT, we must meet, on an ongoing basis, various tests regarding the nature of our assets and income, the ownership of our outstanding shares, and the amount of our distributions. Moreover, new legislation, court decisions, administrative guidance or actions by federal agencies or others to modify or re-characterize our assets may make it more difficult or impossible for us to qualify as a REIT. Thus, while we intend to operate so that we qualify as a REIT, no assurance can be given that we will so qualify for any particular year.

If we fail to qualify as a REIT in any taxable year, and do not qualify for certain statutory relief provisions, we would be required to pay U.S. federal income tax on our taxable income, and distributions to our stockholders would not be deductible by us in determining our taxable income. Furthermore, if we fail to maintain our qualification as a REIT, we no longer would be required to distribute substantially all of our net taxable income to stockholders.

Complying with REIT requirements may cause us to forego otherwise attractive investment opportunities or financing or hedging strategies.

In order to qualify as a REIT for U.S. federal income tax purposes, we must continually satisfy various tests on an annual and quarterly basis regarding the sources of our income, the nature and diversification of our assets, the amounts we distribute to stockholders and the ownership of our stock. To meet these tests, we may be required to forego investments we might otherwise make. We also may be required to make distributions to stockholders at disadvantageous times. Thus, compliance with the REIT requirements may hinder our investment performance.

Complying with REIT requirements may force us to liquidate otherwise profitable assets.

In order to continue to qualify as a REIT, we must ensure that at the end of each calendar quarter, at least 75% of the value of our assets consists of cash, cash items, government securities and designated real estate assets, including certain mortgage loans and shares in other REITs. Subject to certain exceptions, our ownership of securities, other than government securities and securities that constitute real estate assets, generally cannot include more than 10% of the outstanding voting securities of any one issuer or more than 10% of the total value of the outstanding securities of any one issuer. In addition, in general, no more than 5% of the value of our total assets, other than government securities and securities that constitute real estate assets, can consist of the securities of any one issuer, no more than 20% of the value of our total assets can be represented by securities of one or more TRSs, and no more than 25% of the value of our total assets can consist of debt of "publicly offered" REITs that is not secured by real property or interests in real property. If we fail to comply with these requirements at the end of any calendar quarter, we must generally correct such failure within 30 days after the end of such calendar quarter to avoid losing our REIT qualification. As a result, we may be required to liquidate otherwise profitable assets prematurely, which could reduce our return on assets, which could adversely affect our results of operations and financial condition.

Potential characterization of distributions or gain on sale may be treated as unrelated business taxable income to tax exempt investors.

If (i) all or a portion of our assets are subject to the rules relating to taxable mortgage pools, (ii) we are a "pension held REIT," (iii) a tax exempt stockholder has incurred debt to purchase or hold our common stock, or (iv) we purchase residual REMIC interests that generate "excess inclusion income," then a portion of the distributions to and, in the case of a stockholder described in clause (iii), gains realized on the sale of common stock by such tax exempt stockholder may be subject to U.S. federal income tax as unrelated business taxable income under the Internal Revenue Code.

Complying with REIT requirements may limit our ability to hedge effectively.

The REIT provisions of the Internal Revenue Code may limit our ability to hedge our assets and liabilities. Any income from a hedging transaction will not constitute gross income for purposes of the 75% or 95% gross income test if we properly identify the transaction as specified in applicable Treasury Regulations and we enter into such transaction (i) in the normal course of our business primarily to manage risk of interest rate or price changes or currency fluctuations with respect to borrowings made or to be made, or ordinary obligations incurred or to be incurred, to acquire or carry real estate assets or (ii) primarily to manage risk of currency fluctuations with respect to any item of income or gain that would be qualifying income under the 75% or 95% gross income tests. To the extent that we enter into other types of hedging transactions, the income from those transactions is likely to be treated as non-qualifying income for purposes of both of these gross income tests. As a result of these rules, we intend to limit our use of advantageous hedging techniques or implement those hedges through a TRS. This could increase the cost of our hedging activities.

The failure of our Agency RMBS that are subject to a repurchase agreement to qualify as real estate assets would adversely affect our ability to qualify as a REIT.

We may enter into repurchase agreements under which we will nominally sell certain of our Agency RMBS to a counterparty and simultaneously enter into an agreement to repurchase the sold assets. We believe that we will be treated for U.S. federal income tax purposes as the owner of the securities that are the subject of any such agreement notwithstanding that such agreement may transfer record ownership of the assets to the counterparty during the term of the agreement. It is possible, however, that the IRS could assert that we did not own the securities during the term of the repurchase agreement, in which case we could fail to qualify as a REIT.

REIT distribution requirements could adversely affect our ability to execute our business plan and may require us to incur debt, sell assets or take other actions to make such distributions.

In order to continue to qualify as a REIT, we must distribute to stockholders, each calendar year, at least 90% of our REIT taxable income (including certain items of non-cash income), determined without regard to the deduction for dividends paid and excluding net capital gain. To the extent that we satisfy the 90% distribution requirement, but distribute less than 100% of our taxable income, we will be subject to U.S. federal corporate income tax on our undistributed income. In addition, we will incur a 4% nondeductible excise tax on the amount, if any, by which our distributions in any calendar year are less than a minimum amount specified under U.S. federal income tax law.

We intend to distribute our net income to stockholders in a manner intended to satisfy the 90% distribution requirement and to avoid both corporate income tax and the 4% nondeductible excise tax. Our taxable income may substantially exceed our net income as determined by U.S. GAAP or differences in timing between the recognition of taxable income and the actual receipt of cash may occur in which case we may have taxable income in excess of cash flow from our operating activities. In such event, we may generate less cash flow than taxable income in a particular year and find it difficult or impossible to meet the REIT distribution requirements.

Our qualification as a REIT may depend on the accuracy of legal opinions or advice rendered or given or statements by the issuers of assets we acquire, including with respect to the treatment of our TBA securities and transactions for tax purposes.

When purchasing securities, we may rely on opinions or advice of counsel for the issuer of such securities, or statements made in related offering documents, for purposes of determining, among other things, whether such securities represent debt or equity securities for U.S. federal income tax purposes, the value of such securities, and also to what extent those securities constitute qualified real estate assets for purposes of the REIT asset tests and produce qualified income for purposes of the 75% gross income test. In addition, we may from time to time obtain and rely upon opinions of counsel regarding the qualification of certain assets and income as real estate assets. The inaccuracy of any such opinions, advice or statements may adversely affect our ability to qualify as a REIT and result in significant corporate-level tax.

We may utilize TBAs as a means of investing and financing Agency RMBS. There is no direct authority with respect to the qualification of TBAs as real estate assets or U.S. government securities for purposes of the 75% asset test or the qualification of income or gains from dispositions of TBAs as gains from the sale of real property (including interests in real property and interests in mortgages on real property) or other qualifying income for purposes of the 75% gross income test. We intend to 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 TBAs should be treated as ownership of the underlying Agency RMBS, and to 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. Such opinions of counsel are not binding on the IRS, and there can be no assurance that the IRS will not successfully challenge the conclusions set forth therein.

Our ownership of, and relationship with, our TRSs will be restricted and a failure to comply with the restrictions would jeopardize our REIT status and may result in the application of a 100% excise tax.

A REIT may own up to 100% of the stock of one or more TRSs. A TRS may earn income that would not be qualifying REIT income if earned directly by the parent REIT. Both the TRS and the REIT must jointly elect to treat the subsidiary as a TRS. A corporation of which a TRS directly or indirectly owns more than 35% of the voting power or value of the stock will automatically be treated as a TRS. Overall, no more than 20% of the value of a REIT's total assets may consist of stock or securities of one or more TRSs. The value of our interests in and thus the amount of assets held in a TRS may also be restricted by our need to qualify for an exclusion from regulation as an investment company under the Investment Company Act.

Any domestic TRS we own will pay U.S. federal, state and local income tax at regular corporate rates. In addition, the TRS rules limit the deductibility of interest paid or accrued by a TRS to its parent REIT to assure that the TRS is subject to an appropriate level of corporate taxation. The rules also impose a 100% excise tax on certain transactions between a TRS and its parent REIT that are not conducted on an arm's-length basis. Although we monitor our investments in and transactions with TRSs, there can be no assurance that we will be able to comply with the limitation on the value of our TRSs discussed above or to avoid application of the 100% excise tax discussed above.

Dividends payable by REITs generally do not qualify for the reduced tax rates on dividend income from regular corporations, which could adversely affect the value of our shares.

The maximum U.S. federal income tax rate for dividends payable to domestic stockholders that are individuals, trusts and estates is 20%. Dividends payable by REITs, however, are generally not eligible for these reduced rates. Although the reduced U.S. federal income tax rate applicable to dividend income from regular corporate dividends does not adversely affect the taxation of REITs or dividends paid by REITs, the more favorable rates applicable to regular corporate dividends could cause investors who are individuals, trusts and estates to perceive investments in REITs to be relatively less attractive than investments in the stocks of non-REIT corporations that pay dividends, which could adversely affect the value of the shares of REITs, including our shares of common stock.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Our business is highly dependent on information technology. In the ordinary course of our business, we store sensitive data, including our proprietary business information and that of our business partners, and non-public personally identifiable information of mortgage borrowers, on our networks. The secure maintenance, processing and transmission of this information is critical to our operations. Computer malware, viruses, ransomware and phishing attacks remain widespread and are increasingly sophisticated. We are frequently the target of attempted cyber threats, as are many other organizations within the financial servicing industry. We continuously monitor and develop our information technology networks and infrastructure to help prevent, detect, address and mitigate the risk of unauthorized access, misuse, computer viruses, and other events that could have a security impact. Despite these security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties, disruption to our operations or trading activities or damage to our reputation, all of which could have a material adverse effect on our business, results of operations and financial condition. For additional information on these risks, see Item 1A, "*Risk Factors*" of this Annual Report on Form 10-K.

We recognize the importance of protecting our information and our information technology systems, and assessing, identifying and managing cybersecurity-related risks have been integrated into our risk management processes. We focus on information technology and cybersecurity measures at both an enterprise-wide operational level and an individual employee level. We have in place various methods and levels of information technology and cybersecurity measures which are aimed at protecting our information and information technology systems to help secure long-term value for our stockholders and other stakeholders. By way of example, these measures include the following:

- industry standard targeted controls and security frameworks, including the National Institute of Standards and Technology (NIST), to protect our environment, including antivirus, antimalware, multi-factor authentication, complex and regularly changed passwords, patch management, email security and firewalls to protect our assets and our ability to maintain operations;
- use of technologies to help detect, identify and manage risks within our environments, including endpoint detect and response, security information and event management and vulnerability management;
- a formal cybersecurity incident response plan designed to respond to security incidents in a systematic and complete manner, and involves senior executives, external technical, legal and other resources, including an incident response retainer with our third-party security operations center;
- regularly monitoring and assessing our cybersecurity programs using external parties including a third-party 24/7 security operations center and by conducting periodic cyber maturity and risk assessments, penetration tests and other targeted controls assessments;
- central systems backup processes and associated disaster recovery plans;
- membership in an information sharing and analysis center and other industry groups so that we may stay informed about challenges specific to the financial services industry and contribute to the overall cybersecurity community; and
- employee training and awareness programs addressing cybersecurity and data privacy challenges we face in our industry.

Our board of directors is responsible for overseeing matters relating to our information technology and cybersecurity risk exposures and the steps our Company takes to monitor and mitigate these risks. The board is briefed semi-annually or as needed by senior management and the Chief Information Security Officer, or CISO, on cybersecurity matters, or more frequently as the circumstances require. To assist the board, we also have established a security and privacy steering committee comprised of members of senior management, including our CISO and our Chief Technology Officer, to oversee data privacy, information technology, and cybersecurity matters. Our CISO has extensive information technology and program management experience, has served in this role for the Company since 2019 and has supported the Company's information security function since 2015.

To date, we believe that the risks from identified cybersecurity threats, including as a result of previous cybersecurity incidents, have not materially affected and are not reasonably likely to materially affect us, including our business strategy, results of operations or financial condition.

Item 2. Properties

We lease administrative office space in Minnesota, New York, South Carolina and Texas. We do not own, lease or utilize any physical properties that would be considered material to our business and operations.

Item 3. 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 4. Mine Safety Disclosures

None.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities

Market Information

Our common stock is listed on the NYSE under the symbol "TWO." As of February 12, 2025, 104,022,011 shares of common stock were issued and outstanding.

Holders

As of February 12, 2025, there were 466 registered holders and approximately 93,446 beneficial owners of our common stock.

Dividends

We have historically paid dividends on our common stock. All dividend distributions are authorized by our board of directors, in its discretion, and will depend on such items as our REIT taxable income, financial condition, maintenance of REIT status, and other factors that the board of directors may deem relevant from time to time. The holders of our common stock share proportionally on a per share basis in all declared dividends on our common stock. Dividends cannot be paid on our common stock unless we have paid full cumulative dividends on all classes of our preferred stock. We have paid full cumulative dividends on all classes of our preferred stock from the respective dates of issuance through December 31, 2024. We intend to continue to pay quarterly dividends on our common stock and to distribute to our common stockholders as dividends 100% of our REIT taxable income, on an annual basis.

We have not established a minimum dividend distribution level for our common stock. See Item 1A, "*Risk Factors*" and Item 7, "*Management's Discussion and Analysis of Financial Conditions and Results of Operations*" of this Annual Report on Form 10-K for information regarding the sources of funds used for dividends and for a discussion of factors, if any, which may adversely affect our ability to pay dividends in 2025 and thereafter.

Our stock transfer agent and registrar is Equiniti Trust Company, LLC. Requests for information from Equiniti Trust Company, LLC can be sent to Equiniti Trust Company, LLC, P.O. Box 64856, St. Paul, MN 55164-0856 and their telephone number is 1-800-468-9716.

Securities Authorized for Issuance under Equity Compensation Plans

Our 2021 Equity Incentive Plan, or the Equity Incentive Plan, was adopted by our board of directors and approved by our stockholders for the purpose of enabling us to provide equity compensation to attract and retain qualified directors, officers, advisers, consultants and other personnel. The Equity Incentive Plan is administered by the compensation committee of our board of directors and permits the grants of restricted common stock, restricted stock units, or RSUs, performance-based awards (including performance share units, or PSUs), phantom shares, dividend equivalent rights and other equity-based awards. For a detailed description of the Equity Incentive Plan, see Note 20 - *Equity Incentive Plans* of the consolidated financial statements included under Item 8 of this Annual Report on Form 10-K.

The following table presents certain information about the Equity Incentive Plan as of December 31, 2024:

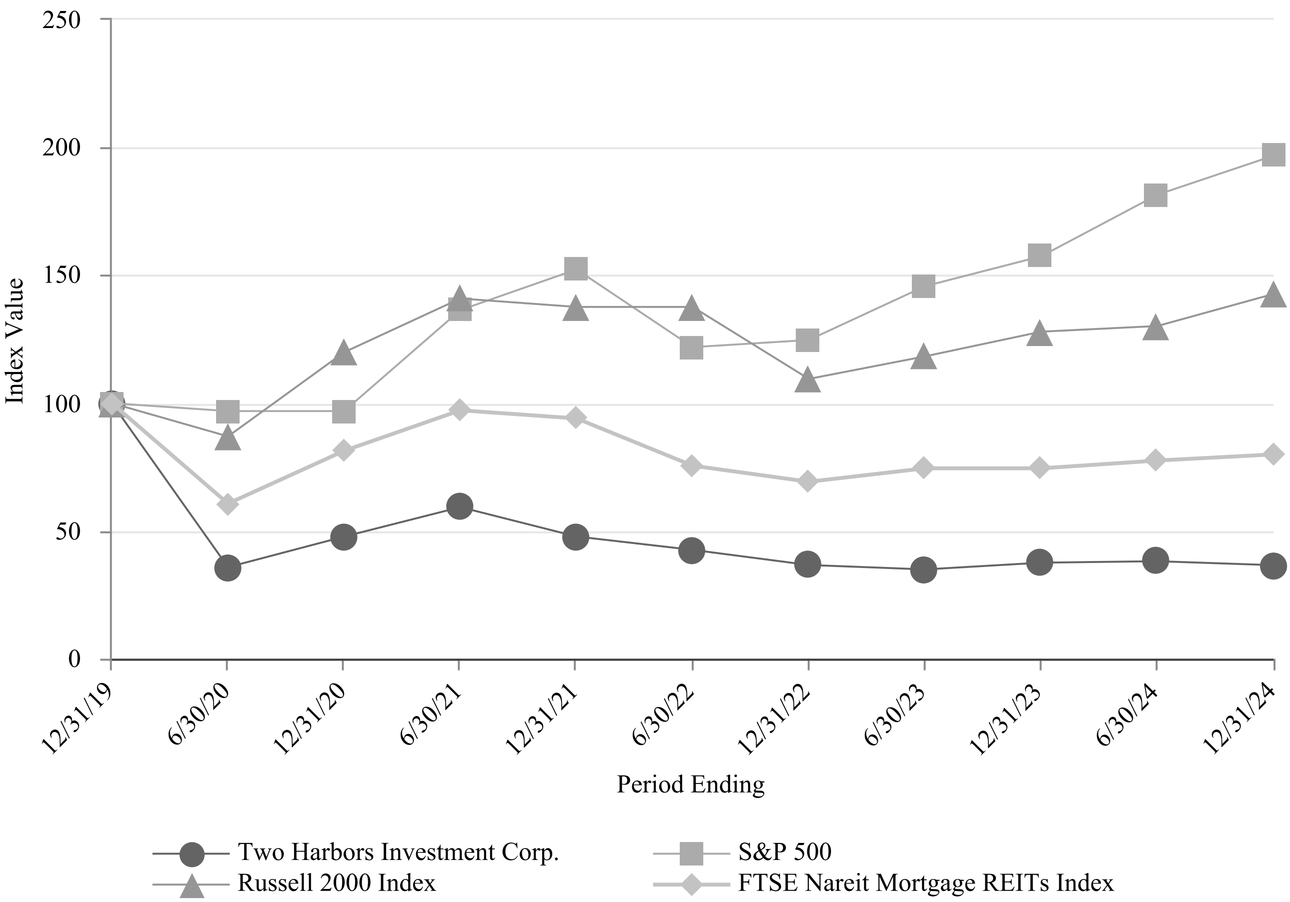
	December 31, 2024		
Plan Category	**Number of securities to be issued upon exercise of outstanding options, warrants and rights**	**Weighted-average exercise price of outstanding options, warrants and rights**	**Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column of this table)**
Equity compensation plans approved by stockholders [(1)]	—	$ —	3,546,040
Equity compensation plans not approved by stockholders	—	—	—
Total	—	$ —	3,546,040

(1) For a detailed description of the Equity Incentive Plan, see Note 20 - *Equity Incentive Plans* of the consolidated financial statements included under Item 8 of this Annual Report on Form 10-K.

Performance Graph

The following graph compares a stockholder's cumulative total return, assuming $100 invested at December 31, 2019, with all reinvestment of dividends, as if such amounts had been invested in: (i) our common stock; (ii) the stocks included in the Standard and Poor's 500 Stock Index, or S&P 500; (iii) the stocks included in the Russell 2000 Index; and (iv) the stocks included in the FTSE Nareit Mortgage REITs Index. Beginning with this Annual Report on Form 10-K, the Bloomberg REIT Mortgage Index has been excluded from this graph, as this benchmark was discontinued during the year ended December 31, 2024. The Russell 2000 Index and the FTSE Nareit Mortgage REITs Index have been included as we believe the companies included in these indices are comparable to the Company's size, business and operations.

COMPARISON OF CUMULATIVE TOTAL RETURN
Among Two Harbors Investment Corp.,
S&P 500, Russell 2000 Index and FTSE Nareit Mortgage REITs Index



	December 31,					
Index	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Two Harbors Investment Corp.	$ 100.00	$ 47.80	$ 47.83	$ 36.68	$ 37.59	$ 36.62
S&P 500	$ 100.00	$ 96.91	$ 152.34	$ 124.73	$ 157.48	$ 196.85
Russell 2000 Index	$ 100.00	$ 119.93	$ 137.67	$ 109.50	$ 127.98	$ 142.73
FTSE Nareit Mortgage REITs Index	$ 100.00	$ 81.38	$ 94.05	$ 69.27	$ 74.52	$ 79.96

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

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 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 December 31, 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 December 31, 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 December 31, 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 December 31, 2024.

Item 6. [Reserved]

Item 7. 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 Annual Report on Form 10-K. This section of this Form 10-K generally discusses 2024 and 2023 items and year-to-year comparisons between 2024 and 2023. Discussions of 2022 items and year-to-year comparisons between 2023 and 2022 that are not included in this Form 10-K can be found in "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal 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.

One of our wholly owned subsidiaries, TH MSR Holdings LLC (formerly Matrix Financial Services Corporation) 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. Beginning in 2024, TH MSR Holdings also acquires MSR on loans originated by its subsidiary, RoundPoint, through purchases and recapture of MSR. 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 of 2024, RoundPoint began operating its in-house, direct-to-consumer originations platform, which was established primarily to benefit our MSR portfolio through the retention or recapture of 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 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; MSR fair value tends to move opposite to origination volume. For example, the value of MSR typically increases in periods marked by low origination activity and vice versa. Thus, origination activities provide supplementary sources of profitability to our stockholders while also hedging our MSR.

Our Agency RMBS portfolio is comprised primarily of fixed rate mortgage-backed securities backed by single-family and multi-family mortgage loans. All of our principal and interest Agency RMBS are Fannie Mae or Freddie Mac mortgage pass-through certificates or collateralized mortgage obligations, 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 Internal Revenue 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.

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 consolidated balance sheets and statements of comprehensive income (loss) are significantly affected by fluctuations in market prices. At December 31, 2024, approximately 85.0% of our total assets, or $10.4 billion, consisted of financial instruments recorded at fair value. See Note 12 - *Fair Value* to the consolidated financial statements, included in this Annual Report on Form 10-K, 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 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. 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.

