

An Agency + MSR Mortgage REIT

First Quarter 2023
Earnings Call

MAY 2, 2023



TWO HARBORS
Investment Corp.

Safe Harbor Statement



FORWARD-LOOKING STATEMENTS

This presentation includes “forward-looking statements” within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Actual results may differ from expectations, estimates and projections and, consequently, readers should not rely on these forward-looking statements as predictions of future events. Words such as “expect,” “target,” “assume,” “estimate,” “project,” “budget,” “forecast,” “anticipate,” “intend,” “plan,” “may,” “will,” “could,” “should,” “believe,” “predicts,” “potential,” “continue,” and similar expressions are intended to identify such forward-looking statements. These forward-looking statements involve significant risks and uncertainties that could cause actual results to differ materially from expected results, including, among other things, those described in our Annual Report on Form 10-K for the year ended December 31, 2022, and any subsequent Quarterly Reports on Form 10-Q, under the caption “Risk Factors.” Factors that could cause actual results to differ include, but are not limited to: the state of credit markets and general economic conditions; changes in interest rates and the market value of our assets; changes in prepayment rates of mortgages underlying our target assets; the rates of default or decreased recovery on the mortgages underlying our target assets; declines in home prices; our ability to establish, adjust and maintain appropriate hedges for the risks in our portfolio; the availability and cost of our target assets; the availability and cost of financing; changes in the competitive landscape within our industry; our ability to effectively execute and to 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 pending acquisition of RoundPoint Mortgage Servicing Corporation; our ability to recognize the benefits of our pending acquisition of RoundPoint Mortgage Servicing Corporation; our decision to terminate our management agreement with PRCM Advisers LLC and the ongoing litigation related to such termination; our ability to manage various operational risks and costs associated with our business; interruptions in or impairments to our communications and information technology systems; our ability to acquire mortgage servicing rights (MSR) and successfully operate our seller-servicer subsidiary and oversee our subservicers; the impact of any deficiencies in the servicing or foreclosure practices of third parties and related delays in the foreclosure process; our exposure to legal and regulatory claims; legislative and regulatory actions affecting our business; the impact of new or modified government mortgage refinance or principal reduction programs; our ability to maintain our REIT qualification; and limitations imposed on our business due to our REIT status and our exempt status under the Investment Company Act of 1940.

Readers are cautioned not to place undue reliance upon any forward-looking statements, which speak only as of the date made. Two Harbors does not undertake or accept any obligation to release publicly any updates or revisions to any forward-looking statement to reflect any change in its expectations or any change in events, conditions or circumstances on which any such statement is based. Additional information concerning these and other risk factors is contained in Two Harbors’ most recent filings with the Securities and Exchange Commission (SEC). All subsequent written and oral forward-looking statements concerning Two Harbors or matters attributable to Two Harbors or any person acting on its behalf are expressly qualified in their entirety by the cautionary statements above.

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Readers are advised that the financial information in this presentation is based on company data available at the time of this presentation and, in certain circumstances, may not have been audited by the company’s independent auditors.

Financials Overview

Attractive Opportunities Ahead From Wide RMBS Spreads and Slow MSR Prepayment Speeds

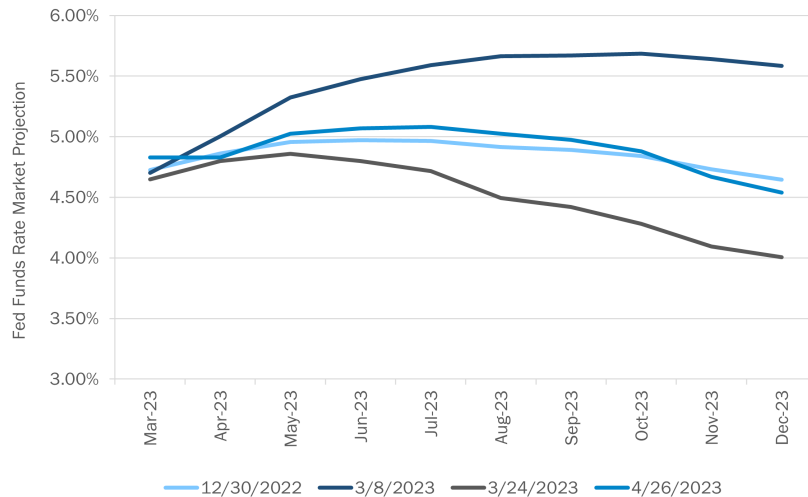


Note: Financial data throughout this presentation is as of or for the quarter ended March 31, 2023, unless otherwise noted. Per share metrics utilize basic common shares as the denominator. In accordance with generally accepted accounting principles, all common share and per common share amounts presented herein have been adjusted on a retroactive basis to reflect the one-for-four reverse stock split completed on November 1, 2022.