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, 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.

We estimate the fair value of our MSR using a discounted cash flow model, which incorporates both observable and unobservable market data, including principal balance, note rate, geographical location, loan-to-value (LTV) ratios, FICO and other loan characteristics, along with servicing fee, ancillary income, earnings rates on escrow balances and recapture rates. Significant unobservable inputs include prepayment speeds; option adjusted spread, or OAS, which represents the incremental spread added to the risk-free rate to reflect the effects of any embedded options and other risk inherent in MSR; and cost to service. We obtain third-party valuations, industry surveys and other available market data quarterly to assess the reasonableness of the the significant unobservable inputs used in the cash flow model, as well as fair value calculated by the cash flow model, subject to internally-established hierarchy and override procedures.

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 December 31, 2024, 24.6% 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 this Annual Report on Form 10-K. 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 values. 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 to the consolidated financial statements, included under Item 8 of this Annual Report on Form 10-K. 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 to the consolidated financial statements, included under Item 8 of this Annual Report on Form 10-K.

Market Conditions and Outlook

Interest rates remained volatile throughout 2024 as fixed-income market participants considered the impact on Federal Reserve's policy (the Fed) of often conflicting economic signals on employment and inflation. By the third quarter, inflation data showed enough progress towards the Fed's two percent target that the Fed cut rates by 50 basis points in September. The Treasury yield curve steepened as the Fed cut rates while robust supply of longer-term Treasuries kept longer end rates high. Mortgage spread volatility declined as the Fed began to cut rates, though nominal current coupon spreads remained wider than longer-term averages. MSR valuations were well supported throughout the year, with balanced supply and demand and favorable prepayment rates.

During the fourth quarter of 2024, interest rates increased across the Treasury curve as both job and inflation data firmed up, driving a shift from the third quarter of 2024 to a hawkish stance from the Fed. The Fed delivered two 25 basis point interest rate cuts during the fourth quarter of 2024, bringing the total to 100 basis points for the year, while the market's expectations for more cuts in 2025 went from 4.5 to start the fourth quarter of 2024 to 1.5 cuts by quarter end, making it one of the most volatile episodes in recent Fed policy cycles. The bond market also had to contend with the outcome of the U.S. Presidential election, which fueled a rise in short-dated interest rate volatility in October, spiking to the 95th percentile of history in the post-COVID era. As the results of November's U.S. Congressional and Presidential elections made it clear that the Republican Party would be in control of both the executive and legislative branches of government, expansionary fiscal policy and the potential economic impact from tariffs led to a bearish steepening of the Treasury rate curve. Over the fourth quarter of 2024, the 10-year Treasury yield increased by 79 basis points to finish at 4.57% while the 2-year increased by 60 basis points to 4.24%, steepening the Treasury yield curve by 19 basis points. The S&P 500 was higher by about 2.1%.

Mortgage performance was volatile from month-to-month, as spreads widened significantly in October as rates and volatility increased only to recover in November following the Presidential election. Mortgages gave back some of their gains in December in light of the continued strengthening economic data and a more hawkish Fed posture toward year end. Ultimately, our preferred implied volatility gauge, 2-year options on 10-year rates, increased from 94 to 101 basis points on an annualized basis, right in the middle of its range for 2024. The nominal spread on current coupon MBS finished 11 basis points wider at 117 basis points to the Treasury curve, while the option-adjusted spread finished 6 basis points wider at 23. Nominal spreads remained attractive to longer-term averages, while option-adjusted spreads are tighter on a historical basis. Given that the Treasury rate curve bear steepened and implied volatility ticked up, on a hedged basis lower coupon mortgages generally underperformed while higher coupon mortgages outperformed. Higher coupon specified pools were the best performer, outperforming TBAs by at least a quarter point.

Primary mortgage rates increased in the fourth quarter of 2024, tracking the increase in yields on the longer end of the Treasury curve. The Freddie Mac 30-year rate increased by 78 basis points to 6.85%. Overall prepayment rates for 30-year Agency RMBS increased by 0.4% percentage points quarter-over-quarter to 6.9% CPR, as higher coupon speeds reflected the mini-refinance wave triggered by the fall in rates in the third quarter of 2024. Borrowers with a refinance incentive responded to the lowest mortgage rates in September with a propensity similar to borrower behavior back in 2019. Our MSR portfolio, with a low gross mortgage rate of 3.46%, came in at 4.9% CPR in the fourth quarter of 2024, down 0.4% percentage points compared to the third quarter of 2024, as slower seasonal factors began to take effect.

The housing market has shown some signs of improvement with home sales running at about 10% more volume on a year-on-year basis and inventory has begun to climb, though homes available for sale and turnover in the housing market remain at historically low levels. Home prices finished the year with a small gain and we expect another small but steady increase in 2025.

The MSR market remained stable and well supported, with bulk deals consistently receiving double digit competitive bids. Some large scale bids/acquisitions in the fourth quarter lifted 2024 transfers to $622 billion UPB, approximately the same amount as 2023, though the number of bulk bid opportunities dropped by 25% year-over-year.

RMBS funding markets remained stable and available throughout the fourth quarter of 2024. Spreads for repurchase agreements widened with financing for RMBS between SOFR plus 25 to 35 basis points. The increased spreads were the result of several factors including potential year-end funding pressures and uncertainty around Fed actions at their November and December meetings. In retrospect, year-end was uneventful in the funding markets and early indications for 2025 are that spreads are normalizing into a tighter historical context.

Looking forward, given the fluidity of expectations on how the Fed will be managing rates, market participants are expected to remain keenly focused on incoming data on inflation and employment. New policy proposals and implementation by the incoming U.S. administration could add to market volatility. Nonetheless, driven by the rise in mortgage rates in the fourth quarter of 2024 plus weaker winter turnover seasonal factors, we anticipate prepayment rates will slow down in the near term. We expect our low mortgage rate MSR holdings, which remain hundreds of basis points below prevailing rates, to prepay below 4% CPR in the first quarter of 2025. Our portfolio is comprised primarily of lower interest rate mortgages, with less than 1% of the portfolio having incentive to refinance at current rates. We expect there to remain ample opportunities to add MSR at attractive spreads even as MSR transfer volume continues to normalize to pre-COVID levels. Nominal current coupon spreads remain wide compared to long-term history, and when either paired with MSR or hedged with rates, generate attractive levered returns. Though there are good reasons to believe that elevated interest rate volatility will persist for the short- to medium-term, the level of mortgage spread volatility has materially declined from early parts of this interest rate cycle, improving the risk adjusted return profile.

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

(dollars in thousands)	December 31, 2024		December 31, 2023	
Agency RMBS	$ 7,376,965	71.1 %	$ 8,335,245	73.2 %
Mortgage servicing rights	2,994,271	28.9 %	3,052,016	26.8 %
Other	3,734	— %	4,150	— %
Total	$ 10,374,970		$ 11,391,411	

Prepayment speeds and volatility due to interest rates

Our portfolio is subject to market risks, primarily interest rate risk and prepayment risk. We pair our MSR and interest-only Agency RMBS portfolio with a portion of our Agency pool portfolio to offset risk. 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. Prepayment rates for the MSR portfolio declined to 4.9% over the fourth quarter of 2024, which is consistent with the universe of mortgage loans with similar coupon rates. Housing turnover rates tend to be slower in the fall and winter months due to school schedules, holidays and colder weather. 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 December 31, 2024, and the four immediately preceding quarters:

	Three Months Ended				
	December 31, 2024	September 30, 2024	June 30, 2024	March 31, 2024	December 31, 2023
Agency RMBS	7.5 %	7.2 %	7.3 %	4.8 %	5.2 %
Mortgage servicing rights	4.9 %	5.3 %	5.3 %	3.9 %	3.8 %

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:

	December 31, 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%	220,041	188,239	4.9 %	85.7 %	3.7 %	195,717	—	38
3.5%	109,474	97,261	3.1 %	84.3 %	4.1 %	97,831	—	51
4.0%	585,683	537,910	9.4 %	100.0 %	4.6 %	577,462	—	55
4.5%	2,076,840	1,972,162	7.5 %	100.0 %	5.1 %	2,123,706	—	52
5.0%	1,759,213	1,713,538	6.9 %	100.0 %	5.8 %	1,791,565	—	33
5.5%	1,411,225	1,401,684	6.7 %	99.8 %	6.4 %	1,422,048	—	25
6.0%	499,542	505,297	13.0 %	91.5 %	6.9 %	509,491	—	25
≥ 6.5%	377,197	388,924	9.7 %	100.0 %	7.5 %	389,382	—	12
	7,039,215	6,805,015	7.7 %	98.7 %	5.7 %	7,107,202	—	37
Other P&I	561,159	540,946	0.1 %	— %	5.4 %	557,799	—	15
Interest-only	462,886	22,016	10.1 %	— %	5.4 %	27,747	(2,386)	172
Agency Derivatives	135,310	8,988	9.9 %	— %	6.6 %	14,731	—	235
Total Agency RMBS	$ 8,198,570	$ 7,376,965		91.1 %		$ 7,707,479	$ (2,386)	

	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 UPB of loans underlying our MSR portfolio for the three months ended December 31, 2024, and the four immediately preceding quarters:

	Three Months Ended				
(in thousands)	**December 31, 2024**	**September 30, 2024**	**June 30, 2024**	**March 31, 2024**	**December 31, 2023**
UPB at beginning of period	$ 202,052,184	$ 209,389,409	$ 213,596,880	$ 215,647,172	$ 218,662,270
Purchases of mortgage servicing rights	2,439,058	3,287,735	327,750	3,116,814	829,133
Origination and recapture of mortgage servicing rights	43,132	17,359	—	—	—
Sales of mortgage servicing rights	2,828	(6,247,585)	—	(1,430,294)	(61,612)
Scheduled payments	(1,647,137)	(1,640,591)	(1,639,278)	(1,645,501)	(1,639,884)
Prepaid	(2,545,452)	(2,779,533)	(2,872,850)	(2,110,763)	(2,127,341)
Other changes	(27,604)	25,390	(23,093)	19,452	(15,394)
UPB at end of period	$ 200,317,009	$ 202,052,184	$ 209,389,409	$ 213,596,880	$ 215,647,172

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 December 31, 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 December 31, 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 4.3:1.0.

As of December 31, 2024, we held $504.6 million in cash and cash equivalents, approximately $5.4 million of unpledged Agency RMBS and $3.4 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on our unpledged securities of approximately $6.5 million. As of December 31, 2024, we held approximately $5.2 million of unpledged MSR and $22.9 million of unpledged servicing advances. Overall, on December 31, 2024, we had $70.1 million unused committed and $795.0 million unused uncommitted borrowing capacity on MSR financing facilities, and $59.7 million in unused committed borrowing capacity on servicing advance financing facilities. As of December 31, 2024, all of our mortgage loans were pledged for financing and we had $30.9 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 $14.47 at December 31, 2024, a decrease from $14.93 per common share at September 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 twelve months ended December 31, 2024 was primarily driven by unrealized losses recognized on AFS securities and dividends declared, partially offset by net servicing income earned. Our comprehensive loss attributable to common stockholders was $1.6 million and comprehensive income attributable to common stockholders was $107.6 million for the three and twelve months ended December 31, 2024, respectively, as compared to comprehensive income attributable to common stockholders of $38.9 million and comprehensive loss attributable to common stockholders of $49.7 million for the three and twelve months ended December 31, 2023, respectively.

The following table presents the components of our comprehensive income (loss) for the three and twelve months ended December 31, 2024 and 2023:

(in thousands, except share data) Income Statement Data:	Three Months Ended December 31,		Year Ended December 31,	
	2024	2023	2024	2023
			(unaudited)	
Net interest income (expense):				
Interest income	$ 103,774	$ 122,401	$ 450,152	$ 480,364
Interest expense	138,668	168,080	607,806	643,225
Net interest expense	(34,894)	(45,679)	(157,654)	(162,861)
Net servicing income:				
Servicing income	167,568	178,609	681,648	685,777
Servicing costs	4,575	12,029	20,069	95,488
Net servicing income	162,993	166,580	661,579	590,289
Other income (loss):				
Loss on investment securities	(8,009)	(82,469)	(40,038)	(69,970)
Gain (loss) on servicing asset	82,520	(172,589)	(62,674)	(111,620)
Gain (loss) on interest rate swap and swaption agreements	199,612	(139,234)	147,871	(52,946)
Loss on other derivative instruments	(55,144)	(143,812)	(41,017)	(166,210)
Gain on mortgage loans held-for-sale	558	—	1,482	—
Other income	850	—	1,199	5,103
Total other income (loss)	220,387	(538,104)	6,823	(395,643)
Expenses:				
Compensation and benefits	21,800	21,297	89,753	52,865
Other operating expenses	19,085	23,959	76,241	62,313
Total expenses	40,885	45,256	165,994	115,178
Income (loss) before income taxes	307,601	(462,459)	344,754	(83,393)
Provision for (benefit from) income taxes	30,872	(29,259)	46,586	22,978
Net income (loss)	276,729	(433,200)	298,168	(106,371)
Dividends on preferred stock	(11,784)	(12,012)	(47,136)	(48,607)
Gain on repurchase and retirement of preferred stock	—	519	644	2,973
Net income (loss) attributable to common stockholders	$ 264,945	$ (444,693)	$ 251,676	$ (152,005)
Basic earnings (loss) per weighted average common share	$ 2.54	$ (4.56)	$ 2.41	$ (1.60)
Diluted earnings (loss) per weighted average common share	$ 2.37	$ (4.56)	$ 2.37	$ (1.60)
Dividends declared per common share	$ 0.45	$ 0.45	$ 1.80	$ 1.95
Comprehensive income (loss):				
Net income (loss)	$ 276,729	$ (433,200)	$ 298,168	$ (106,371)
Other comprehensive (loss) income:				
Unrealized (loss) gain on available-for-sale securities	(266,565)	483,579	(144,095)	102,282
Other comprehensive (loss) income	(266,565)	483,579	(144,095)	102,282
Comprehensive income (loss)	10,164	50,379	154,073	(4,089)
Dividends on preferred stock	(11,784)	(12,012)	(47,136)	(48,607)
Gain on repurchase and retirement of preferred stock	—	519	644	2,973
Comprehensive (loss) income attributable to common stockholders	$ (1,620)	$ 38,886	$ 107,581	$ (49,723)

(in thousands) Balance Sheet Data:	December 31, 2024	December 31, 2023
Available-for-sale securities	$ 7,371,711	$ 8,327,149
Mortgage servicing rights	$ 2,994,271	$ 3,052,016
Total assets	$ 12,204,319	$ 13,138,800
Repurchase agreements	$ 7,805,057	$ 8,020,207
Revolving credit facilities	$ 1,020,171	$ 1,329,171
Term notes payable	$ —	$ 295,271
Convertible senior notes	$ 260,229	$ 268,582
Total stockholders' equity	$ 2,122,509	$ 2,203,390

Results of Operations

Interest Income

Interest income decreased from $122.4 million and $480.4 million for the three and twelve months ended December 31, 2023, respectively, to $103.8 million and $450.2 million for the same periods in 2024 due to a decrease in Agency RMBS portfolio size and lower average cash balances held throughout the periods.

Interest Expense

Interest expense decreased from $168.1 million and $643.2 million for the three and twelve months ended December 31, 2023 to $138.7 million and $607.8 million for the same periods in 2024 due to lower borrowing balances on both AFS securities and MSR, partially 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 twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31, 2024			Year Ended December 31, 2024		
(dollars in thousands)	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	$ 7,818,127	$ 92,644	4.7 %	$ 8,266,949	$ 393,527	4.8 %
Mortgage loans held-for-sale	2,885	49	6.8 %	1,234	78	6.3 %
Reverse repurchase agreements	356,668	4,308	4.8 %	351,714	18,447	5.2 %
Other		6,773			38,100	
Total interest income/net asset yield	$ 8,177,680	$ 103,774	5.1 %	$ 8,619,897	$ 450,152	5.2 %
Interest-bearing liabilities:						
Borrowings collateralized by:						
Available-for-sale securities	$ 7,468,264	$ 95,892	5.1 %	$ 7,785,923	$ 425,321	5.5 %
Agency Derivatives (2)	5,033	69	5.5 %	6,199	372	6.0 %
Mortgage servicing rights and advances (3)	1,830,453	38,143	8.3 %	1,837,788	163,826	8.9 %
Mortgage loans held-for-sale	2,646	55	8.3 %	786	66	8.4 %
Unsecured borrowings:						
Convertible senior notes	260,091	4,506	6.9 %	263,632	18,199	6.9 %
Other		3			22	
Total interest expense/cost of funds	$ 9,566,487	$ 138,668	5.8 %	$ 9,894,328	$ 607,806	6.1 %
Net interest expense/spread		$ (34,894)	(0.7)%		$ (157,654)	(0.9)%

(dollars in thousands)	Three Months Ended December 31, 2023			Year Ended December 31, 2023		
	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	$ 8,822,467	$ 103,250	4.7 %	$ 8,926,898	$ 412,310	4.6 %
Mortgage loans held-for-sale	332	2	2.4 %	312	9	2.9 %
Reverse repurchase agreements	282,522	3,839	5.4 %	419,188	19,889	4.7 %
Other		15,310			48,156	
Total interest income/net asset yield	$ 9,105,321	$ 122,401	5.4 %	$ 9,346,398	$ 480,364	5.1 %
Interest-bearing liabilities:						
Borrowings collateralized by:						
Available-for-sale securities	$ 8,157,185	$ 117,021	5.7 %	$ 8,407,394	$ 442,880	5.3 %
Agency Derivatives (2)	8,694	135	6.2 %	11,283	642	5.7 %
Mortgage servicing rights and advances (3)	2,014,734	46,267	9.2 %	1,979,403	174,253	8.8 %
U.S. Treasuries (4)	—	—	— %	144,045	6,629	4.6 %
Unsecured borrowings:						
Convertible senior notes	268,447	4,651	6.9 %	272,993	18,815	6.9 %
Other		6			6	
Total interest expense/cost of funds	$ 10,449,060	$ 168,080	6.4 %	$ 10,815,118	$ 643,225	5.9 %
Net interest income/spread		$ (45,679)	(1.0)%		$ (162,861)	(0.8)%

(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 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 twelve months ended December 31, 2024, as compared to the same periods in 2023 was driven by net purchases of higher coupon AFS securities with lower unamortized premiums. The decrease in cost of funds associated with the financing of AFS securities for the three months ended December 31, 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 year ended December 31, 2024, as compared to the same period in 2023, was due to rising interest rates throughout the first half of 2024.

The decrease in yields on reverse repurchase agreements for the three months ended December 31, 2024, as compared to the same period in 2023, was due to declining interest rates. The increase in yields on reverse repurchase agreements for the year ended December 31, 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 year ended December 31, 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 twelve months ended December 31, 2024 or the three months ended December 31, 2023.

The decrease in cost of funds associated with the financing of MSR assets and related servicing advance obligations for the three months ended December 31, 2024, as compared to the same period in 2023, was primarily due to declining interest rates, as well as a greater portion of our MSR financing from repurchase agreements versus revolving credit facilities. Our repurchase agreements, on average, carry lower floating rate spreads than our revolving credit facilities. The increase in cost of funds associated with the financing of MSR assets and related servicing advance obligations for the year ended December 31, 2024, as compared to the same period in 2023, was the result of rising interest rates throughout the first half of 2024. We have one revolving credit facility in place to finance our servicing advance obligations, which are included in other assets on our 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 small number 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 twelve months ended December 31, 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 twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31,		Year Ended December 31,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Gross yield/stated coupon	5.0 %	4.8 %	5.0 %	4.9 %
Net (premium amortization) discount accretion	(0.3)%	(0.1)%	(0.2)%	(0.3)%
Net yield	4.7 %	4.7 %	4.8 %	4.6 %

Net Servicing Income

The following table presents the components of net servicing income for the three and twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31,		Year Ended December 31,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Servicing fee income	$ 127,928	$ 139,798	$ 528,206	$ 555,221
Ancillary and other fee income	4,498	2,913	16,718	5,149
Float income	35,142	35,898	136,724	125,407
Total servicing income	167,568	178,609	681,648	685,777
Total servicing costs	4,575	12,029	20,069	95,488
Net servicing income	$ 162,993	$ 166,580	$ 661,579	$ 590,289

The decrease in total servicing income for the three months ended December 31, 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, partially offset by higher ancillary and other fee income as a result of the acquisition of RoundPoint. The decrease in total servicing income for the year ended December 31, 2024, as compared to the same period in 2023, was primarily due lower servicing fee income on a smaller MSR portfolio as a result of sales and runoff, partially 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.

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 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 consolidated statements of comprehensive income (loss). The decrease in servicing costs during the three and twelve months ended December 31, 2024, as compared to the same periods in 2023, was the result of lower third-party subservicing fees due to the acquisition of RoundPoint.

Loss On Investment Securities

The following table presents the components of loss on investment securities for the three and twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31,		Year Ended December 31,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Proceeds from sales	$ 1,286,810	$ 978,936	$ 2,183,330	$ 2,673,827
Amortized cost of securities sold	(1,293,570)	(1,061,837)	(2,222,634)	(2,792,703)
Total realized losses on sales	(6,760)	(82,901)	(39,304)	(118,876)
(Provision for) reversal of provision for credit losses	(284)	328	(259)	545
Other	(965)	104	(475)	48,361
Loss on investment securities	$ (8,009)	$ (82,469)	$ (40,038)	$ (69,970)

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 loss on investment securities).

The majority of the "other" component of 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.

Gain (Loss) On Servicing Asset

The following table presents the components of gain (loss) on servicing asset for the three and twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31,		Year Ended December 31,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Changes in fair value due to changes in valuation inputs or assumptions used in the valuation model	$ 139,393	$ (115,944)	$ 140,168	$ 97,859
Changes in fair value due to realization of cash flows (runoff)	(57,367)	(55,486)	(231,606)	(227,663)
Gains (losses) on sales [(1)]	494	(1,159)	28,764	18,184
Gain (loss) on servicing asset	$ 82,520	$ (172,589)	$ (62,674)	$ (111,620)

(1) During the year ended December 31, 2023, excess MSR was transferred to Agency-sponsored trusts in exchange for stripped mortgage backed securities, or SMBS. In each transaction, a portion of the SMBS was acquired by third parties, and we acquired the remaining balance of those SMBS, which were briefly included within Agency AFS securities until their sale in the same year.

The increase in gain (decrease in loss) on servicing asset for the three and twelve months ended December 31, 2024, as compared to the same periods in 2023, was driven by favorable change in valuation inputs and assumptions used in the fair valuation of MSR and higher realized gains on sales of MSR, partially offset by slightly higher portfolio run-off.

Gain (Loss) On Interest Rate Swap And Swaption Agreements

The following table summarizes the net interest spread and gains and losses associated with our interest rate swap and swaption positions recognized during the three and twelve months ended December 31, 2024 and 2023:

	Three Months Ended December 31,		Year Ended December 31,	
(in thousands)	**2024**	**2023**	**2024**	**2023**
Net interest spread	$ 12,158	$ 7,444	$ 58,527	$ 21,358
Early termination, agreement maturation and option expiration gains (losses)	66,033	(12,438)	(3,999)	(36,194)
Change in unrealized gain (loss) on interest rate swap and swaption agreements, at fair value	121,421	(134,240)	93,343	(38,110)
Gain (loss) on interest rate swap and swaption agreements	$ 199,612	$ (139,234)	$ 147,871	$ (52,946)

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 twelve months ended December 31, 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 (loss) income or to loss on investment securities, in the case of certain AFS securities for which we have elected the fair value option.

Loss On Other Derivative Instruments

The following table provides a summary of the total net gains (losses) recognized on other derivative instruments we hold for purposes of both hedging and non-hedging activities, principally TBAs, futures, options on futures, and inverse interest-only securities during the three and twelve months ended December 31, 2024 and 2023:

(in thousands)	Three Months Ended December 31, 2024	Three Months Ended December 31, 2023	Year Ended December 31, 2024	Year Ended December 31, 2023
TBAs	$ (141,978)	$ 28,967	$ (144,416)	$ (155,942)
Futures	89,155	(175,506)	105,216	(8,973)
Options on futures	—	—	(127)	(779)
Inverse interest-only securities	(2,321)	2,727	(1,690)	(516)
Loss on other derivative instruments	$ (55,144)	$ (143,812)	$ (41,017)	$ (166,210)

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

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 twelve months ended December 31, 2024 and 2023:

(in thousands)	Three Months Ended December 31, 2024	Three Months Ended December 31, 2023	Year Ended December 31, 2024	Year Ended December 31, 2023
Mortgage loans held-for-sale	$ 768	$ —	$ 1,185	$ —
Interest rate lock commitments	(341)	—	137	—
Forward mortgage loan sale commitments	131	—	160	—
Gain on mortgage loans held-for-sale	$ 558	$ —	$ 1,482	$ —

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 small number of loans purchased from the collateral underlying our MSR.

Expenses

The following table presents the components of expenses for the three and twelve months ended December 31, 2024 and 2023:

(dollars in thousands)	Three Months Ended December 31, 2024	Three Months Ended December 31, 2023	Year Ended December 31, 2024	Year Ended December 31, 2023
Compensation and benefits:				
Non-cash equity compensation expenses	$ 1,610	$ 1,613	$ 10,946	$ 10,976
All other compensation and benefits	20,190	19,684	78,807	41,889
Total compensation and benefits	$ 21,800	$ 21,297	$ 89,753	$ 52,865
Other operating expenses:				
Certain operating expenses (1)	$ 39	$ 3,408	$ 714	$ 26,356
All other operating expenses	19,046	20,551	75,527	35,957
Total other operating expenses	$ 19,085	$ 23,959	$ 76,241	$ 62,313
Annualized operating expense ratio	7.7 %	8.6 %	7.6 %	5.2 %
Annualized operating expense ratio, excluding non-cash equity compensation and certain operating expenses (1)	7.4 %	7.6 %	7.0 %	3.5 %

(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 consolidated financial statements, included under Item 1 of this Annual Report on Form 10-K. It also includes certain transaction expenses incurred in connection with the Company's acquisition of RoundPoint.

The decrease in total operating expenses during the three months ended December 31, 2024, as compared to the same period in 2023, was driven by lower expenses incurred in connection with the Company's ongoing litigation with PRCM Advisers as well as operational efficiencies implemented throughout 2024, partially offset by slightly higher compensation and benefits expenses. The increase in total operating expenses during the year ended December 31, 2024, as compared to the same period in 2023, was driven by the addition of RoundPoint's compensation, benefits, operating and loan level expenses, partially offset by lower expenses incurred in connection with the Company's ongoing litigation with PRCM Advisers. 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 consolidated statements of comprehensive income (loss). Post-acquisition, all servicing-related expenses incurred by RoundPoint are included within the other operating expenses line item on our consolidated statements of comprehensive income (loss).

Income Taxes

During the three and twelve months ended December 31, 2024, we recognized a provision for income taxes of $30.9 million and $46.6 million, respectively. The provision recognized for the three months ended December 31, 2024 was primarily due to net income from MSR servicing and mortgage loan origination activities and net gains recognized on MSR, partially offset by operating expenses incurred in our TRSs. The provision recognized for the year ended December 31, 2024 was primarily due to net income from MSR servicing and mortgage loan origination activities, partially offset by operating expenses incurred in our TRSs. During the three and twelve months ended December 31, 2023, we recognized a benefit from income taxes of $29.3 million and a provision for income taxes of $23.0 million, respectively. The benefit recognized for the three months ended December 31, 2023 was primarily due to net losses recognized on MSR and operating expenses, partially offset by net income from MSR servicing activities in our TRSs. The provision recognized during the year ended December 31, 2023 was primarily due to net income from MSR servicing activities, partially offset by net losses recognized on MSR and operating expenses in our TRSs.

Other Comprehensive (Loss) Income

The following table provides a summary of the components of other comprehensive (loss) income during the three and twelve months ended December 31, 2024 and 2023:

(in thousands)	Three Months Ended December 31, 2024	Three Months Ended December 31, 2023	Year Ended December 31, 2024	Year Ended December 31, 2023
Unrealized (losses) gains on available-for-sale securities	$ (255,412)	$ 405,935	$ (150,672)	$ (38,584)
Realized (gains) losses on sales of available-for-sale securities reclassified to loss on investment securities	(11,153)	77,644	6,577	140,866
Other comprehensive (loss) income	$ (266,565)	$ 483,579	$ (144,095)	$ 102,282

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 (loss) income. Additionally, we reclassify unrealized gains and losses on AFS securities in accumulated other comprehensive loss to net income (loss) upon the recognition of any realized gains and losses on sales as individual securities are sold. Fluctuations in other comprehensive (loss) income 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 $3.7 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 December 31, 2024 and December 31, 2023:

	December 31, 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	$ 7,600,374	$ 64,627	$ 7,665,001	$ —	$ 2,789	$ (321,829)	$ 7,345,961	4.93 %	$ 101.17
Interest-only securities	462,886	27,747	27,747	(2,386)	473	(3,818)	22,016	2.05 %	$ 24.04
Total	$ 8,063,260	$ 92,374	$ 7,692,748	$ (2,386)	$ 3,262	$ (325,647)	$ 7,367,977		

	December 31, 2023								
(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	$ 8,421,733	$ 24,239	$ 8,445,972	$ —	$ 22,677	$ (196,748)	$ 8,271,901	4.65 %	$ 100.65
Interest-only securities	840,723	58,567	58,567	(3,619)	907	(4,757)	51,098	2.08 %	$ 17.25
Total	$ 9,262,456	$ 82,806	$ 8,504,539	$ (3,619)	$ 23,584	$ (201,505)	$ 8,322,999		

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. Beginning in 2024, TH MSR Holdings also acquires MSR on loans originated by its subsidiary, RoundPoint, through purchases and recapture of MSR. As of December 31, 2024 and December 31, 2023, our MSR had a fair market value of $3.0 billion and $3.1 billion, respectively.

As of December 31, 2024 and December 31, 2023, our MSR portfolio included MSR on 803,091 and 848,264 loans with an unpaid principal balance of approximately $200.3 billion and $215.6 billion, respectively. The following tables summarize certain characteristics of the loans underlying our MSR by gross weighted average coupon rate types and ranges at December 31, 2024 and December 31, 2023:

	December 31, 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%	290,943	$ 89,430,478	2.8 %	$ 364	47	768	71.0 %	0.5 %	3.7 %	25.1
> 3.25 - 3.75%	139,660	35,290,037	3.4 %	321	59	753	74.1 %	1.0 %	4.8 %	25.2
> 3.75 - 4.25%	100,224	20,301,195	3.9 %	267	81	752	75.8 %	1.2 %	5.6 %	25.5
> 4.25 - 4.75%	56,071	10,101,522	4.4 %	259	80	739	77.3 %	2.0 %	5.9 %	25.3
> 4.75 - 5.25%	39,434	9,206,486	5.0 %	353	49	746	78.9 %	1.9 %	5.5 %	25.2
> 5.25%	53,606	16,587,910	6.0 %	409	26	750	80.1 %	2.0 %	9.0 %	26.8
	679,938	180,917,628	3.6 %	342	53	759	73.7 %	1.0 %	4.8 %	25.3
15-Year Fixed:										
≤ 2.25%	22,006	5,269,938	2.0 %	284	44	777	59.1 %	0.2 %	3.7 %	25.0
> 2.25 - 2.75%	36,840	7,071,915	2.4 %	238	47	772	58.8 %	0.3 %	4.9 %	25.0
> 2.75 - 3.25%	31,403	3,793,169	2.9 %	176	71	765	61.4 %	0.3 %	7.4 %	25.3
> 3.25 - 3.75%	17,399	1,525,985	3.4 %	137	85	755	64.0 %	0.4 %	9.2 %	25.4
> 3.75 - 4.25%	8,149	619,730	3.9 %	131	80	741	65.3 %	0.7 %	8.2 %	25.3
> 4.25%	5,848	689,057	4.9 %	227	41	741	65.6 %	1.3 %	10.7 %	27.0
	121,645	18,969,794	2.6 %	226	55	769	60.3 %	0.3 %	5.8 %	25.2
Total ARMs	1,508	429,587	4.4 %	374	55	762	71.9 %	1.4 %	14.6 %	25.4
Total	803,091	$ 200,317,009	3.5 %	$ 331	53	760	72.4 %	0.9 %	4.9 %	25.3

(dollars in thousands)	December 31, 2023 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%	300,020	$ 94,894,696	2.8 %	$ 374	35	768	70.9 %	0.4 %	2.9 %	25.1
> 3.25 - 3.75%	146,125	37,950,849	3.4 %	329	48	753	74.1 %	0.8 %	3.9 %	25.2
> 3.75 - 4.25%	106,188	22,115,548	3.9 %	274	70	751	75.7 %	1.1 %	4.8 %	25.5
> 4.25 - 4.75%	59,731	10,989,253	4.4 %	262	69	739	77.3 %	2.0 %	5.4 %	25.3
> 4.75 - 5.25%	41,155	9,621,267	4.9 %	355	38	746	78.7 %	1.6 %	4.4 %	25.2
> 5.25%	62,101	17,412,054	6.0 %	382	19	745	80.2 %	1.3 %	5.0 %	26.4
	715,320	192,983,667	3.5 %	347	42	758	73.7 %	0.8 %	3.7 %	25.3
15-Year Fixed:										
≤ 2.25%	22,725	5,921,063	2.0 %	307	32	777	59.1 %	0.2 %	2.9 %	25.0
> 2.25 - 2.75%	38,338	8,012,105	2.4 %	258	36	772	58.8 %	0.2 %	3.6 %	25.0
> 2.75 - 3.25%	34,192	4,585,258	2.9 %	190	62	766	61.8 %	0.3 %	5.7 %	25.3
> 3.25 - 3.75%	19,514	1,915,441	3.4 %	149	75	756	64.0 %	0.6 %	7.0 %	25.4
> 3.75 - 4.25%	9,125	761,588	3.9 %	139	71	741	65.2 %	1.0 %	8.1 %	25.3
> 4.25%	6,546	793,853	5.0 %	227	32	742	65.3 %	0.9 %	8.5 %	27.9
	130,440	21,989,308	2.6 %	242	45	769	60.3 %	0.3 %	4.5 %	25.2
Total ARMs	2,504	674,197	4.5 %	358	56	761	70.6 %	0.9 %	12.8 %	25.4
Total	848,264	$ 215,647,172	3.5 %	$ 336	42	759	72.3 %	0.7 %	3.8 %	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 60 days of origination. Substantially all of our funded mortgage loans held-for-sale are currently pledged as collateral for warehouse facilities. We have three repurchase facilities in place that are secured by VFNs issued in connection with our securitization of MSR, which are collateralized by portions of our MSR portfolio. Finally, our convertible senior notes due January 2026 are unsecured and pay interest semiannually at a rate of 6.25% per annum.

At December 31, 2024 and December 31, 2023, borrowings under repurchase agreements, revolving credit facilities, warehouse facilities, term notes payable and convertible senior notes had the following characteristics:

(dollars in thousands)	December 31, 2024			December 31, 2023		
Borrowing Type	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Years to Maturity	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Years to Maturity
Repurchase agreements	$ 7,805,057	5.15 %	0.3	$ 8,020,207	5.74 %	0.2
Revolving credit facilities	1,020,171	7.56 %	1.6	1,329,171	8.66 %	1.1
Warehouse facilities	2,032	6.64 %	0.2	—	— %	—
Term notes payable	—	— %	—	295,271	8.27 %	0.5
Convertible senior notes [(1)]	260,229	6.25 %	1.0	268,582	6.25 %	2.0
Total	$ 9,087,489	5.45 %	0.4	$ 9,913,231	6.22 %	0.3

(dollars in thousands)	December 31, 2024			December 31, 2023		
Collateral Type	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Haircut on Collateral Value	Amount Outstanding	Weighted Average Borrowing Rate	Weighted Average Haircut on Collateral Value
Agency RMBS	$ 7,044,857	4.90 %	3.7 %	$ 7,739,356	5.64 %	3.8 %
Non-Agency securities	207	5.39 %	44.2 %	233	6.36 %	44.2 %
Agency Derivatives	4,993	5.31 %	17.6 %	8,046	6.14 %	18.5 %
Mortgage servicing rights	1,684,871	7.53 %	30.7 %	1,862,714	8.59 %	32.4 %
Mortgage servicing advances	90,300	7.23 %	12.8 %	34,300	8.68 %	12.4 %
Mortgage loans held-for-sale	2,032	6.64 %	— %	—	— %	— %
Other [(1)]	260,229	6.25 %	N/A	268,582	6.25 %	N/A
Total	$ 9,087,489	5.45 %	8.7 %	$ 9,913,231	6.22 %	9.1 %

(1) Includes unsecured convertible senior notes due 2026 paying interest semiannually at a rate of 6.25% per annum on the aggregate principal amount, which was $261.9 million on December 31, 2024.

As of December 31, 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 4.3:1.0. 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 December 31, 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)
December 31, 2024	$ 9,566,487	$ 9,087,489	$ 10,293,529	4.3:1.0	$ 4,493,055	$ 269,370	6.5:1.0
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

(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 December 31, 2023 to December 31, 2024.

(in millions, except per share amounts)	Book Value	Common Shares Outstanding	Common Book Value Per Share
Common stockholders' equity at December 31, 2023	$ 1,569.5	103.2	$ 15.21
Net income	298.1		
Other comprehensive loss	(143.9)		
Comprehensive income	154.2		
Dividends on preferred stock	(47.2)		
Gain on repurchase and retirement of preferred stock	0.6		
Comprehensive income attributable to common stockholders	107.6		
Dividends on common stock	(187.9)		
Other	10.9	0.5	
Balance before capital transactions	1,500.1	103.7	
Repurchase and retirement of preferred stock	0.4		
Issuance of common stock, net of offering costs	0.2	—	
Common stockholders' equity at December 31, 2024	$ 1,500.7	103.7	$ 14.47
Total preferred stock liquidation preference	621.8		
Total stockholders' equity at December 31, 2024	$ 2,122.5		

U.S. GAAP to Estimated Taxable Income

The following tables provide reconciliations of our GAAP net income (loss) to our estimated taxable income (loss) split between our REIT and TRSs for the years ended December 31, 2024 and 2023:

	Year Ended December 31, 2024		
(in millions)	**TRS**	**REIT**	**Consolidated**
GAAP net income (loss), pre-tax	$ 183.6	$ 161.2	$ 344.8
State taxes	(10.1)	—	(10.1)
Adjusted GAAP net income (loss), pre-tax	173.5	161.2	334.7
Permanent differences			
Dividends from TRSs	—	96.9	96.9
State deferred tax expense	6.8	—	6.8
Other permanent differences	—	6.8	6.8
Temporary differences			
Net accretion of OID and market discount	(68.2)	40.4	(27.8)
Net unrealized gains and losses	(6.5)	(215.1)	(221.6)
Net realized gains and losses on sales of RMBS	—	3.1	3.1
Net realized gains and losses on sales of MSR	11.5	(4.9)	6.6
Credit loss impairment	—	0.3	0.3
Other temporary differences	(0.1)	(6.5)	(6.6)
Capital loss carryforward deferral	—	89.5	89.5
Net operating loss carryforward utilization	(71.8)	—	(71.8)
Estimated taxable income	45.2	171.7	216.9
Dividend paid deduction	—	(171.7)	(171.7)
Estimated taxable income post-dividend paid deduction	$ 45.2	$ —	$ 45.2

	Year Ended December 31, 2023		
(in millions)	**TRS**	**REIT**	**Consolidated**
GAAP net income (loss), pre-tax	$ 99.0	$ (182.4)	$ (83.4)
State taxes	(2.5)	(0.4)	(2.9)
Adjusted GAAP net income (loss), pre-tax	96.5	(182.8)	(86.3)
Permanent differences			
Dividends from TRSs	—	65.0	65.0
State deferred tax benefit	(2.1)	—	(2.1)
Other permanent differences	(0.8)	4.0	3.2
Temporary differences			
Net accretion of OID and market discount	(67.7)	33.5	(34.2)
Net unrealized gains and losses	53.2	48.6	101.8
Net realized gains and losses on sales of RMBS	—	(1.1)	(1.1)
Net realized gains and losses on sales of MSR	0.2	(27.3)	(27.1)
Credit loss impairment	—	(0.5)	(0.5)
Other temporary differences	4.0	26.3	30.3
Capital loss carryforward deferral	—	331.2	331.2
Net operating loss carryforward utilization	(66.6)	(51.5)	(118.1)
Estimated taxable income	16.7	245.4	262.1
Dividend paid deduction	—	(245.4)	(245.4)
Estimated taxable post-dividend paid deduction	$ 16.7	$ —	$ 16.7

The permanent differences recorded in 2024 and 2023 were primarily due to dividends paid from the Company's TRSs to the REIT as well as differences related to officer's compensation deduction limitations, compensation expense related to restricted stock dividends and vesting, the dividends paid deduction for tax, amortization of goodwill for tax, and state taxes, net of federal benefit in the Company's TRSs. The temporary tax differences recorded in 2024 and 2023 were principally timing differences between U.S. GAAP and tax accounting related to unrealized gains and losses from derivative instruments, realized and unrealized gains and losses from MSR and RMBS, accretion and amortization from RMBS, litigation expenses, changes in reserves related to servicing advances and allowance for credit losses on certain RMBS, deferral of net capital losses and utilization of net operating losses.

Change in Accumulated Other Comprehensive Loss

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, do not impact our GAAP net (loss) income or taxable income but are recognized on our consolidated balance sheets as a change in stockholders' equity under "accumulated other comprehensive loss." As a result of this fair value accounting through stockholders' equity, we expect our net income to have less significant fluctuations and result in less U.S. GAAP to taxable income timing differences than if the portfolio were accounted for as trading instruments.

Dividends

For the year ended December 31, 2024, we declared cash dividends totaling $1.80 per common share. As a REIT, we are required to distribute at least 90% of our taxable income to stockholders, subject to certain distribution requirements. For the year ended December 31, 2024, our board of directors elected to distribute all of our REIT taxable income for the year. Temporary differences between GAAP net income (loss) and taxable income can generate deterioration in book value on a permanent and temporary basis as taxable income is distributed that has not been earned for U.S. GAAP purposes.

Liquidity and Capital Resources

Our liquidity and capital resources are managed and forecasted on a daily basis. We believe this helps ensure 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 December 31, 2024, we held $504.6 million in cash and cash equivalents available to support our operations; $10.4 billion of AFS securities, MSR, mortgage loans held-for-sale and derivative assets held at fair value; and $9.1 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 December 31, 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, decreased from 4.6:1.0 to 4.3:1.0, which was predominantly driven by decrease in financing on Agency RMBS as a result of sales, partially offset by an increase in MSR financing. During the year ended December 31, 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 decreased from 4.5:1.0 to 4.3:1.0, which was driven by the maturity of outstanding term notes payable in June 2024, as well as decreases in both Agency RMBS and MSR financing as a result of sales and portfolio runoff, respectively. During the three and twelve months ended December 31, 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, decreased from 7.0:1.0 to 6.5:1.0 and increased from 6.0:1.0 to 6.5:1.0, respectively.

As of December 31, 2024, we held approximately $5.4 million of unpledged Agency RMBS and $3.4 million of unpledged non-Agency securities. As a result, we had an overall estimated unused borrowing capacity on unpledged securities of approximately $6.5 million. As of December 31, 2024, we held approximately $5.2 million of unpledged MSR and $22.9 million of unpledged servicing advances. Overall, on December 31, 2024, we had $70.1 million unused committed and $795.0 million unused uncommitted borrowing capacity on MSR financing facilities, and $59.7 million in unused committed borrowing capacity on servicing advance financing facilities. As of December 31, 2024, all of our mortgage loans were pledged for financing and we had $30.9 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 year ended December 31, 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 December 31, 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 three repurchase facilities 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)

	December 31, 2024				
Expiration Date (1)	**Amount Outstanding**	**Unused Committed Capacity (2)**	**Unused Uncommitted Capacity**	**Total Capacity**	**Eligible Collateral**
March 31, 2026	$ 597,731	$ 52,269	$ 250,000	$ 900,000	Mortgage servicing rights
March 8, 2027	$ 332,140	$ 17,860	$ 150,000	$ 500,000	Mortgage servicing rights (3)
May 22, 2026	$ 530,000	$ —	$ 20,000	$ 550,000	Mortgage servicing rights (4)
October 26, 2026	$ 150,000	$ —	$ 150,000	$ 300,000	Mortgage servicing rights (4)
November 21, 2025	$ 75,000	$ —	$ 225,000	$ 300,000	Mortgage servicing rights (4)
June 14, 2026	$ 90,300	$ 59,700	$ —	$ 150,000	Mortgage servicing advances
August 19, 2025	$ 2,032	$ 32,968	$ —	$ 35,000	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) These repurchase facilities are secured by the related VFNs issued by TH MSR Issuer Trust and collateralized by portions of our MSR portfolio.

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 December 31, 2024:

- Total indebtedness to tangible net worth must be less than 8.0:1.0. As of December 31, 2024, our total indebtedness to tangible net worth, as defined, was 4.7:1.0.
- Cash liquidity must be greater than $200.0 million. As of December 31, 2024, our liquidity, as defined, was $504.6 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 December 31, 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 $2.1 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 December 31, 2024 and December 31, 2023:

(in thousands)	**December 31, 2024**	**December 31, 2023**
Available-for-sale securities, at fair value	$ 7,097,561	$ 8,126,028
Mortgage servicing rights, at fair value	2,989,106	3,047,890
Mortgage loans held-for-sale, at fair value	2,059	—
Restricted cash	218,715	12,575
Due from counterparties	25,231	36,420
Derivative assets, at fair value	5,031	11,877
Other assets	118,686	79,749
Total	$ 10,456,389	$ 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 December 31, 2024 and December 31, 2023:

(in thousands)	December 31, 2024	December 31, 2023
Within 30 days	$ 2,377,824	$ 2,833,162
30 to 59 days	2,316,237	1,918,818
60 to 89 days	1,307,145	2,059,438
90 to 119 days	759,177	994,789
120 to 364 days	366,706	833,571
One to three years	1,960,400	1,273,453
Total	$ 9,087,489	$ 9,913,231

For the year ended December 31, 2024, our restricted and unrestricted cash balance increased approximately $22.8 million to $817.6 million at December 31, 2024. The cash movements can be summarized by the following:

- *Cash flows from operating activities.* For the year ended December 31, 2024, operating activities increased our cash balances by approximately $201.0 million, primarily driven by our financial results for the year.
- *Cash flows from investing activities*. For the year ended December 31, 2024, investing activities increased our cash balances by approximately $895.3 million, primarily driven by principal payments received on AFS securities as well as net sales of both AFS securities and derivative instruments, partially offset by net payments for reverse repurchase agreements, the final payment for the acquisition of RoundPoint made in January 2024 and net purchases of MSR.
- *Cash flows from financing activities.* For the year ended December 31, 2024, financing activities decreased our cash balance by approximately $1.1 billion, driven by net paydowns on our revolving credit facilities, the maturity and repayment of our term notes payable in June 2024, a decrease in AFS securities repurchase agreement financing, the payment of dividends and repurchases of portions of our convertible senior notes and preferred shares outstanding, partially offset by an increase in MSR repurchase agreement financing.

Recently Issued Accounting Standards

Refer to Note 2 - *Basis of Presentation and Significant Accounting Policies* of the notes to the consolidated financial statements included in Item 8 of this Form 10-K.

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.

Other Matters

We intend to conduct our business so as to maintain our exempt status under, and not to become regulated as, an investment company for purposes of the 1940 Act. If we failed to maintain our exempt status under the 1940 Act and became regulated as an investment company, our ability to, among other things, use leverage would be substantially reduced and, as a result, we would be unable to conduct our business as described in Item 1, "*Business - Other Business - Regulation*" of this Annual Report on Form 10-K. Accordingly, we monitor our compliance with both the 55% Test and the 80% Tests of the 1940 Act in order to maintain our exempt status. As of December 31, 2024, we determined that we maintained compliance with both the 55% Test and the 80% Test requirements.

We calculate that at least 75% of our assets were qualified REIT assets, as defined in the Internal Revenue Code for the year ended December 31, 2024. We also calculate that our revenue qualified for the 75% source of income test and for the 95% source of income test rules for the year ended December 31, 2024. Consequently, we met the REIT income and asset tests. We also met all REIT requirements regarding the ownership of our common stock and the distribution of our net income. Therefore, for the year ended December 31, 2024, we believe that we qualified as a REIT under the Internal Revenue Code.

Item 7A. 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 more stable performance, relative to RMBS portfolios without MSR, across changing market environments. 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 TRSs, which are subject to U.S. federal, state and, if applicable, local income tax.

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

Interest Rate Effect on Net Interest Income

Our operating results depend in large part on differences between the income earned on our assets and our cost of borrowing and hedging activities. The costs associated with our borrowings are generally based on prevailing market interest rates. During a period of rising interest rates, our borrowing costs generally will increase while the coupon interest earned on our existing portfolio of leveraged fixed-rate Agency RMBS 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 servicing portfolio. 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 December 31, 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 December 31, 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.

	Changes in Interest Rates			
(dollars in thousands)	**-50 bps**	**-25 bps**	**+25 bps**	**+50 bps**
Change in annualized net interest income [(1)]:	$ (24,679)	$ (12,412)	$ 12,336	$ 24,701
% change in net interest income [(1)]	*(16.5)%*	*(8.3)%*	*8.2 %*	*16.5 %*
Change in value of financial position:				
Available-for-sale securities	$ 196,311	$ 100,039	$ (103,369)	$ (209,650)
As a % of common equity	*13.1 %*	*6.6 %*	*(6.9)%*	*(14.0)%*
Mortgage servicing rights [(2)]	$ (69,569)	$ (31,904)	$ 22,362	$ 41,594
As a % of common equity [(2)]	*(4.6)%*	*(2.1)%*	*1.5 %*	*2.8 %*
Mortgage loans held-for-sale	$ 34	$ 18	$ (20)	$ (43)
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Derivatives, net	$ (158,153)	$ (75,712)	$ 68,949	$ 131,207
As a % of common equity	*(10.5)%*	*(5.1)%*	*4.6 %*	*8.7 %*
Reverse repurchase agreements	$ 74	$ 37	$ (37)	$ (74)
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Repurchase agreements	$ (3,989)	$ (1,994)	$ 1,994	$ 3,989
As a % of common equity	*(0.3)%*	*(0.1)%*	*0.2 %*	*0.3 %*
Revolving credit facilities	$ (235)	$ (117)	$ 117	$ 234
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Warehouse facilities	$ (1)	$ —	$ —	$ 1
As a % of common equity	*— %*	*— %*	*— %*	*— %*
Convertible senior notes	$ (999)	$ (498)	$ 495	$ 987
As a % of common equity	*(0.1)%*	*— %*	*— %*	*0.1 %*
Total Net Assets	$ (36,527)	$ (10,131)	$ (9,509)	$ (31,755)
As a % of total assets	*(0.3)%*	*(0.1)%*	*(0.1)%*	*(0.3)%*
As a % of common equity	*(2.4)%*	*(0.7)%*	*(0.6)%*	*(2.1)%*

(1) Amounts include the effect of interest spread from our interest rate swaps and float income from custodial accounts associated with our servicing portfolio, 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 December 31, 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 7, "*Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources*" in this Annual Report on Form 10-K 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 8. Financial Statements and Supplementary Data

TWO HARBORS INVESTMENT CORP.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
of Two Harbors Investment Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Two Harbors Investment Corp. (the Company) as of December 31, 2024 and 2023, the related consolidated statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 18, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

	Valuation of Mortgage Servicing Rights
Description of the Matter	At December 31, 2024, the Company held $3.0 billion of mortgage servicing rights (MSR) which are reported at fair value. As more fully described in Note 12 to the consolidated financial statements, the Company determines fair value of its MSR portfolio using a discounted cash flow model, which incorporates both observable and unobservable market data inputs. Significant unobservable inputs include prepayment speeds, option-adjusted spread, and cost to service. Auditing the Company's valuation of the MSR portfolio was especially challenging because the valuation involved significant judgement due to the significant unobservable inputs used in the valuation of this portfolio. Selecting and applying audit procedures to address the estimation uncertainty involves auditor subjectivity and industry-specific knowledge of MSR, including the current market conditions considered by a market participant.

How We Addressed the Matter in Our Audit	We obtained an understanding of the MSR fair value measurements process, evaluated the design, and tested the operating effectiveness of internal controls addressing the valuation of the MSR portfolio. This included testing controls over management's governance over the functionality of the discounted cash flow model utilized to estimate fair value and management's review of the reasonableness of the significant unobservable inputs used in the discounted cash flow model, including prepayment speeds, option-adjusted spread and cost to service, against available market data. Additionally, we tested controls over management's review of Company determined fair value in comparison to fair value ranges that management obtained from third-party pricing vendors to evaluate the reasonableness of the fair values developed by the Company. We also tested management's controls over the completeness and accuracy of significant inputs used in the valuations, as well as their evaluation of the competence and objectivity of those third-party pricing vendors. To test the fair value of the Company's MSR fair value measurements, our audit procedures included, among others, involving our internal valuation specialists to evaluate reasonableness of significant unobservable inputs, identify potential sources of contrary information and independently develop a fair value for the MSR based on consideration of available market information and compare management's estimates to our ranges. We also tested the completeness and accuracy of significant inputs used in the fair value measurement process and evaluated the competence and objectivity of management's third-party pricing vendors.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2009.

Minneapolis, Minnesota
February 18, 2025

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

	December 31, 2024	December 31, 2023
ASSETS		
Available-for-sale securities, at fair value (amortized cost $7,697,027 and $8,509,383, respectively; allowance for credit losses $2,866 and $3,943, respectively)	$ 7,371,711	$ 8,327,149
Mortgage servicing rights, at fair value	2,994,271	3,052,016
Mortgage loans held-for-sale, at fair value	2,334	332
Cash and cash equivalents	504,613	729,732
Restricted cash	313,028	65,101
Accrued interest receivable	33,331	35,339
Due from counterparties	386,464	323,224
Derivative assets, at fair value	10,114	85,291
Reverse repurchase agreements	355,975	284,091
Other assets	232,478	236,525
Total Assets [1]	$ 12,204,319	$ 13,138,800
LIABILITIES AND STOCKHOLDERS' EQUITY		
Liabilities:		
Repurchase agreements	$ 7,805,057	$ 8,020,207
Revolving credit facilities	1,020,171	1,329,171
Warehouse facilities	2,032	—
Term notes payable	—	295,271
Convertible senior notes	260,229	268,582
Derivative liabilities, at fair value	24,897	21,506
Due to counterparties	648,643	574,735
Dividends payable	58,725	58,731
Accrued interest payable	85,994	141,773
Commitments and contingencies (see Note 18)	—	—
Other liabilities	176,062	225,434
Total Liabilities [1]	10,081,810	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 103,680,321 and 103,206,457 shares issued and outstanding, respectively	1,037	1,032
Additional paid-in capital	5,936,609	5,925,424
Accumulated other comprehensive loss	(320,524)	(176,429)
Cumulative earnings	1,648,785	1,349,973
Cumulative distributions to stockholders	(5,744,865)	(5,509,823)
Total Stockholders' Equity	2,122,509	2,203,390
Total Liabilities and Stockholders' Equity	$ 12,204,319	$ 13,138,800

(1) The consolidated balance sheets include assets and liabilities of consolidated variable interest entities, or VIEs. At December 31, 2024 and December 31, 2023, assets of the VIEs totaled $163,317 and $525,259, and liabilities of the VIEs totaled $134,931 and $479,810, respectively. See Note 4 - *Variable Interest Entities* for additional information.

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

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

	Year Ended December 31,		
	2024	**2023**	**2022**
Net interest income (expense):			
Interest income	$ 450,152	$ 480,364	$ 295,540
Interest expense	607,806	643,225	258,395
Net interest (expense) income	(157,654)	(162,861)	37,145
Net servicing income:			
Servicing income	681,648	685,777	603,911
Servicing costs	20,069	95,488	94,119
Net servicing income	661,579	590,289	509,792
Other income (loss):			
Loss on investment securities	(40,038)	(69,970)	(603,937)
(Loss) gain on servicing asset	(62,674)	(111,620)	425,376
Gain (loss) on interest rate swap and swaption agreements	147,871	(52,946)	29,499
(Loss) gain on other derivative instruments	(41,017)	(166,210)	9,310
Gain on mortgage loans held-for-sale	1,482	—	9
Other income (loss)	1,199	5,103	(14)
Total other income (loss)	6,823	(395,643)	(139,757)
Expenses:			
Compensation and benefits	89,753	52,865	40,723
Other operating expenses	76,241	62,313	42,005
Total expenses	165,994	115,178	82,728
Income (loss) before income taxes	344,754	(83,393)	324,452
Provision for income taxes	46,586	22,978	104,213
Net income (loss)	298,168	(106,371)	220,239
Dividends on preferred stock	(47,136)	(48,607)	(53,607)
Gain on repurchase and retirement of preferred stock	644	2,973	20,149
Net income (loss) attributable to common stockholders	$ 251,676	$ (152,005)	$ 186,781
Basic earnings (loss) per weighted average common share	$ 2.41	$ (1.60)	$ 2.15
Diluted earnings (loss) per weighted average common share	$ 2.37	$ (1.60)	$ 2.13
Comprehensive income (loss):			
Net income (loss)	$ 298,168	$ (106,371)	$ 220,239
Other comprehensive (loss) income:			
Unrealized (loss) gain on available-for-sale securities	(144,095)	102,282	(465,057)
Other comprehensive (loss) income	(144,095)	102,282	(465,057)
Comprehensive income (loss)	154,073	(4,089)	(244,818)
Dividends on preferred stock	(47,136)	(48,607)	(53,607)
Gain on repurchase and retirement of preferred stock	644	2,973	20,149
Comprehensive income (loss) attributable to common stockholders	$ 107,581	$ (49,723)	$ (278,276)

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

TWO HARBORS INVESTMENT CORP.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(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, 2021	$ 702,550	$ 860	$5,627,758	$ 186,346	$ 1,212,983	$ (4,986,544)	$ 2,743,953
Net income	—	—	—	—	220,239	—	220,239
Other comprehensive loss before reclassifications	—	—	—	(893,589)	—	—	(893,589)
Amounts reclassified from accumulated other comprehensive income	—	—	—	428,532	—	—	428,532
Other comprehensive loss	—	—	—	(465,057)	—	—	(465,057)
Repurchase and retirement of preferred stock	(71,551)	—	—	—	20,149	—	(51,402)
Issuance of common stock, net of offering costs	—	3	6,611	—	—	—	6,614
Preferred dividends declared	—	—	—	—	—	(53,607)	(53,607)
Common dividends declared	—	—	—	—	—	(228,845)	(228,845)
Non-cash equity award compensation	—	1	11,629	—	—	—	11,630
Balance, December 31, 2022	$ 630,999	$ 864	$5,645,998	$ (278,711)	$ 1,453,371	$ (5,268,996)	$ 2,183,525
Net loss	—	—	—	—	(106,371)	—	(106,371)
Other comprehensive loss before reclassifications	—	—	—	(38,584)	—	—	(38,584)
Amounts reclassified from accumulated other comprehensive income	—	—	—	140,866	—	—	140,866
Other comprehensive income	—	—	—	102,282	—	—	102,282
Repurchase and retirement of preferred stock	(17,786)	—	—	—	2,973	—	(14,813)
Issuance of common stock, net of offering costs	—	172	275,502	—	—	—	275,674
Repurchase of common stock	—	(6)	(7,050)	—	—	—	(7,056)
Preferred dividends declared	—	—	—	—	—	(48,607)	(48,607)
Common dividends declared	—	—	—	—	—	(192,220)	(192,220)
Non-cash equity award compensation	—	2	10,974	—	—	—	10,976
Balance, December 31, 2023	$ 613,213	$ 1,032	$5,925,424	$ (176,429)	$ 1,349,973	$ (5,509,823)	$ 2,203,390
Net income	—	—	—	—	298,168	—	298,168
Other comprehensive loss before reclassifications	—	—	—	(150,672)	—	—	(150,672)
Amounts reclassified from accumulated other comprehensive income	—	—	—	6,577	—	—	6,577
Other comprehensive loss	—	—	—	(144,095)	—	—	(144,095)
Repurchase and retirement of preferred stock	(11,746)	—	—	—	644	—	(11,102)
Issuance of common stock, net of offering costs	—	1	243	—	—	—	244
Preferred dividends declared	—	—	—	—	—	(47,136)	(47,136)
Common dividends declared	—	—	—	—	—	(187,906)	(187,906)
Non-cash equity award compensation	—	4	10,942	—	—	—	10,946
Balance, December 31, 2024	$ 601,467	$ 1,037	$5,936,609	$ (320,524)	$ 1,648,785	$ (5,744,865)	$ 2,122,509

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

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

	Year Ended December 31,		
	2024	**2023**	**2022**
Cash Flows From Operating Activities:			
Net income (loss)	$ 298,168	$ (106,371)	$ 220,239
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Amortization of premiums and discounts on investment securities, net	15,773	25,406	79,794
Amortization of deferred debt issuance costs on term notes payable and convertible senior notes	2,053	2,589	2,678
Provision for (reversal of provision for) credit losses on investment securities	259	(545)	2,730
Realized and unrealized losses on investment securities	39,779	70,515	601,207
Loss (gain) on servicing asset	62,674	111,620	(425,376)
Realized and unrealized (gains) losses on interest rate swaps and swaptions	(89,344)	74,304	(34,328)
Unrealized (gains) losses on other derivative instruments	(58,063)	102,694	13,797
Gains on mortgage loans held-for-sale	(1,493)	—	(9)
Gain on repurchase of term notes payable and convertible senior notes	(226)	(5,104)	—
Equity based compensation	10,946	10,976	11,630
Originations and purchases of mortgage loans held-for-sale	(64,416)	(80)	(264)
Proceeds from sales of mortgage loans held-for-sale	62,869	—	—
Proceeds from repayment of mortgage loans held-for-sale	145	31	30
Net change in assets and liabilities:			
Decrease (increase) in accrued interest receivable	2,008	679	(9,752)
Decrease in deferred income taxes, net	33,798	14,504	105,241
(Decrease) increase in accrued interest payable	(55,779)	47,739	75,652
Change in other operating assets and liabilities, net	(58,147)	(5,448)	(19,867)
Net cash provided by operating activities	201,004	343,509	623,402
Cash Flows From Investing Activities:			
Purchases of available-for-sale securities	(2,135,001)	(3,877,805)	(10,662,518)
Proceeds from sales of available-for-sale securities	2,183,330	2,673,827	7,793,705
Principal payments on available-for-sale securities	707,203	662,469	1,102,994
Purchases of mortgage servicing rights, net of purchase price adjustments	(114,124)	(312,637)	(629,810)
Proceeds from sales of mortgage servicing rights	109,778	133,938	261,827
Short sales (purchases) of derivative instruments, net	21,809	(4,029)	(71,291)
Proceeds from sales and settlement (payments for termination and settlement) of derivative instruments, net	204,476	(244,364)	125,908
Payments for reverse repurchase agreements	(3,649,355)	(2,487,516)	(3,241,834)
Proceeds from reverse repurchase agreements	3,577,471	3,270,360	2,309,581
Acquisition of RoundPoint Mortgage Servicing LLC, net of cash acquired	(20,976)	26,798	—
Increase (decrease) in due to counterparties, net	10,668	(36,824)	260,157
Net cash provided by (used in) investing activities	$ 895,279	$ (195,783)	$ (2,751,281)

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

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

	Year Ended December 31,		
	2024	**2023**	**2022**
Cash Flows From Financing Activities:			
Proceeds from repurchase agreements	$ 46,460,195	$ 37,045,726	$ 35,927,488
Principal payments on repurchase agreements	(46,675,345)	(37,628,530)	(34,980,922)
Proceeds from revolving credit facilities	129,500	404,000	720,000
Principal payments on revolving credit facilities	(438,500)	(193,660)	(21,930)
Proceeds from warehouse facilities	49,705	—	—
Principal payments on warehouse facilities	(47,673)	—	—
Repayment of term notes payable	(295,776)	(100,970)	—
Repurchase/repayment of convertible senior notes	(9,675)	(13,169)	(143,774)
Repurchase and retirement of preferred stock	(11,102)	(14,813)	(51,402)
Proceeds from issuance of common stock, net of offering costs	244	275,674	6,614
Repurchase of common stock	—	(7,056)	—
Dividends paid on preferred stock	(47,364)	(48,960)	(54,989)
Dividends paid on common stock	(187,684)	(197,640)	(235,371)
Net cash (used in) provided by financing activities	(1,073,475)	(479,398)	1,165,714
Net increase (decrease) in cash, cash equivalents and restricted cash	22,808	(331,672)	(962,165)
Cash, cash equivalents and restricted cash at beginning of period	794,833	1,126,505	2,088,670
Cash, cash equivalents and restricted cash at end of period	$ 817,641	$ 794,833	$ 1,126,505
Supplemental Disclosure of Cash Flow Information:			
Cash paid for interest	$ 618,659	$ 565,834	$ 153,181
Cash paid (received) for taxes, net	$ 9,255	$ 7,380	$ (1,575)
Noncash Activities:			
Dividends declared but not paid at end of period	$ 58,725	$ 58,731	$ 64,504

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

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.

The Company has elected to be treated as a REIT as defined under the Internal Revenue Code of 1986, as amended, or the Internal Revenue 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 Internal Revenue Code, to engage in such activities.

Note 2. Basis of Presentation and Significant Accounting Policies

Consolidation and Basis of Presentation

The accompanying consolidated financial statements include the accounts of all subsidiaries; inter-company accounts and transactions have been eliminated. All trust entities in which the Company holds investments that are considered variable interest entities, or VIEs, for financial reporting purposes were reviewed for consolidation under the applicable consolidation guidance. Whenever the Company has both the power to direct the activities of a trust that most significantly impact the entities' performance, and the obligation to absorb losses or the right to receive benefits of the entities that could be significant, the Company consolidates the trust. The accounting and reporting policies of the Company conform to U.S. generally accepted accounting principles, or U.S. GAAP. The Company consists of a single operating and reportable segment; the investment portfolio is managed as a whole and resources are allocated and financial performance is assessed by the chief operating decision maker on a consolidated basis. Accordingly, the consolidated financial statements and notes thereto are presented as a single reportable segment. Certain prior period amounts have been reclassified to conform to the current period presentation. All per share amounts, common shares outstanding and common equity-based awards for the year ended December 31, 2022 reflect the Company's one-for-four reverse stock split effected on November 1, 2022 at 5:01 p.m. Eastern Time (refer to Note 19 - *Stockholders' Equity* for additional information).

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 certain assets and liabilities sufficient to recover unrealized losses in those assets and liabilities, and other estimates that affect the reported amounts of certain assets and liabilities as of the date of the 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

Business Combinations

Under Accounting Standards Codification (ASC) 805, *Business Combinations*, or ASC 805, an acquisition is considered a business combination when the assets acquired and liabilities assumed constitute a business. The acquisition method prescribed in ASC 805 requires, among other things, that the assets acquired and liabilities assumed be recognized at fair value as of the acquisition date. In a business combination, the initial allocation of the purchase price is considered preliminary and therefore subject to change until the end of the measurement period (up to one year from the acquisition date). Goodwill is calculated as the excess of the consideration transferred over the net assets acquired that meet the criteria for separate recognition and represents the estimated future economic benefits arising from these and other assets acquired that could not be individually identified or do not qualify for recognition as a separate asset. Goodwill is included within the other assets line item on the Company's consolidated balance sheets. Acquisition-related costs are expensed as incurred and included within the other operating expenses line item in the Company's consolidated statements of comprehensive income (loss). The results of operations of acquired businesses are included from the date of acquisition.

Goodwill and Intangible Assets

On an annual basis, the Company qualitatively assesses its goodwill assigned to each of its reporting units during the fourth quarter of each year. This qualitative assessment evaluates various events and circumstances, such as macro-economic conditions, industry and market conditions, cost factors, relevant events and financial trends, that may impact a reporting unit's fair value. Using this qualitative assessment, the Company determines whether it is more-likely-than-not that the reporting unit's fair value exceeds its carrying value. If it is determined that it is not more-likely-than-not that the reporting unit's fair value exceeds the carrying value, or upon consideration of other factors, including recent acquisition, restructuring or divestiture activity, the Company performs a quantitative, "step one" goodwill impairment analysis. In addition, the Company may test goodwill in between annual test dates if an event occurs or circumstances change that could more-likely-than-not reduce the fair value of a reporting unit below its carrying value. The Company did not recognize any goodwill impairment during the year ended December 31, 2024.

As a result of the acquisition of RoundPoint effective September 30, 2023, the Company identified intangible assets in the form of state licenses, GSE approvals and trade names. Intangible assets are included within the other assets line item on the Company's consolidated balance sheets. 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. Amortization of acquired intangible assets is included within the other operating expenses line item in the Company's consolidated statements of comprehensive income (loss). If impairment events occur, they could accelerate the timing of acquired intangible asset charges. Licenses and approvals acquired are deemed to have an indefinite useful life and are evaluated for impairment annually during the fourth quarter and in interim periods if indicators of impairment exist. The Company did not recognize any impairment on its intangible assets during the year ended December 31, 2024.

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 may issue term notes to qualified institutional buyers and variable funding notes, or VFNs, to one of the subsidiaries, in each case secured on a pari passu basis.

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.

Available-for-Sale Securities, at Fair Value

The Company invests primarily in mortgage pass-through certificates, collateralized mortgage obligations and other RMBS representing interests in or obligations backed by pools of mortgage loans issued by a Fannie Mae, Freddie Mac or Ginnie Mae. The Company also holds securities that are not issued by a GSE or U.S government agency, or non-Agency securities, other Agency securities, and, from time to time, U.S. Treasuries.

The Company classifies its Agency and non-Agency investment securities, excluding inverse interest-only Agency securities which are classified as derivatives for purposes of U.S. GAAP, as available-for-sale, or AFS, investments. Although the Company generally intends to hold most of its investment securities until maturity, it may, from time to time, sell any of its investment securities as part of its overall management of its portfolio. Accordingly, the Company classifies all of its securities as AFS, including its interest-only strips, which represent the Company's right to receive a specified portion of the contractual interest flows of specific Agency or non-Agency securities. All assets classified as AFS, excluding certain AFS securities for which the Company has elected the fair value option, are reported at estimated fair value with unrealized gains and losses included in accumulated other comprehensive loss.

On July 1, 2015, the Company elected the fair value option for Agency interest-only securities acquired on or after such date. On July 1, 2021, the Company elected the fair value option for all non-Agency securities acquired on or after such date. On January 1, 2023, the Company elected the fair value option for all other non-RMBS Agency securities acquired on or after such date. All Agency interest-only securities acquired on or after July 1, 2015, all non-Agency securities acquired on or after July 1, 2021, and all other non-RMBS Agency securities acquired on or after January 1, 2023 are carried at estimated fair value with changes in fair value recorded as a component of loss on investment securities in the consolidated statements of comprehensive income (loss).

Fair value is determined under the guidance of ASC 820, *Fair Value Measurements and Disclosures,* or ASC 820. The Company determines the fair value of its investment securities that are issued or guaranteed as to principal and/or interest by a GSE or U.S. government agency, based upon prices obtained from third-party pricing vendors or broker quotes received using the bid price, which are both deemed indicative of market activity. In determining the fair value of its non-Agency securities, management judgment is used to arrive at fair value that considers prices obtained from third-party pricing vendors, broker quotes received and other applicable market data. If listed price data is not available or insufficient, 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. See Note 12 - *Fair Value* of these notes to the consolidated financial statements for details on fair value measurement.

Investment securities transactions are recorded on the trade date. The cost basis for realized gains and losses on sales of investment securities are determined on the first-in, first-out, or FIFO, method.

Interest income (*i.e*., gross yield/stated coupon) on securities is accrued based on the outstanding principal balance and their contractual terms. Premiums and discounts associated with Agency securities and non-Agency securities rated AA and higher at the time of purchase, are amortized and accreted, respectively, as an adjustment to interest income over the life of such securities using the contractual method under ASC 310-20, *Nonrefundable Fees and Other Costs*, which is applied at the individual security level based upon each security's effective interest rate. The Company calculates each security's effective interest rate at the time of purchase by solving for the discount rate that equates the present value of that security's remaining contractual cash flows, assuming no principal prepayments, to its purchase price. When applying the contractual effective interest method, as principal prepayments occur, an amount of the unamortized premium or discount is recognized in interest income such that the contractual effective interest rate on the remaining security balance is unaffected.

Discounts associated with non-Agency securities that were purchased at a discount to par value and were rated below AA at the time of purchase and Agency and non-Agency interest-only securities that can be contractually prepaid or otherwise settled in such a way that the Company would not recover substantially all of its recorded investment are accreted as an adjustment to interest income over the life of such securities using the prospective method under ASC 325-40, *Investments - Other: Beneficial Interests in Securitized Financial Assets*, which is applied at the individual security level based upon each security's effective interest rate. At the time of acquisition, the security's effective interest rate is calculated by solving for the single discount rate that equates the present value of the Company's best estimate of the amount and timing of the cash flows expected to be collected from the security to its purchase price. On at least a quarterly basis, the Company reviews and, if appropriate, makes adjustments to its cash flow projections based on input and analysis received from external sources, internal models, and its judgment about interest rates, prepayment rates, the timing and amount of credit losses, and other factors. Changes in cash flows from those originally projected, or from those estimated at the last evaluation, may result in a prospective change in the effective interest rate and interest income recognized on such securities.

Actual maturities of AFS securities are affected by the contractual lives of the associated mortgage collateral, periodic payments of principal, and prepayments of principal. Therefore actual maturities of AFS securities are generally shorter than stated contractual maturities. Stated contractual maturities are generally greater than ten years.

For AFS securities where the fair value option has not been elected, the Company evaluates for impairment at least quarterly, and more frequently when economic or market conditions warrant such evaluation. When the fair value of an AFS security is less than its amortized cost, the security is considered impaired. For securities that are impaired, the Company determines if it (i) has the intent to sell the security, (ii) is more-likely-than-not that it will be required to sell the security before recovery of its amortized cost basis, or (iii) does not expect to recover the entire amortized cost basis of the security. If the Company determines that it is more-likely-than-not that it will incur a realized loss on the security when it is sold, the difference between the amortized cost and the fair value is recognized in the consolidated statements of comprehensive income (loss) as a component of loss on investment 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 initial estimated allowance for credit losses is equal to the difference between the prepayment adjusted contractual cash flows with no credit losses and the prepayment adjusted expected cash flows with credit losses, discounted at the effective interest rate on the AFS security. The contractual cash flows and expected cash flows are based on management's best estimate and take into consideration current prepayment assumptions, lifetime expected losses based on past loss experience, current market conditions, and reasonable and supportable forecasts of future conditions. The allowance for credit losses on Agency AFS securities relates to prepayment assumption changes on interest-only Agency RMBS. The initial allowance for credit losses causes an increase in the AFS security amortized cost and recognizes an allowance for credit losses in the same amount. Subsequent adverse or favorable changes in the allowance for credit losses are recognized immediately in earnings as a provision for or reduction in credit losses (within loss on investment securities). Adverse changes are reflected as an increase to the allowance for credit losses and favorable changes are reflected as a decrease to the allowance for credit losses. The allowance for credit losses is limited to the difference between the beneficial interest's fair value and its amortized cost, and any remaining adverse changes in these circumstances are reflected as a prospective adjustment to accretable yield. If the allowance for credit losses has been reduced to zero, the remaining favorable changes are reflected as a prospective adjustment to accretable yield. The Company does not adjust the effective interest rate in subsequent periods for prepayment assumption changes or variable-rate changes. Any changes in the allowance for credit losses due to the time-value-of-money are accounted for in the consolidated statements of comprehensive income (loss) as provision for credit losses rather than a reduction to interest income. Any portion of the AFS securities that is deemed uncollectible results in a write-off of the uncollectible amortized cost with a corresponding reduction to the allowance for credit losses. Recoveries of amounts previously written off results in an increase to the allowance for credit losses.

Mortgage Servicing Rights, at Fair Value

One of the Company's wholly owned subsidiaries, TH MSR Holdings LLC (formerly Matrix Financial Services Corporation), 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. Beginning in 2024, TH MSR Holdings also acquires MSR on loans originated by its subsidiary, RoundPoint, through purchases and recapture of MSR. TH MSR Holdings does not directly service mortgage loans; instead, it engages RoundPoint to handle substantially all servicing functions 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. As an owner and manager of MSR, the Company may be obligated to fund advances of principal and interest payments due to third-party owners of the loans, but not yet received from the individual borrowers. These advances are reported as servicing advances within the other assets line item on the consolidated balance sheets.

MSR are reported at fair value on the consolidated balance sheets. Although MSR transactions are observable in the marketplace, the valuation includes unobservable market data inputs (prepayment speeds; option-adjusted spread, or OAS, which represents the incremental spread added to the risk-free rate to reflect the effects of any embedded options and other risk inherent in MSR; and cost to service). Changes in the fair value of MSR are included within the (loss) gain on servicing asset line item on the Company's consolidated statements of comprehensive income (loss). Servicing fee, ancillary and other fee income, as well as float income from custodial accounts associated with the Company's servicing portfolio, are included within the servicing income line item on the Company's consolidated statements of comprehensive income (loss). 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 consolidated statements of comprehensive income (loss).

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 (loss) line item in the 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 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.

Cash and Cash Equivalents

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

Restricted Cash

Restricted cash represents cash balances the Company is required to maintain with counterparties for securities and derivatives trading activity, servicing activities and collateral for the Company's borrowings. Also included is the cash balance held pursuant to a letter of credit on the New York office lease. Cash balances required to be maintained with counterparties are not available to the Company for general corporate purposes, but may be applied against amounts due to security, derivative, servicing or financing counterparties or returned to the Company when collateral requirements are exceeded, or at the maturity of the derivative or financing arrangement.

Accrued Interest Receivable

Accrued interest receivable represents interest that is due and payable to the Company. Cash interest is generally received within 30 days of recording the receivable.

Due from/to Counterparties, net

Due from counterparties includes cash held by counterparties for payment of principal and interest as well as cash held by counterparties for securities and derivatives trading activity, servicing activities and collateral for the Company's borrowings but represents excess capacity and deemed unrestricted and a receivable from the counterparty as of the balance sheet date. Due from counterparties also includes cash receivable from counterparties for sales of MSR pending final transfer and settlement. Due to counterparties includes cash payable by the Company upon settlement of trade positions as well as cash deposited to and held by the Company for securities and derivatives trading activity, servicing activities and collateral for the Company's borrowings but represents a payable to the counterparty as of the balance sheet date. Due to counterparties also includes purchase price holdbacks on MSR acquisitions for early prepayment or default provisions, collateral exceptions and other contractual terms.

Derivative Financial Instruments, at Fair Value

In accordance with 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.

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 consolidated statements of comprehensive income (loss) as gain (loss) 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 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.

Reverse Repurchase Agreements

The Company may enter into reverse repurchase agreements with third-party broker-dealers whereby it purchases U.S. Treasury securities under agreements to resell at an agreed-upon price and date. Generally, the Company may enter into reverse repurchase agreement transactions in order to effectively borrow U.S. Treasury securities that it can then deliver to counterparties to whom it has made short sales of the same securities, earn a yield on excess cash balances, or preserve existing repurchase agreements by substituting collateral. The Company accounts for these reverse repurchase agreements as securities borrowing transactions and records them at their contractual amounts, as specified in the respective agreements.

Repurchase Agreements

The Company may finance certain of its investment securities and MSR through the use of repurchase agreements. These repurchase agreements are generally short-term debt, which expire within one year. At times, certain of the Company's repurchase agreements may have contractual terms of greater than one year, and, thus, would be considered long-term debt. Borrowings under repurchase agreements generally bear interest rates based on an index plus a spread and are generally uncommitted. The repurchase agreements are treated as collateralized financing transactions and are carried at their contractual amounts, as specified in the respective agreements.

Revolving Credit Facilities

To finance MSR assets and related servicing advance obligations, the Company enters into revolving credit facilities collateralized by the value of the MSR and/or servicing advances pledged. Borrowings under these revolving credit facilities that expire within one year are considered short-term debt. As of December 31, 2024, the Company's revolving credit facilities that had contractual terms of greater than one year were considered long-term debt. The Company's revolving credit facilities generally bear interest rates based on an index plus a spread. Borrowings under revolving credit facilities are treated as collateralized financing transactions and are carried at contractual amounts, as specified in the respective agreements.

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.

Term Notes Payable

Term notes payable related to the Company’s consolidated securitization are recorded at outstanding principal balance, net of any unamortized deferred debt issuance costs, on the Company’s consolidated balance sheets.

Convertible Senior Notes

Convertible senior notes include unsecured convertible debt that are carried at their unpaid principal balance, net of any unamortized deferred issuance costs, on the Company’s consolidated balance sheet. Interest on the notes is payable semiannually until such time the notes mature or are converted into shares of the Company’s common stock.

Accrued Interest Payable

Accrued interest payable represents interest that is due and payable to third parties. Interest is generally paid within 30 days to three months of recording the payable, based upon the Company’s remittance requirements.

Deferred Tax Assets and Liabilities

Income recognition for U.S. GAAP and tax differ in certain respects. These differences often reflect differing accounting treatments for tax and U.S. GAAP, such as accounting for discount and premium amortization, credit losses, asset impairments, recognition of certain operating expenses and certain valuation estimates. Some of these differences are temporary in nature and create timing mismatches between when taxable income is earned and the tax is paid versus when the earnings (losses) for U.S. GAAP purposes, or GAAP net income (loss), are recognized and the tax provision is recorded. Some of these differences are permanent since certain income (or expense) may be recorded for tax purposes but not for U.S. GAAP purposes (or vice versa). One such significant permanent difference is the Company’s ability as a REIT to deduct dividends paid to stockholders as an expense for tax purposes, but not for U.S. GAAP purposes.

As a result of these temporary differences, the Company’s TRSs may recognize taxable income in periods prior or subsequent to when it recognizes income for U.S. GAAP purposes. When this occurs, the TRSs pay or defer the tax liability and establish deferred tax assets or deferred tax liabilities, respectively, for U.S. GAAP purposes.

Deferred tax assets generally represent items that may be used as a tax deduction in a tax return in future years for which the Company has already recognized the tax benefit for U.S. GAAP purposes. The Company estimates, based on existence of sufficient evidence, the ability to realize the remainder of any deferred tax asset its TRSs recognize. Any adjustments to such estimates will be made in the period such determination is made. Deferred tax liabilities generally represent tax expense for which payment has been deferred or expense has already been taken as a deduction on the Company’s tax return but has not yet been recognized as an expense for U.S. GAAP purposes. The Company’s deferred tax assets and/or liabilities are generated solely by differences in GAAP net income (loss) and taxable income (loss) at our taxable subsidiaries. U.S. GAAP and tax differences in the REIT may create additional deferred tax assets and/or liabilities to the extent the Company does not distribute all of its taxable income.

Income Taxes

The Company has elected to be taxed as a REIT under the Internal Revenue Code and the corresponding provisions of state law. To qualify as a REIT, the Company must distribute at least 90% of its annual REIT taxable income to stockholders (not including taxable income retained in its taxable subsidiaries) within the time frame set forth in the Internal Revenue Code and the Company must also meet certain other requirements. In addition, because certain activities, if performed by the Company, may cause the Company to earn income which is not qualifying for the REIT gross income tests, the Company has formed TRSs, as defined in the Internal Revenue Code, to engage in such activities. These TRSs’ activities are subject to income taxes as well as any REIT taxable income not distributed to stockholders.

The Company assesses its tax positions for all open tax years and determines whether the Company has any material unrecognized liabilities in accordance with ASC 740, *Income Taxes*. The Company records these liabilities to the extent the Company deems them more-likely-than-not to be incurred. The Company classifies interest and penalties on material uncertain tax positions as interest expense and operating expense, respectively, in its consolidated statements of comprehensive income (loss).

Other Comprehensive Income (Loss)

Current period net unrealized gains and losses on AFS securities, excluding certain AFS securities for which the Company has elected the fair value option, are reported as components of accumulated other comprehensive loss on its consolidated statements of stockholders' equity and in the consolidated statements of comprehensive income (loss). Net unrealized gains and losses on securities held by the Company's taxable subsidiaries that are reported in accumulated other comprehensive loss are adjusted for the effects of taxation and may create deferred tax assets or liabilities.

Earnings Per Share

The Company's common stock, par value and shares issued and outstanding, includes issued and unvested shares of restricted common stock, which have full rights to the common stock dividend declarations of the Company. Common shares underlying certain other equity-based awards granted by the Company are not included in common stock until the awards vest. If these awards have non-forfeitable dividend participation rights, they are considered participating securities in the calculations of basic and diluted earnings (loss) per share.

Basic earnings (loss) per share is computed by dividing net income (loss) attributable to common stockholders, less income allocated to participating securities pursuant to the two-class method, by the weighted average number of common shares outstanding during the period. Diluted earnings (loss) per share is computed by dividing basic net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding during the period, further adjusted for the dilutive effect, if any, of share-based payment awards and the assumed conversion of convertible notes into common shares.

Unvested equity-based awards are included in the calculation of diluted earnings (loss) per share under either the two-class method or the treasury stock method, depending upon which method produces the more dilutive result. The two-class method is an earnings allocation formula under which earnings (loss) per share is calculated for common stock and participating securities according to dividends declared and participating rights in undistributed earnings. Under this method, all earnings (distributed and undistributed) are allocated between participating securities and common shares based on their respective rights to receive dividends or dividend equivalents. Under the treasury stock method, common equivalent shares are calculated assuming that any share-based payment awards vest according to their respective agreements and unrecognized compensation cost is used to repurchase shares of the Company's outstanding common stock at the average market price during the reported period. Under the if-converted method, the assumed conversion of each convertible note into common shares is calculated by adding back the respective periodic interest expense (net of any tax effects) associated with dilutive convertible notes to net income (loss) attributable to common stockholders and adding the shares issued in an assumed conversion to the diluted weighted average share count.

Equity Incentive Plan

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 Equity Incentive Plan permits the grants of restricted common stock, restricted stock units, or RSUs, performance-based awards (including performance share units, or PSUs), phantom shares, dividend equivalent rights and other equity-based awards. See Note 20 - *Equity Incentive Plans* for further details regarding the Equity Incentive Plan.

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

Recently Issued and/or Adopted Accounting Standards

Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued Accounting Standards Update (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 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.

Disaggregation of Income Statement Expenses

In November 2024, the FASB issued ASU No. 2024-03, which requires public entities to disclose specific expense categories, including employee compensation, depreciation, and intangible asset amortization expenses, in the notes to financial statements on both an annual and interim basis. The guidance also requires a qualitative description of amounts that are not disaggregated quantitatively. The ASU is effective for annual periods beginning after December 15, 2026, and for interim periods beginning after December 15, 2027, with early adoption permitted. The guidance should be applied either prospectively or retrospectively for each period presented. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and disclosures.

Issuer's Accounting for Induced Conversions of Convertible Debt Instruments

In November 2024, the FASB issued ASU No. 2024-04, which clarifies the requirements for determining whether certain settlements of convertible debt instruments should be accounted for as an induced conversion or a debt extinguishment. The ASU is effective for annual periods, and interim periods within those annual periods, beginning after December 31, 2025, with early adoption permitted for entities that have adopted ASU No. 2020-06. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and disclosures.

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. 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 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 adds 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 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 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

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 consolidated statements of comprehensive income (loss). During the years ended December 31, 2023 and 2022, the Company recognized $1.3 million and $0.8 million, respectively, of acquisition-related costs.

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 December 31, 2023. 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 years ended December 31, 2023 and 2022 prepared as if the RoundPoint acquisition had been consummated on January 1, 2022.

	Year Ended December 31,	
(in thousands)	**2023**	**2022**
Revenue [(1)]	$ 806,945	$ 889,186
(Loss) income before income taxes	$ (104,823)	$ 260,023

(1) The Company's revenue is defined as the sum of the interest income, servicing income and total other income line items on the 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, 2022.

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 $23.9 million and $2.0 million during the years ended December 31, 2023 and 2022, respectively. These subservicing expenses are included within the servicing costs line item on the Company's consolidated statements of comprehensive income (loss).

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 may issue term notes to qualified institutional buyers and variable funding notes, or VFNs, to one of the subsidiaries, in each case secured on a pari passu basis. The Company has three repurchase facilities that are secured by the VFNs, which are collateralized by portions of the Company's MSR portfolio. During the year ended December 31, 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 consolidated balance sheets as of December 31, 2024 and December 31, 2023:

(in thousands)	December 31, 2024	December 31, 2023
Note receivable [1]	$ —	$ 399,317
Restricted cash	44,631	45,642
Accrued interest receivable [1]	—	551
Other assets	118,686	79,749
Total Assets	$ 163,317	$ 525,259
Term notes payable	$ —	$ 399,317
Revolving credit facilities	90,300	34,300
Accrued interest payable	560	816
Other liabilities	44,071	45,377
Total Liabilities	$ 134,931	$ 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.

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 consolidated balance sheets. The following table presents the Company's AFS investment securities by collateral type as of December 31, 2024 and December 31, 2023:

(in thousands)	December 31, 2024	December 31, 2023
Agency:		
Federal National Mortgage Association	$ 4,764,502	$ 5,467,684
Federal Home Loan Mortgage Corporation	2,505,390	2,790,662
Government National Mortgage Association	98,085	64,653
Non-Agency	3,734	4,150
Total available-for-sale securities	$ 7,371,711	$ 8,327,149

At December 31, 2024 and December 31, 2023, the Company pledged AFS securities with a carrying value of $7.1 billion and $8.1 billion, respectively, as collateral for repurchase agreements. See Note 13 - *Repurchase Agreements*.

At December 31, 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 consolidated balance sheets. As of December 31, 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 $3.7 million and $4.2 million, respectively.

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

(in thousands)	December 31, 2024							
	Principal/ Current Face	Un-amortized Premium	Accretable Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	$ 7,600,374	$ 135,743	$ (71,116)	$ 7,665,001	$ —	$ 2,789	$ (321,829)	$ 7,345,961
Interest-only	462,886	27,747	—	27,747	(2,386)	473	(3,818)	22,016
Total Agency	8,063,260	163,490	(71,116)	7,692,748	(2,386)	3,262	(325,647)	7,367,977
Non-Agency	503,924	3,724	(16)	4,279	(480)	244	(309)	3,734
Total	$ 8,567,184	$ 167,214	$ (71,132)	$ 7,697,027	$ (2,866)	$ 3,506	$ (325,956)	$ 7,371,711

(in thousands)	December 31, 2023							
	Principal/ Current Face	Un-amortized Premium	Accretable Purchase Discount	Amortized Cost	Allowance for Credit Losses	Unrealized Gain	Unrealized Loss	Carrying Value
Agency:								
Principal and interest	$ 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	$ 9,832,353	$ 217,937	$ (130,951)	$ 8,509,383	$ (3,943)	$ 23,757	$ (202,048)	$ 8,327,149

The following table presents the Company’s AFS securities according to their estimated weighted average life classifications as of December 31, 2024:

(in thousands)	December 31, 2024		
	Agency	Non-Agency	Total
< 1 year	$ 270	$ —	$ 270
≥ 1 and < 3 years	11,387	—	11,387
≥ 3 and < 5 years	29,908	5	29,913
≥ 5 and < 10 years	7,326,412	3,430	7,329,842
≥ 10 years	—	299	299
Total	$ 7,367,977	$ 3,734	$ 7,371,711

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 years ended December 31, 2024, 2023 and 2022 in the allowance for credit losses on Agency and non-Agency AFS securities:

	Year Ended December 31, 2024		
(in thousands)	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	$ (3,619)	$ (324)	$ (3,943)
Additions on securities for which credit losses were not previously recorded	(50)	(81)	(131)
Decrease (increase) on securities with previously recorded credit losses	(24)	(104)	(128)
Write-offs	1,307	29	1,336
Allowance for credit losses at end of period	$ (2,386)	$ (480)	$ (2,866)

	Year Ended December 31, 2023		
(in thousands)	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	$ (6,785)	$ (173)	$ (6,958)
Additions on securities for which credit losses were not previously recorded	(55)	(370)	(425)
(Increase) decrease on securities with previously recorded credit losses	965	5	970
Write-offs	2,256	214	2,470
Allowance for credit losses at end of period	$ (3,619)	$ (324)	$ (3,943)

	Year Ended December 31, 2022		
(in thousands)	Agency	Non-Agency	Total
Allowance for credit losses at beginning of period	$ (12,851)	$ (1,387)	$ (14,238)
Additions on securities for which credit losses were not previously recorded	(482)	(501)	(983)
(Increase) decrease on securities with previously recorded credit losses	(3,462)	1,715	(1,747)
Write-offs	10,010	—	10,010
Allowance for credit losses at end of period	$ (6,785)	$ (173)	$ (6,958)

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 December 31, 2024 and December 31, 2023. At December 31, 2024 and December 31, 2023, the Company held 632 and 646 AFS securities, respectively; of the securities for which an allowance for credit losses has not been recorded, 159 and 477 were in an unrealized loss position for less than twelve consecutive months and 370 and 0 were in an unrealized loss position for more than twelve consecutive months, respectively.

	December 31, 2024					
	Unrealized Loss Position for					
	Less than 12 Months		12 Months or More		Total	
(in thousands)	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Agency	$ 3,252,413	$ (53,374)	$ 3,845,019	$ (270,700)	$ 7,097,432	$ (324,074)
Non-Agency	5	—	—	—	5	—
Total	$ 3,252,418	$ (53,374)	$ 3,845,019	$ (270,700)	$ 7,097,437	$ (324,074)

	December 31, 2023					
	Unrealized Loss Position for					
	Less than 12 Months		12 Months or More		Total	
(in thousands)	**Estimated Fair Value**	**Gross Unrealized Losses**	**Estimated Fair Value**	**Gross Unrealized Losses**	**Estimated Fair Value**	**Gross Unrealized Losses**
Agency	$ 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 loss on investment securities in the Company's consolidated statements of comprehensive income (loss). The following table presents details around sales of AFS securities during the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
(in thousands)	**2024**	**2023**	**2022**
Proceeds from sales of available-for-sale securities	$ 2,183,330	$ 2,673,827	$ 7,793,705
Amortized cost of available-for-sale securities sold	(2,222,634)	(2,792,703)	(8,359,967)
Total realized losses on sales, net	$ (39,304)	$ (118,876)	$ (566,262)
Gross realized gains	$ 2,426	$ 16,285	$ 40,574
Gross realized losses	(41,730)	(135,161)	(606,836)
Total realized losses on sales, net	$ (39,304)	$ (118,876)	$ (566,262)

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. Beginning in 2024, TH MSR Holdings also acquires MSR on loans originated by its subsidiary, RoundPoint, through purchases and recapture of MSR. 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 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 years ended December 31, 2024, 2023 and 2022.

	Year Ended December 31,		
(in thousands)	2024	2023	2022
Balance at beginning of period	$ 3,052,016	$ 2,984,937	$ 2,191,578
Purchases of mortgage servicing rights	115,587	317,194	640,051
Additions from sales of mortgage loans	667	—	—
Sales of mortgage servicing rights [1]	(81,014)	(115,754)	(259,059)
Changes in fair value due to:			
Changes in valuation inputs or assumptions used in the valuation model [2]	140,168	97,859	793,631
Other changes in fair value [3]	(231,606)	(227,663)	(371,023)
Other changes [4]	(1,547)	(4,557)	(10,241)
Balance at end of period [5]	$ 2,994,271	$ 3,052,016	$ 2,984,937

(1) During the year ended December 31, 2023, excess MSR was transferred to Agency-sponsored trusts in exchange for stripped mortgage backed securities, or SMBS. In each transaction, a portion of the SMBS was acquired by third parties and the Company acquired the remaining balance of those SMBS, which were briefly included within Agency AFS securities until their sale in the same year.
(2) Includes the impact of acquiring MSR at a cost different from fair value.
(3) Primarily represents changes due to the realization of cash flows.
(4) Includes purchase price adjustments, contractual prepayment protection, and changes due to the Company's purchase of the underlying collateral.
(5) Based on the prior month-end's principal balance of the loans underlying the Company's MSR, increased for current month purchases.

At December 31, 2024, the Company pledged MSR with a carrying value of $3.0 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*.

As of December 31, 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)	December 31, 2024	December 31, 2023
Weighted average prepayment speed:	6.3 %	6.2 %
Impact on fair value of 10% adverse change	$ (61,975)	$ (74,042)
Impact on fair value of 20% adverse change	$ (120,142)	$ (146,237)
Weighted average delinquency:	0.8 %	0.9 %
Impact on fair value of 10% adverse change	$ (1,297)	$ (4,654)
Impact on fair value of 20% adverse change	$ (2,567)	$ (12,376)
Weighted average option-adjusted spread:	5.1 %	5.3 %
Impact on fair value of 10% adverse change	$ (70,293)	$ (59,285)
Impact on fair value of 20% adverse change	$ (137,449)	$ (119,776)
Weighted average per loan annual cost to service:	$ 65.02	$ 68.27
Impact on fair value of 10% adverse change	$ (36,191)	$ (24,111)
Impact on fair value of 20% adverse change	$ (72,381)	$ (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 consolidated statements of comprehensive income (loss) for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
(in thousands)	**2024**	**2023**	**2022**
Servicing fee income	$ 528,206	$ 555,221	$ 564,923
Ancillary and other fee income	16,718	5,149	1,932
Float income	136,724	125,407	37,056
Total	$ 681,648	$ 685,777	$ 603,911

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 consolidated statements of comprehensive income (loss). Post-acquisition, all servicing-related expenses incurred by RoundPoint are included within the compensation and benefits and other operating expenses line items on the Company's consolidated statements of comprehensive income (loss).

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 $141.6 million and $143.2 million and were included in other assets on the consolidated balance sheets as of December 31, 2024 and December 31, 2023, respectively. At December 31, 2024 and December 31, 2023, mortgage loans in 60+ day delinquent status (whether or not subject to forbearance) accounted for approximately 0.9% 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 December 31, 2024 and December 31, 2023, the Company had pledged servicing advances with a carrying value of $118.7 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 60 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 December 31, 2024 and December 31, 2023:

(in thousands)	December 31, 2024	December 31, 2023
Unpaid principal balance	$ 2,297	$ 318
Mark-to-market adjustments	37	14
Total mortgage loans held-for-sale	$ 2,334	$ 332

The following table presents a reconciliation of the Company's mortgage loans held-for-sale for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
(in thousands)	2024	2023	2022
Balance at beginning of period	$ 332	$ 283	$ 40
Originations and purchases of mortgage loans	64,416	80	264
Sales and principal collections	(62,437)	(31)	(30)
Unrealized gains (losses) on mortgage loans	23	—	9
Balance at end of period	$ 2,334	$ 332	$ 283

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 December 31, 2024, the Company had pledged mortgage loans held-for-sale with a carrying value of $2.1 million as collateral for this warehouse facility. See Note 15 - *Warehouse Facilities*.

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 December 31, 2024 and December 31, 2023:

(in thousands)	December 31, 2024	December 31, 2023
Restricted cash balances held by trading counterparties:		
For securities trading activity	$ 950	$ 450
For derivatives trading activity	43,398	1,669
For servicing activities	49,900	50,345
As restricted collateral for borrowings	218,715	12,575
Total restricted cash balances held by trading counterparties	312,963	65,039
Restricted cash balance pursuant to letter of credit on office lease	65	62
Total	$ 313,028	$ 65,101

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

(in thousands)	December 31, 2024	December 31, 2023
Cash and cash equivalents	$ 504,613	$ 729,732
Restricted cash	313,028	65,101
Total cash, cash equivalents and restricted cash	$ 817,641	$ 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 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).

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 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 December 31, 2024 and December 31, 2023:

	December 31, 2024			
	Derivative Assets		Derivative Liabilities	
(in thousands)	Fair Value	Notional	Fair Value	Notional
Inverse interest-only securities	$ 9,058	$ 135,310	$ —	$ —
Interest rate swap agreements	—	16,594,467	—	—
TBAs	732	(34,000)	(24,883)	4,531,800
Futures, net	—	(3,973,400)	—	—
Interest rate lock commitments	151	15,727	(13)	2,613
Forward mortgage loan sale commitments	173	19,030	(1)	1,343
Total	$ 10,114	$ 12,757,134	$ (24,897)	$ 4,535,756

	December 31, 2023			
	Derivative Assets		Derivative Liabilities	
(in thousands)	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)	—	—
TBAs	72,980	2,979,000	(21,506)	518,000
Futures, net	—	—	—	(6,203,050)
Total	$ 85,291	$ 2,942,735	$ (21,506)	$ 12,103,064

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.

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

Derivative Instruments	Location of Gain (Loss) Recognized in Income	Amount of Gain (Loss) Recognized in Income		
		Year Ended December 31,		
(in thousands)		2024	2023	2022
Interest rate risk management:				
TBAs	(Loss) gain on other derivative instruments	$ (144,416)	$ (155,942)	$ (487,713)
Futures	(Loss) gain on other derivative instruments	105,216	(8,973)	514,467
Options on futures	(Loss) gain on other derivative instruments	(127)	(779)	(2,224)
Interest rate swaps - Payers	Gain (loss) on interest rate swap and swaption agreements	301,781	(53,263)	772,829
Interest rate swaps - Receivers	Gain (loss) on interest rate swap and swaption agreements	(153,941)	526	(756,744)
Swaptions	Gain (loss) on interest rate swap and swaption agreements	31	(209)	13,414
Interest rate lock commitments	Gain on mortgage loans held-for-sale	137	—	—
Forward mortgage loan sale commitments	Gain on mortgage loans held-for-sale	160	—	—
Non-risk management:				
Inverse interest-only securities	(Loss) gain on other derivative instruments	(1,690)	(516)	(15,220)
Total		$ 107,151	$ (219,156)	$ 38,809

For the years ended December 31, 2024, 2023 and 2022, the Company recognized $58.5 million of income, $21.4 million of income, and $4.8 million of expense, respectively, for the accrual and/or settlement of the net interest spread associated with its interest rate swaps. The income resulted from paying either a fixed interest rate or a floating interest rate (OIS or SOFR) and receiving either a floating interest rate (OIS or SOFR) or a fixed interest rate on an average $14.1 billion, $8.0 billion and $12.4 billion notional, respectively.

The following tables present information with respect to the volume of activity in the Company's derivative instruments during the years ended December 31, 2024 and 2023:

	Year Ended December 31, 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	$ —	$ (28,425)	$ 135,310	$ 149,602	$ —
Interest rate swap agreements	17,788,114	40,285,144	(41,478,791)	16,594,467	14,147,884	(3,901)
Swaptions, net	(200,000)	(500,000)	700,000	—	(57,923)	(98)
TBAs, net	3,497,000	63,434,400	(62,433,600)	4,497,800	4,235,543	(68,791)
Futures, net	(6,203,050)	(25,011,200)	27,240,850	(3,973,400)	(5,501,400)	(30,570)
Options on futures, net	—	—	—	—	—	(127)
Interest rate lock commitments	—	136,943	(118,603)	18,340	25,879	—
Forward mortgage loan sale commitments	—	136,943	(116,570)	20,373	25,900	—
Total	$ 15,045,799	$ 78,482,230	$ (76,235,139)	$ 17,292,890	$ 13,025,485	$(103,487)

	Year Ended December 31, 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	$ —	$ (32,721)	$ 163,735	$ 180,080	$ —
Interest rate swap agreements	—	22,600,456	(4,812,342)	17,788,114	7,974,494	(36,114)
Swaptions, net	—	(400,000)	200,000	(200,000)	(161,644)	(80)
TBAs, net	3,826,000	42,018,000	(42,347,000)	3,497,000	3,016,532	(230,319)
Futures, net	(18,285,452)	(35,976,130)	48,058,532	(6,203,050)	(9,085,474)	167,235
Options on futures, net	—	—	—	—	—	(779)
Total	$(14,262,996)	$ 28,242,326	$ 1,066,469	$ 15,045,799	$ 1,923,988	$(100,057)

(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 consolidated statements of cash flows. Realized gains and losses and derivative fair value adjustments are reflected within the realized and unrealized (gains) losses on interest rate swaps and swaptions, unrealized (gains) losses on other derivative instruments and gains on mortgage loans held-for-sale line items within the operating activities section of the 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; proceeds from sales and settlement (payments for termination and settlement) of derivative instruments, net; and increase (decrease) in due to counterparties, net line items within the investing activities section of the consolidated statements of cash flows.

Interest Rate Sensitive Assets/Liabilities

The Company's Agency RMBS portfolio is generally subject to change in value when interest rates 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 December 31, 2024 and December 31, 2023, the Company had $16.5 million and $41.9 million, respectively, of interest-only securities, and $3.0 billion and $3.1 billion, respectively, of MSR. Interest-only securities are included in AFS securities, at fair value, in the 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 December 31, 2024 and December 31, 2023:

	December 31, 2024				
				Net Carrying Value (4)	
(in thousands)	Notional Amount (1)	Cost Basis (2)	Market Value (3)	Derivative Assets	Derivative Liabilities
Purchase contracts	$ 4,931,800	$ 4,898,394	$ 4,874,996	$ —	$ (23,398)
Sale contracts	(434,000)	(405,339)	(406,092)	732	(1,485)
TBAs, net	$ 4,497,800	$ 4,493,055	$ 4,468,904	$ 732	$ (24,883)

(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	$ 3,497,000	$ 3,170,548	$ 3,222,022	$ 72,980	$ (21,506)

(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 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 December 31, 2024 and December 31, 2023:

(dollars in thousands)	December 31, 2024			December 31, 2023		
Type & Maturity	Notional Amount	Carrying Value	Weighted Average Months to Expiration	Notional Amount	Carrying Value	Weighted Average Months to Expiration
U.S. Treasury futures - 2 year	$ (2,027,800)	$ —	2.96	$ (549,600)	$ —	2.89
U.S. Treasury futures - 5 year	(713,800)	—	2.96	(1,876,700)	—	2.89
U.S. Treasury futures - 10 year	(907,600)	—	2.60	(983,300)	—	2.60
U.S. Treasury futures - 20 year	318,300	—	2.60	(388,200)	—	2.89
Eris SOFR swap futures - 10 year	(80,000)	—	122.63	—	—	—
SOFR futures:						
≤ 1 year	(562,500)	—	5.52	(1,842,750)	—	6.05
> 1 and ≤ 2 years	—	—	—	(562,500)	—	17.56
Total futures	$ (3,973,400)	$ —	5.24	$ (6,203,050)	$ —	5.10

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 December 31, 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)

December 31, 2024 Swaps Maturities	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 %	4.490 %	0.21
> 1 and ≤ 3 years	4,505,979	3.929 %	4.490 %	1.50
> 3 and ≤ 5 years	3,073,385	3.579 %	4.490 %	3.50
> 5 and ≤ 7 years	1,885,295	3.781 %	4.490 %	6.86
> 7 and ≤ 10 years	1,122,030	3.822 %	4.490 %	9.90
> 10 years	648,381	3.843 %	4.490 %	14.60
Total	$ 13,882,741	4.042 %	4.490 %	3.47

(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	$ 12,127,483	4.245 %	5.380 %	3.87

(1) Notional amount includes $2.4 billion and $1.1 billion in forward starting interest rate swaps as of December 31, 2024 and December 31, 2023, respectively.

(2) Weighted averages exclude forward starting interest rate swaps. As of December 31, 2024 and December 31, 2023, forward starting interest rate swap payers had a weighted average fixed pay rate of 3.8% and 4.0% and weighted average maturities of 5.5 and 6.4 years, respectively.

Additionally, as of December 31, 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)

	December 31, 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	4.490 %	4.025 %	0.22
> 1 and ≤ 3 years	929,804	4.490 %	3.328 %	2.75
> 3 and ≤ 5 years	352,348	4.490 %	3.099 %	4.71
> 5 and ≤ 7 years	99,607	4.490 %	3.097 %	6.70
> 7 and ≤ 10 years	—	— %	— %	0.00
> 10 years	543,326	4.490 %	3.384 %	20.13
Total	$ 2,711,726	4.490 %	3.565 %	6.60

(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	$ 5,660,631	5.380 %	4.052 %	5.00

(1) Notional amount includes $719.8 million and $645.2 million in forward starting interest rate swaps as of December 31, 2024 and December 31, 2023, respectively.
(2) Weighted averages exclude forward starting interest rate swaps. As of December 31, 2024 and December 31, 2023, forward starting interest rate swap receivers had a weighted average fixed receive rate of 4.0% and 4.4% and weighted average maturities of 2.6 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 December 31, 2024. As of December 31, 2023, the Company had the following outstanding interest rate swaptions:

(notional and dollars in thousands)	December 31, 2023						
	Option				**Underlying Swap**		
Swaption	**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 December 31, 2024, the Company had outstanding IRLCs of $18.3 million in principal with a net fair value of $0.1 million.

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 60 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 December 31, 2024, the Company had outstanding forward mortgage loan sale commitments of $20.4 million in principal with a net fair value of $0.2 million.

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 December 31, 2024, the fair value of derivative financial instruments as an asset and liability position was $10.1 million and $24.9 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 December 31, 2024 and December 31, 2023, the Company had $354.7 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 carrying value of the reverse repurchase agreements of $356.0 million and $284.1 million, respectively.

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 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 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 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 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 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 consolidated balance sheets as of December 31, 2024 and December 31, 2023:

	December 31, 2024					
				Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets (1)		
(in thousands)	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Balance Sheets	Net Amounts of Assets (Liabilities) Presented in the Balance Sheets	Financial Instruments	Cash Collateral (Received) Pledged	Net Amount
Assets:						
Derivative assets	$ 244,270	$ (234,156)	$ 10,114	$ (10,114)	$ —	$ —
Reverse repurchase agreements	355,975	—	355,975	—	(354,654)	1,321
Total Assets	$ 600,245	$ (234,156)	$ 366,089	$ (10,114)	$ (354,654)	$ 1,321
Liabilities:						
Repurchase agreements	$ (7,805,057)	$ —	$ (7,805,057)	$ 7,805,057	$ —	$ —
Derivative liabilities	(259,053)	234,156	(24,897)	10,114	—	(14,783)
Total Liabilities	$ (8,064,110)	$ 234,156	$ (7,829,954)	$ 7,815,171	$ —	$ (14,783)

	December 31, 2023					
				Gross Amounts Not Offset with Financial Assets (Liabilities) in the Balance Sheets (1)		
(in thousands)	Gross Amounts of Recognized Assets (Liabilities)	Gross Amounts Offset in the Balance Sheets	Net Amounts of Assets (Liabilities) Presented in the Balance Sheets	Financial Instruments	Cash Collateral (Received) Pledged	Net Amount
Assets:						
Derivative assets	$ 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 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 consolidated balance sheets.

Note 12. Fair Value

Fair Value Measurements

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

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

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 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 December 31, 2024.

Mortgage servicing rights. The Company holds a portfolio of MSR that are carried at fair value on the consolidated balance sheets. The Company determines fair value of its MSR using a discounted cash flow model, which incorporates both observable and unobservable market data. 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. Inputs into the model include principal balance, note rate, geographical location, loan-to-value (LTV) ratios, FICO and other loan characteristics, along with servicing fee, ancillary income, earnings rates on escrow balances and recapture rates. Significant unobservable inputs include prepayment speeds; option adjusted spread, or OAS, which represents the incremental spread added to the risk-free rate to reflect the effects of any embedded options and other risk inherent in MSR; and cost to service. The Company obtains third-party valuations, industry surveys and other available market data quarterly to assess the reasonableness of the significant unobservable inputs used in the cash flow model, as well as the fair value calculated by the cash flow model, subject to internally-established hierarchy and override procedures. As a result, the Company classified 100% of its MSR as Level 3 fair value assets at December 31, 2024.

Mortgage loans held-for-sale. The Company recognizes on its 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 December 31, 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 December 31, 2024. The Company did not hold any interest rate swaptions at December 31, 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 December 31, 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 December 31, 2024. The Company did not hold any options on futures at December 31, 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 December 31, 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 December 31, 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.

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:

	Recurring Fair Value Measurements December 31, 2024			
(in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Available-for-sale securities	$ —	$ 7,367,977	$ 3,734	$ 7,371,711
Mortgage servicing rights	—	—	2,994,271	2,994,271
Mortgage loans held-for-sale	—	2,334	—	2,334
Derivative assets	732	9,231	151	10,114
Total assets	$ 732	$ 7,379,542	$ 2,998,156	$ 10,378,430
Liabilities:				
Derivative liabilities	$ 24,883	$ 1	$ 13	$ 24,897
Total liabilities	$ 24,883	$ 1	$ 13	$ 24,897

	Recurring Fair Value Measurements December 31, 2023			
(in thousands)	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 valuation of Level 3 instruments requires significant judgment by management and its third-party pricing vendors. Both management and the third-party pricing vendors 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 management and the third-party pricing vendors in the absence of market information. Assumptions used by management and the third-party pricing vendors due to lack of observable inputs may significantly impact the resulting fair value and therefore the Company's consolidated financial statements.

The Company's valuation committee reviews all valuations determined using discounted cash flow models, as well as those that are based on pricing information received from third-party pricing vendors. As part of this review, all valuations are compared against third-party valuations, industry surveys and 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 third-party pricing vendors.

In determining fair value, both management and third-party pricing vendors may use various valuation approaches, including market and income approaches. Inputs that are used in determining fair value may include pricing information, credit data, volatility statistics, underlying instrument (e.g., loan) characteristics, prepayment speeds, expected life, earnings rates and cost to service. 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 and/or management 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 and liabilities measured at fair value on a recurring basis:

	Year Ended December 31, 2024			
	Assets			Liabilities
(in thousands)	Available-For-Sale Securities	Mortgage Servicing Rights	Interest Rate Lock Commitments	Interest Rate Lock Commitments
Beginning of period level 3 fair value	$ 4,150	$ 3,052,016	$ —	$ —
Gains (losses) included in net income (loss):				
Realized	(566)	(202,842)	—	—
Unrealized	— (1)	140,168 (2)	151 (3)	13 (3)
Reversal of provision for credit losses	(127)	—	—	—
Net gains (losses) included in net income (loss)	(693)	(62,674)	151	13
Other comprehensive income	277	—	—	—
Purchases/additions	—	116,254	—	—
Sales	—	(109,778)	—	—
Settlements	—	(1,547)	—	—
Gross transfers into level 3	—	—	—	—
Gross transfers out of level 3	—	—	—	—
End of period level 3 fair value	$ 3,734	$ 2,994,271	$ 151	$ 13
Change in unrealized gains or losses for the period included in earnings for assets held at the end of the reporting period	$ — (4)	$ 148,278 (5)	$ 151 (6)	$ 13 (6)
Change in unrealized gains or losses for the period included in other comprehensive (loss) income for assets held at the end of the reporting period	$ 277	$ —	$ —	$ —

	Year Ended December 31, 2023			
	Assets			Liabilities
(in thousands)	Available-For-Sale Securities	Mortgage Servicing Rights	Interest Rate Lock Commitments	Interest Rate Lock Commitments
Beginning of period level 3 fair value	$ 125,158	$ 2,984,937	$ —	$ —
Gains (losses) included in net income (loss):				
Realized	(1,408)	(209,479)	—	—
Unrealized	4,817 (1)	97,859 (2)	— (3)	— (3)
Reversal of provision for credit losses	(146)	—	—	—
Net gains (losses) included in net income (loss)	3,263	(111,620)	—	—
Other comprehensive income	1,112	—	—	—
Purchases/additions	—	317,194	—	—
Sales	(125,383)	(133,938)	—	—
Settlements	—	(4,557)	—	—
Gross transfers into level 3	—	—	—	—
Gross transfers out of level 3	—	—	—	—
End of period level 3 fair value	$ 4,150	$ 3,052,016	$ —	$ —
Change in unrealized gains or losses for the period included in earnings for assets held at the end of the reporting period	$ — (4)	$ 119,164 (5)	$ — (6)	$ — (6)
Change in unrealized gains or losses for the period included in other comprehensive (loss) income for assets held at the end of the reporting period	$ 1,112	$ —	$ —	$ —

(1) The change in unrealized gains or losses on available-for-sale securities accounted for under the fair value option was recorded in loss on investment securities on the 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 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 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 loss on investment securities on the 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 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 consolidated statements of comprehensive income (loss).

No transfers between Level 1, Level 2 or Level 3 were made during the years ended December 31, 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.

At December 31, 2024, the Company determined the fair value of its MSR internally using a discounted cash flow model. At December 31, 2023, the Company determined the fair value of its MSR based on prices obtained from multiple third-party pricing vendors who also used discounted cash flow models to inform their best estimates of fair value market price. The tables below present information about the significant unobservable market data used by management and/or 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 December 31, 2024 and December 31, 2023:

December 31, 2024

Unobservable Input	Range			Weighted Average (1)
Constant prepayment speed	5.2%	-	29.3%	6.3%
Option-adjusted spread	5.1%	-	5.1%	5.1%
Per loan annual cost to service	$65.00	-	$73.88	$65.02

December 31, 2023

Unobservable Input	Range			Weighted Average (2)
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) Calculation for constant prepayment speed and per-loan annual cost to service utilizes underlying loan principal balance for weighting purposes. Calculation for OAS utilizes relative MSR market value for weighting purposes.
(2) 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 December 31, 2024:

December 31, 2024

Unobservable Input	Range			Weighted Average (1)
Pull-through rate	69.3%	-	99.8%	84.4%

(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 years ended December 31, 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 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.

- 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 December 31, 2024, the Company had outstanding borrowings of $680.0 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 December 31, 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 December 31, 2024 and December 31, 2023:

	December 31, 2024		December 31, 2023	
(in thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets:				
Available-for-sale securities	$ 7,371,711	$ 7,371,711	$ 8,327,149	$ 8,327,149
Mortgage servicing rights	$ 2,994,271	$ 2,994,271	$ 3,052,016	$ 3,052,016
Mortgage loans held-for-sale	$ 2,334	$ 2,334	$ 332	$ 332
Cash and cash equivalents	$ 504,613	$ 504,613	$ 729,732	$ 729,732
Restricted cash	$ 313,028	$ 313,028	$ 65,101	$ 65,101
Derivative assets	$ 10,114	$ 10,114	$ 85,291	$ 85,291
Reverse repurchase agreements	$ 355,975	$ 355,975	$ 284,091	$ 284,091
Other assets	$ 31,283	$ 31,283	$ 31,373	$ 31,373
Liabilities:				
Repurchase agreements	$ 7,805,057	$ 7,805,057	$ 8,020,207	$ 8,020,207
Revolving credit facilities	$ 1,020,171	$ 1,020,171	$ 1,329,171	$ 1,329,171
Warehouse facilities	$ 2,032	$ 2,032	$ —	$ —
Term notes payable	$ —	$ —	$ 295,271	$ 289,653
Convertible senior notes	$ 260,229	$ 259,241	$ 268,582	$ 254,232
Derivative liabilities	$ 24,897	$ 24,897	$ 21,506	$ 21,506

Note 13. Repurchase Agreements

As of December 31, 2024 and December 31, 2023, the Company had outstanding $7.8 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 5.15% and 5.74% and weighted average remaining maturities of 94 and 55 days as of December 31, 2024 and December 31, 2023, respectively.

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

	December 31, 2024				
	Collateral Type				
(in thousands)	Agency RMBS	Non-Agency Securities	Agency Derivatives	Mortgage Servicing Rights	Total Amount Outstanding
Within 30 days	$ 2,373,562	$ —	$ 4,262	$ —	$ 2,377,824
30 to 59 days	2,316,237	—	—	—	2,316,237
60 to 89 days	1,304,175	207	731	—	1,305,113
90 to 119 days	759,177	—	—	—	759,177
120 to 364 days	291,706	—	—	75,000	366,706
One year and over	—	—	—	680,000	680,000
Total	$ 7,044,857	$ 207	$ 4,993	$ 755,000	$ 7,805,057
Weighted average borrowing rate	4.90 %	5.39 %	5.31 %	7.44 %	5.15 %

	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)	December 31, 2024	December 31, 2023
Available-for-sale securities, at fair value	$ 7,097,561	$ 8,126,028
Mortgage servicing rights, at fair value (1)	1,355,639	463,529
Restricted cash	218,363	12,375
Due from counterparties	25,231	36,420
Derivative assets, at fair value	5,031	11,877
Total	$ 8,701,825	$ 8,650,229

(1) As of December 31, 2024 and December 31, 2023, MSR repurchase agreements totaling $755.0 million and $214.0 million, respectively, were secured by VFNs issued in connection with the Company's securitization of MSR. The VFNs are collateralized by portions of the Company's MSR portfolio. 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 year ended December 31, 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.

As of both December 31, 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 December 31, 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 7.56% and 8.66% and weighted average remaining maturities of 1.6 and 1.1 years, respectively.

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

(in thousands)	December 31, 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	1,020,171	1,004,871
Total	$ 1,020,171	$ 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 December 31, 2024 and December 31, 2023, MSR with a carrying value of $1.6 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 December 31, 2024 and December 31, 2023, servicing advances with a carrying value of $118.7 million and $79.7 million, respectively, were pledged as collateral for the Company's future payment obligations under its servicing advance revolving credit facility. 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 a warehouse facility 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 60 days of origination. As of December 31, 2024, the Company had outstanding short-term borrowings under its warehouse facility of $2.0 million with a weighted average borrowing rate of 6.64% and a weighted average remaining maturity of 87 days. The Company did not have any outstanding borrowings under its warehouse facility as of December 31, 2023.

At December 31, 2024 and December 31, 2023, borrowings under the Company’s warehouse facility had the following remaining maturities:

(in thousands)	December 31, 2024	December 31, 2023
Within 30 days	$ —	$ —
30 to 59 days	—	—
60 to 89 days	2,032	—
90 to 119 days	—	—
120 to 364 days	—	—
One year and over	—	—
Total	$ 2,032	$ —

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 December 31, 2024, mortgage loans held-for-sale with a carrying value of $2.1 million were pledged as collateral for the Company’s future payment obligations under its warehouse facility. Additionally, as of December 31, 2024, $0.4 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 year ended December 31, 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 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 year ended December 31, 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 both December 31, 2024 and December 31, 2023, the notes had a conversion rate of 33.8752 shares of common stock per $1,000 principal amount of the notes. 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 year ended December 31, 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 year ended December 31, 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 and $2.2 million for the years ended December 31, 2024 and 2023, respectively, which were recorded within the other income (loss) line item on the consolidated statements of comprehensive income (loss).

As of December 31, 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 December 31, 2024 and December 31, 2023 was $260.2 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 December 31, 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.

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 December 31, 2024, the Company's 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 consolidated financial statements and therefore no accrual is required as of December 31, 2024.

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 December 31, 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 (3)
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		24,870,817	$ 601,467				

(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 Term 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 December 31, 2024, the Company had declared and paid all required quarterly dividends on the Company's preferred stock.

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.

The following table summarizes the Company's purchases of its 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 under the preferred share repurchase program during the years ended December 31, 2024, 2023 and 2022:

(dollars in thousands)	Year Ended December 31,					
	2024		2023		2022	
Class of Stock	**Number of Shares**	**Aggregate Cost**	**Number of Shares**	**Aggregate Cost**	**Number of Shares**	**Aggregate Cost**
Series A Preferred Stock	35,047	$ 809	236,183	$ 4,723	428,549	$ 7,793
Series B Preferred Stock	280,060	$ 6,370	273,894	$ 5,349	786,846	$ 13,784
Series C Preferred Stock	170,502	$ 3,923	225,547	$ 4,741	1,742,555	$ 29,825
Total[(1)]	485,609	$ 11,102	735,624	$ 14,813	2,957,950	$ 51,402

(1) The difference between the aggregate cost and the carrying value of the preferred stock repurchased resulted in a total gain attributable to common stockholders of $0.6 million, $3.0 million and $20.1 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Common Stock

Reverse Stock Split

On September 21, 2022, the Company's board of directors approved a one-for-four reverse stock split of its outstanding shares of common stock. The reverse stock split was effected on November 1, 2022 at 5:01 p.m. Eastern Time. At the effective time, every four issued and outstanding shares of the Company's common stock were converted into one share of common stock. No fractional shares were issued in connection with the reverse stock split; instead, each stockholder holding fractional shares was entitled to receive, in lieu of such fractional shares, cash in an amount determined on the basis of the volume weighted average price of the Company's common stock on the NYSE on November 1, 2022. In connection with the reverse stock split, the number of authorized shares of the Company's common stock was also reduced on a one-for-four basis, from 700,000,000 to 175,000,000. The par value of each share of common stock remained unchanged. All per share amounts, common shares outstanding and common equity-based awards for the year ended December 31, 2022 have been adjusted on a retroactive basis to reflect the reverse stock split.

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 December 31, 2024, the Company had 103,680,321 shares of common stock outstanding. The following table presents a reconciliation of the common shares outstanding for the years ended December 31, 2024, 2023 and 2022:

	Number of common shares
Common shares outstanding, December 31, 2021	85,977,831
Issuance of common stock	324,896
Non-cash equity award compensation (1)	126,118
Common shares outstanding, December 31, 2022	86,428,845
Issuance of common stock	17,149,490
Repurchase of common stock	(593,453)
Non-cash equity award compensation (1)	221,575
Common shares outstanding, December 31, 2023	103,206,457
Issuance of common stock	18,987
Non-cash equity award compensation (1)	454,877
Common shares outstanding, December 31, 2024	103,680,321

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

Distributions to Stockholders

The following table presents cash dividends declared by the Company on its preferred and common stock during the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,					
(dollars in thousands)	**2024**		**2023**		**2022**	
Class of Stock	**Amount**	**Per Share**	**Amount**	**Per Share**	**Amount**	**Per Share**
Series A Preferred Stock	$ 10,258	$ 2.04	$ 10,460	$ 2.04	$ 11,462	$ 2.04
Series B Preferred Stock	$ 19,366	$ 1.92	$ 20,087	$ 1.92	$ 21,547	$ 1.92
Series C Preferred Stock	$ 17,512	$ 1.80	$ 18,060	$ 1.80	$ 20,598	$ 1.80
Common Stock	$ 187,906	$ 1.80	$ 192,220	$ 1.95	$ 228,845	$ 2.64

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 December 31, 2024, 149,617 shares have been issued under the plan for total proceeds of approximately $6.5 million, of which 18,987, 16,965 and 17,653 shares were issued for total proceeds of $0.2 million, $0.2 million and $0.3 million during the years ended December 31, 2024, 2023 and 2022, 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 December 31, 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 year ended December 31, 2023. No shares of common stock were repurchased during the year ended December 31, 2024 or the year ended December 31, 2022.

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 years ended December 31, 2023 and 2022, 7,132,525 and 307,569 shares were sold under the current equity distribution agreement for net proceeds of $99.8 million and $6.1 million, respectively. No shares were sold under the “at the market” equity distribution agreements during the year ended December 31, 2024.

Accumulated Other Comprehensive Loss

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

(in thousands)	December 31, 2024	December 31, 2023
Available-for-sale securities:		
Unrealized gains	$ 3,328	$ 23,305
Unrealized losses	(323,852)	(199,734)
Accumulated other comprehensive loss	$ (320,524)	$ (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 income (loss) upon the recognition of any realized gains and losses on sales as individual securities are sold. For the years ended December 31, 2024, 2023 and 2022, the Company reclassified $6.6 million, $140.9 million and $428.5 million in unrealized losses, respectively, on sold AFS securities from accumulated other comprehensive loss to loss on investment securities on the consolidated statements of comprehensive income (loss).

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.

Restricted Stock Units

The following table summarizes the activity related to RSUs for the years ended December 31, 2024 and 2023:

	Year Ended December 31,			
	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	(394,100)	(19.09)	(221,575)	(23.56)
Forfeited	(20,281)	(16.25)	(5,031)	(20.20)
Outstanding at End of Period	633,746	$ 15.64	613,699	$ 19.11

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 years ended December 31, 2024 and 2023:

	Year Ended December 31,			
	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	(64,275)	(30.06)	(1,647)	(25.21)
Outstanding at End of Period	652,770	$ 19.58	485,822	$ 24.89

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.

Restricted Common Stock

The following table summarizes the activity related to restricted common stock for the years ended December 31, 2024 and 2023:

	Year Ended December 31,			
	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 years ended December 31, 2024, 2023 and 2022 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 $10.9 million, $11.0 million and $11.6 million, respectively. As of December 31, 2024, the Company had $3.8 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 1.5 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 years ended December 31, 2024, 2023 and 2022.

	Year Ended December 31,		
	2024	2023	2022
Interest income:			
Available-for-sale securities	$ 393,527	$ 412,310	$ 272,230
Mortgage loans held-for-sale	78	9	3
Other	56,547	68,045	23,307
Total interest income	450,152	480,364	295,540
Interest expense:			
Repurchase agreements	468,492	474,292	167,455
Revolving credit facilities	108,623	121,124	51,814
Warehouse facilities	66	—	—
Term notes payable	12,426	28,994	19,514
Convertible senior notes	18,199	18,815	19,612
Total interest expense	607,806	643,225	258,395
Net interest (expense) income	$ (157,654)	$ (162,861)	$ 37,145

Note 22. Income Taxes

For the years ended December 31, 2024, 2023 and 2022, the Company qualified to be taxed as a REIT under the Internal Revenue 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.

Certain activities the Company performs may produce income that will not be qualifying income for REIT purposes. These activities include the designated portion of MSR treated as normal mortgage servicing, residential mortgage loans, certain derivative financial instruments and other risk-management instruments. The Company has designated its TRSs to engage in these activities.

The following table summarizes the tax provision (benefit) recorded primarily at the taxable subsidiary level for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,		
(in thousands)	**2024**	**2023**	**2022**
Current tax provision (benefit) :			
Federal	$ 9,541	$ 3,498	$ —
State	3,351	4,976	(1,028)
Total current tax provision (benefit)	12,892	8,474	(1,028)
Deferred tax provision (benefit):			
Federal	26,892	16,602	90,916
State	6,802	(2,098)	14,325
Total deferred tax provision	33,694	14,504	105,241
Total provision for income taxes	$ 46,586	$ 22,978	$ 104,213

During the year ended December 31, 2024, the Company recognized a provision for income taxes of $46.6 million, which was primarily due to net income from MSR servicing and mortgage loan origination activities, partially offset by operating expenses incurred in the Company's TRSs. During the year ended December 31, 2023, the Company recognized a provision for income taxes of $23.0 million, which was primarily due to net income from MSR servicing activity, partially offset by net losses recognized on MSR and operating expenses in the Company's TRSs. During the year ended December 31, 2022, the Company recognized a provision for income taxes of $104.2 million, which was primarily due to net income from MSR servicing activity and net gains recognized on MSR, partially offset by net losses recognized on derivative instruments and operating expenses in the Company's TRSs.

The Company's taxable income before dividend distributions differs from its pre-tax net income for U.S. GAAP purposes primarily due to unrealized gains and losses, the deferral of capital losses for tax, differences in timing of income recognition due to market discount and original issue discount and the calculations surrounding each, dividends paid from the Company's TRSs to the REIT, the utilization of net operating losses for tax and differences in treatment of compensation expense. These book to tax differences in the REIT are not reflected in the consolidated financial statements as the Company intends to retain its REIT status.

As of December 31, 2024, the Company had $253.0 million of net operating loss carryforwards for federal income tax purposes at the REIT, which may be utilized to offset future taxable income after consideration for the dividends paid deduction. These federal net operating loss carryforwards do not have an expiration date and can be carried forward indefinitely. As of December 31, 2024, the Company had $2.6 billion of net capital loss carryforwards for federal income tax purposes at the REIT, which may be utilized to offset future net gains from the sale of capital assets. These federal net capital loss carryforwards have an expiration date of five years of which the majority of these losses will expire between 2025 and 2027. The utilization of the net capital loss carryforwards will depend on the REIT's ability to generate sufficient net capital gains prior to the expiration of the carryforward period.

The following is a reconciliation of the statutory federal rate to the effective rates for the years ended December 31, 2024, 2023 and 2022:

	Year Ended December 31,					
	2024		2023		2022	
(dollars in thousands)	Amount	Percent	Amount	Percent	Amount	Percent
Provision for (benefit from) income taxes at statutory federal tax rate	$ 72,398	21 %	$ (17,513)	21 %	$ 68,135	21 %
State taxes, net of federal benefit, if applicable	8,027	3 %	2,358	(3)%	10,478	3 %
Permanent differences in taxable income from net income for U.S. GAAP purposes	21,794	6 %	65,670	(79)%	(93)	— %
REIT (income) loss not subject to corporate income tax	(55,633)	(16)%	(27,537)	33 %	25,693	8 %
Provision for income taxes/ effective tax rate[1]	$ 46,586	14 %	$ 22,978	(28)%	$ 104,213	32 %

(1) The provision for income taxes is primarily recorded at the taxable subsidiary level.

The Company’s permanent differences in taxable income from net income (loss) for U.S. GAAP purposes in the years ended December 31, 2024 and 2023 were primarily due to dividends paid from the Company’s TRSs to the REIT. Additionally, the Company’s recurring permanent differences in taxable income from net income (loss) for U.S. GAAP purposes in the years ended December 31, 2024, 2023 and 2022 were due to state taxes, net of federal benefit in the Company’s TRSs, the dividends paid deduction for tax, amortization of goodwill for tax and a difference in the compensation expense related to officer’s compensation limitation and restricted stock dividends and vesting.

The Company’s consolidated balance sheets as of December 31, 2024 and December 31, 2023 contain the following current and deferred tax liabilities and assets, which are included in other assets and other liabilities, and are recorded at the taxable subsidiary level:

(in thousands)	December 31, 2024	December 31, 2023
Income taxes receivable (payable):		
Federal income taxes (payable) receivable	$ (3,440)	$ 52
State and local income taxes payable	(777)	(735)
Income taxes payable, net	(4,217)	(683)
Deferred tax assets (liabilities):		
Deferred tax asset	4,751	20,083
Deferred tax liability	(100,231)	(81,765)
Total net deferred tax liabilities	(95,480)	(61,682)
Total tax liabilities, net	$ (99,697)	$ (62,365)

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting and tax purposes at the TRS level. Components of the Company's net deferred tax liabilities and assets as of December 31, 2024 and December 31, 2023 were as follows:

(in thousands)	December 31, 2024	December 31, 2023
Mortgage servicing rights	$ (99,980)	$ (81,765)
Net operating loss carryforward	2,444	18,224
Other	2,056	1,859
Total deferred tax assets (liabilities)	(95,480)	(61,682)
Valuation allowance	—	—
Total net deferred tax assets (liabilities)	$ (95,480)	$ (61,682)

As of December 31, 2024 and December 31, 2023, the Company had not recorded a valuation allowance for any portion of its deferred tax assets as it did not believe, at a more-likely-than-not level, that any portion of its deferred tax assets would not be realized.

Based on the Company's evaluation, it has been concluded that there are no significant uncertain tax positions requiring recognition in the Company's 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 consolidated financial statements.

Note 23. Earnings Per Share

The following table presents a reconciliation of the earnings (loss) and shares used in calculating basic and diluted earnings (loss) per share for the years ended December 31, 2024, 2023 and 2022. All per share amounts, common shares outstanding and common equity-based awards for the year ended December 31, 2022 have been adjusted on a retroactive basis to reflect the reverse stock split.

	Year Ended December 31,		
(in thousands, except share data)	**2024**	**2023**	**2022**
Basic Earnings (Loss) Per Share:			
Net income (loss)	$ 298,168	$ (106,371)	$ 220,239
Dividends on preferred stock	(47,136)	(48,607)	(53,607)
Gain on repurchase and retirement of preferred stock	644	2,973	20,149
Dividends and undistributed earnings allocated to participating restricted stock units	(1,693)	(1,220)	(1,203)
Net income (loss) attributable to common stockholders, basic	$ 249,983	$ (153,225)	$ 185,578
Basic weighted average common shares	103,562,824	95,672,143	86,179,418
Basic earnings (loss) per weighted average common share	$ 2.41	$ (1.60)	$ 2.15
Diluted Earnings (Loss) Per Share:			
Net income (loss) attributable to common stockholders, basic	$ 249,983	$ (153,225)	$ 185,578
Reallocation impact of undistributed earnings to participating restricted stock units	(77)	—	—
Interest expense attributable to convertible notes	18,199	—	19,382
Net income (loss) attributable to common stockholders, diluted	$ 268,105	$ (153,225)	$ 204,960
Basic weighted average common shares	103,562,824	95,672,143	86,179,418
Effect of dilutive shares issued in an assumed vesting of performance share units	477,465	—	157,591
Effect of dilutive shares issued in an assumed conversion	9,049,219	—	9,739,166
Diluted weighted average common shares	113,089,508	95,672,143	96,076,175
Diluted earnings (loss) per weighted average common share	$ 2.37	$ (1.60)	$ 2.13

For the year ended December 31, 2024, 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 years ended December 31, 2023 and 2022, excluded from the calculation of diluted earnings per share was the effect of adding undistributed earnings reallocated to 644,908 and 428,408 weighted average participating RSUs as their inclusion would have been antidilutive.

For the year ended December 31, 2024, 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 year ended December 31, 2023, excluded from the calculation of diluted earnings per share was the effect of adding 331,051 weighted average common share equivalents related to the assumed vesting of outstanding PSUs, as their inclusion would have been antidilutive. For the year ended December 31, 2022, 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 year ended December 31, 2024, 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. For the years ended December 31, 2023 and 2022, excluded from the calculation of diluted earnings per share was the effect of adding back $18.8 million and $0.2 million of interest expense and 9,406,519 and 87,137 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 year ended December 31, 2022, only the Company's convertible senior notes due 2022, which matured in January 2022, were excluded from the calculation of diluted earnings per share, and the assumed conversion of the Company's 2026 notes was included in the calculation of diluted earnings per share under the if-converted method.

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 to benefit the MSR portfolio through the retention or recapture of existing borrowers. The Company's investment portfolio is subject to market risks, primarily interest rate risk, basis risk and prepayment risk. Through its investment in MSR and interest-only Agency RMBS, management seeks to offset a portion of its Agency pool market value exposure. The Company's strategy of pairing MSR and Agency RMBS, 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 consolidated financial statements and notes thereto are presented as a single reportable segment.

Note 25. Subsequent Events

Events subsequent to December 31, 2024 were evaluated through the date these consolidated financial statements were issued and no other additional events were identified requiring further disclosure in these consolidated financial statements.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. 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 Annual Report on Form 10-K. 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 December 31, 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 Annual Report on Form 10-K, 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 December 31, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report On Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2024. In making this assessment the Company's management used criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework (2013 framework).

Based on its assessment, the Company's management believes that, as of December 31, 2024, the Company's internal control over financial reporting was effective based on those criteria.

The Company's independent auditors, Ernst & Young LLP, have issued an attestation report on the effectiveness of the Company's internal control over financial reporting. This report appears on page 118 of this annual report on Form 10-K.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
of Two Harbors Investment Corp.

Opinion on Internal Control Over Financial Reporting

We have audited Two Harbors Investment Corp.'s internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Two Harbors Investment Corp. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2024 and 2023, the related consolidated statements of comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, and the related notes and our report dated February 18, 2025 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report On Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Minneapolis, Minnesota
February 18, 2025

Item 9B. Other Information

(a) None.

(b) During the three months ended December 31, 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 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information set forth under the captions “Overview of Director Nominees,” “Board Composition,” “Director Nominations,” “Corporate Governance Policies and Practices,” “Director Compensation” and “Executive Officers” in the proxy statement for our 2025 Annual Meeting of Stockholders, which will be filed with the SEC, pursuant to Regulation 14A, not later than 120 days after December 31, 2024 is incorporated by reference herein.

Item 11. Executive Compensation

The information set forth under the captions “Executive Compensation,” “Director Compensation” and “Compensation Committee Interlocks and Insider Participation” in the proxy statement for our 2025 Annual Meeting of Stockholders, which will be filed with the SEC, pursuant to Regulation 14A, not later than 120 days after December 31, 2024 is incorporated by reference herein.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

The information set forth under the caption “Stock Ownership” in the proxy statement for our 2025 Annual Meeting of Stockholders, which will be filed with the SEC, pursuant to Regulation 14A, not later than 120 days after December 31, 2024, and under “Securities Authorized for Issuance Under Equity Compensation Plans” in Item 5 of this Annual Report on Form 10-K is incorporated by reference herein.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information set forth under the captions “Certain Relationships and Related Party Transactions” and “Director Independence” in the proxy statement for our 2025 Annual Meeting of Stockholders, which will be filed with the SEC, pursuant to Regulation 14A, not later than 120 days after December 31, 2024 is incorporated by reference herein.

Item 14. Principal Accountant Fees and Services

We retained Ernst & Young LLP, or EY, to audit our consolidated financial statements for the years ended December 31, 2024 and 2023. We also retained EY to provide various other services in during the years ended December 31, 2024 and 2023. The table below presents the aggregate fees billed to us for professional services performed by EY for the years ended December 31, 2024 and 2023:

	Year Ended December 31,	
	2024	2023
Audit fees (1)	$ 1,785,930	$ 1,715,530
Audit-related fees (2)	151,100	51,100
Tax fees (3)	417,631	425,370
Total principal accountant fees	$ 2,354,661	$ 2,192,000

(1) Audit fees pertain to the audit of our annual Consolidated Financial Statements, including review of the interim financial statements contained in our Quarterly Reports on Form 10-Q, comfort letters to underwriters in connection with our registration statements and common stock offerings, attest services, consents to the incorporation of the EY audit report in publicly filed documents and assistance with and review of documents filed with the SEC.

(2) Audit-related fees pertain to assurance and related services that are traditionally performed by the principal accountant, including accounting consultations and audits in connection with proposed or consummated acquisitions, internal control reviews and consultation concerning financial accounting and reporting standards.

(3) Tax fees pertain to services performed for tax compliance, including REIT compliance, tax planning and tax advice, including preparation of tax returns and claims for refund and tax-payment planning services. Tax planning and advice also includes assistance with tax audits and appeals, and tax advice related to specific transactions.

The services performed by EY in 2024 were pre-approved by our Audit Committee in accordance with the pre-approval policy set forth in our Audit Committee Charter. This policy requires that all engagement fees and the terms and scope of all auditing and non-auditing services be reviewed and approved by the Audit Committee in advance of their formal initiation.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Consolidated Financial Statements:

The consolidated financial statements of the Company, together with the independent registered public accounting firm's report thereon, are set forth in Part II, Item 8 on pages 57 through 64 of this Annual Report on Form 10-K and are incorporated herein by reference.

(2) Schedules to Consolidated Financial Statements:

All consolidated financial statement schedules not included have been omitted because they are either inapplicable or the information required is provided in the Company's Consolidated Financial Statements and Notes thereto, included in Part II, Item 8, of this Annual Report on Form 10-K.

(3) Exhibits:

The exhibits listed on the accompanying Exhibits Index are filed or incorporated by reference as part of this Annual Report on Form 10-K.

Item 16. Form 10-K Summary

None.

Exhibit Number	Exhibit Index
1.1	Equity Distribution Agreement between Two Harbors Investment Corp. and JMP Securities LLC dated November 10, 2022 (incorporated by reference to Exhibit 1.1 to the Registrant's Current Report on Form 8-K filed with the SEC on November 10, 2022).
1.2	Amendment No. 1 to the Equity Distribution Agreement, dated as of February 23, 2024 (incorporated by reference to Exhibit 1.2 to the Registrant's Current Report on Form 8-K filed with the SEC on February 23, 2024).
1.3	Amendment No. 2 to the Equity Distribution Agreement, dated as of July 30, 2024 (incorporated by reference to Exhibit 1.3 to the Registrant's Current Report on Form 8-K filed with the SEC on July 30, 2024).
2.1	Agreement and Plan of Merger, dated as of June 11, 2009, by and among Capitol Acquisition Corp., Two Harbors Investment Corp., Two Harbors Merger Corp. and Pine River Capital Management L.P. (incorporated by reference to Annex A filed with Pre Effective Amendment No. 4 to the Registrant's Registration Statement on Form S-4 (File No. 333-160199) filed with the Securities and Exchange Commission, or SEC, on October 8, 2009, or Amendment No. 4).
2.2	Amendment No. 1 to Agreement and Plan of Merger, dated as of August 17, 2009, by and among Capitol Acquisition Corp., Two Harbors Investment Corp., Two Harbors Merger Corp. and Pine River Capital Management L.P. (incorporated by reference to Annex A-2 filed with Amendment No. 4).
2.3	Amendment No. 2 to Agreement and Plan of Merger, dated as of September 20, 2009, by and among Capitol Acquisition Corp., Two Harbors Investment Corp., Two Harbors Merger Corp. and Pine River Capital Management L.P. (incorporated by reference to Annex A-3 filed with Amendment No. 4).
2.4	Agreement and Plan of Merger, by and among Two Harbors Investment Corp., Eiger Merger Subsidiary LLC and CYS Investments, Inc., dated as of April 25, 2018 (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed with the SEC on April 26, 2018).
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).
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 Company'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 Company'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 Company'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).

Exhibit Number	Exhibit Index
3.12	Amended and Restated Bylaws of Two Harbors Investment Corp. (incorporated by reference to Exhibit 3.2 to the Company’s Current Report on Form 8-K, filed with the SEC on September 23, 2020).
4.1	Indenture, dated as of January 19, 2017, between Two Harbors Investment Corp. and The Bank of New York Mellon Trust Company, N.A. (incorporated by reference to Exhibit 4.1 to the Registrant’s Current Report on Form 8-K filed with the SEC on January 19, 2017).
4.2	Supplemental Indenture, dated as of February 1, 2021, between Two Harbors Investment Corp. and The Bank of New York Mellon Trust Company, N.A. (incorporated by reference to Exhibit 4.1 to the Registrant’s Current Report on Form 8-K file with the SEC on February 1, 2021).
4.3	Description of Securities. (filed herewith)
10.1*	Second Restated 2009 Equity Incentive Plan (incorporated by reference to Appendix A to the Registrant’s Definitive Proxy Statement filed with the SEC on March 26, 2015).
10.2*	Form of Restricted Stock Agreement under the Second Restated 2009 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant’s Quarterly Report on Form 10-Q filed with the SEC on August 5, 2015).
10.3*	Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Appendix A to the Registrant’s Definitive Proxy Statement filed with the SEC on April 6, 2021).
10.4*	Form of Director Restricted Stock Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.5*	Form of Officer Restricted Stock Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.3 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.6*	Form of Officer Performance Share Unit Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed with the SEC on April 30, 2024).
10.7*	Form of Common Stock Award Agreement under the Two Harbors Investment Corp. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.5 of the Registrant's Registration Statement on Form S-8 filed with the SEC on May 19, 2021).
10.8	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 19, 2009).
19.1	Two Harbors Investment Corp. Insider Trading Policy. (filed herewith)
21.1	Subsidiaries of registrant. (filed herewith)
23.1	Consent of Independent Registered Public Accounting Firm of Ernst & Young LLP. (filed herewith)
24.1	Powers of Attorney (included on signature page).
31.1	Certification of the Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
31.2	Certification of the Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
32.1	Certification of the Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (filed herewith)
32.2	Certification of the Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (filed herewith)
97.1	Two Harbors Investment Corp. Incentive Compensation Recoupment Policy (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on September 21, 2023).
101	Financial statements from the Annual Report on Form 10-K of Two Harbors Investment Corp. for the year ended December 31, 2024, formatted in Inline XBRL: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Comprehensive Income (Loss), (iii) the Consolidated Statements of Stockholders’ Equity, (iv) the Consolidated Statements of Cash Flows, and (v) the Notes to the Consolidated Financial Statements. (filed herewith)
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101). (filed herewith)

* Management or compensatory agreement

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TWO HARBORS INVESTMENT CORP.

Dated: February 18, 2025

By: /s/ William Greenberg

William Greenberg
President and Chief Executive Officer
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Each of the undersigned hereby appoints William Greenberg, William Dellal and Jillian Halm, and each of them (with full power to act alone), as attorneys and agents for the undersigned, with full power of substitution, for and in the name, place and stead of the undersigned, to sign and file with the Securities and Exchange Commission under the Securities Act of 1934, any and all amendments and exhibits to this annual report on Form 10-K and any and all applications, instruments, and other documents to be filed with the Securities and Exchange Commission pertaining to this annual report on Form 10-K or any amendments thereto, with full power and authority to do and perform any and all acts and things whatsoever requisite and necessary or desirable.

Signature	Title	Date
/s/ William Greenberg William Greenberg	Director, President and Chief Executive Officer (Principal Executive Officer)	February 18, 2025
/s/ William Dellal William Dellal	Interim Chief Financial Officer (Principal Financial Officer)	February 18, 2025
/s/ Jillian Halm Jillian Halm	Chief Accounting Officer (Principal Accounting Officer)	February 18, 2025
/s/ Stephen G. Kasnet Stephen G. Kasnet	Chairman of the Board of Directors	February 18, 2025
/s/ E. Spencer Abraham E. Spencer Abraham	Director	February 18, 2025
/s/ James J. Bender James J. Bender	Director	February 18, 2025
/s/ Sanjiv Das Sanjiv Das	Director	February 18, 2025
/s/ Karen Hammond Karen Hammond	Director	February 18, 2025
/s/ James A. Stern James A. Stern	Director	February 18, 2025
/s/ Hope B. Woodhouse Hope B. Woodhouse	Director	February 18, 2025

BOARD OF DIRECTORS

Stephen G. Kasnet
Chairman of the Board of Directors

E. Spencer Abraham
Independent Director

James J. Bender
Independent Director

Sanjiv Das
Independent Director

William Greenberg
President and Chief Executive Officer

Karen Hammond
Independent Director

James A. Stern
Independent Director

Hope B. Woodhouse
Independent Director

EXECUTIVE OFFICERS

William Greenberg
President and Chief Executive Officer

Nicholas Letica
Vice President and Chief Investment Officer

Rebecca B. Sandberg
Vice President, Chief Legal Officer, Secretary and Chief Compliance Officer

William Dellal
Vice President, Interim Chief Financial Officer

Robert Rush
Vice President and Chief Risk Officer

Alecia Hanson
Vice President and Chief Administrative Officer

ANNUAL MEETING OF SHAREHOLDERS

TWO's stockholders are invited to attend our 2025 Annual Meeting of Stockholders, which will be held virtually on May 14, 2025, beginning at 10 a.m. Eastern Time. Stockholders can attend the virtual meeting via the internet at www.virtualshareholdermeeting.com/TWO2025.

CORPORATE HEADQUARTERS

TWO
1601 Utica Ave. S.
Suite 900
St. Louis Park, MN 55416
Telephone: 612.453.4100
www.twoinv.com

INVESTOR AND MEDIA CONTACT

Maggie Karr
612.453.4080
investors@twoinv.com

STOCK EXCHANGE

TWO's common stock is listed on the NYSE under the symbol "**TWO**".

TRANSFER AGENT

Equiniti Trust Company
P.O. Box 64856
St. Paul, MN 55164-0856
Telephone: 800.468.9716
Outside the U.S.: 651.450.4064
www.shareowneronline.com

DIVIDEND REINVESTMENT AND DIRECT PURCHASE PLAN

TWO maintains a Dividend Reinvestment and Direct Stock Purchase Plan that is administered by Equiniti Trust Company. The plan prospectus and additional plan information is available on the TWO website in the Investors section.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Ernst & Young LLP
700 Nicollet Mall
Suite 500
Minneapolis, MN 55402
612.343.1000

two

1601 Utica Ave. S., Suite 900 St. Louis Park, MN 55416

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