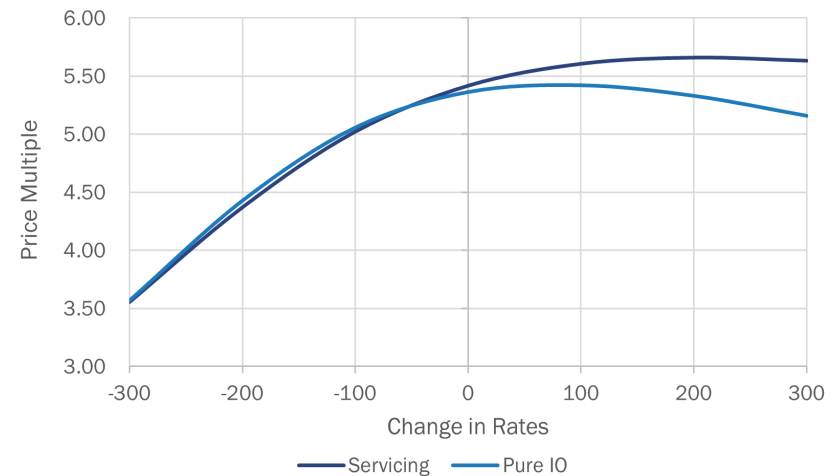
Note: The End Notes are an integral part of this presentation. See slides 30 through 36 at the back of this presentation for information related to certain financial metrics and defined terms used herein.

Key Market Highlights

I. FEDERAL RESERVE RATE EXPECTATIONS⁽¹⁾



II. IMPACT OF INTEREST RATE CHANGES TO MSR MULTIPLES⁽²⁾



- Financial markets were roiled in early March by banking regulators' seizure of two regional banks, Silicon Valley Bank and Signature Bank
- 2-year rates declined by 109 basis points over a 3-day period, culminating in the largest ever 1-day move on March 13
- Market expectations for interest rate hikes spiked in early March, then came back down again sharply after March banking crisis, then leveled out in April to near-January level of terminal Fed Funds rate around 4.5%
- Reminder of why it's important that we keep our interest rate exposures low across the curve

- MSR cashflows are more complex than IO securities and consist of costs to service, float income, ancillary income and recapture
- IO securities increase in value as rates rise due to the extension of cashflows, but that effect goes away once cashflows fully extend
- MSR float income is uncapped; the higher interest rates go, the more cashflow is generated
- Float income adds about 80% to the negative duration of out-of-the-money MSR, and is now the primary reason MSR multiples could continue to rise in a further selloff

Book Value Summary

| (\$ millions, except per share data) | Q1-2023 Book Value | Q1-2023 Book Value per share |
|---|-----------------------|------------------------------------|
| Beginning common stockholders' equity | \$ 1,531.2 | \$ 17.72 |
| Earnings Available for Distribution, net of tax ⁽¹⁾ | 20.6 | |
| Dividend declaration - preferred | (12.3) | |
| Earnings Available for Distribution to common stockholders, net of tax ⁽¹⁾ | 8.3 | |
| Realized and unrealized gains and losses, net of tax | (197.4) | |
| Other comprehensive income, net of tax | 125.9 | |
| Comprehensive loss | (63.2) | |
| Common stock dividends declared | (58.4) | |
| Other | 6.1 | |
| Issuance of common stock, net of offering costs | 177.7 | |
| Ending common stockholders' equity | \$ 1,593.4 | \$ 16.48 |
| Total preferred stock liquidation preference | 652.3 | |
| Ending total equity | \$ 2,245.7 | |

- Book value of \$16.48 per common share, resulting in a (3.6)% quarterly economic return on book value⁽²⁾
 - Quarterly performance driven primarily by mortgage spread widening and increased hedging costs
- Generated Comprehensive Loss of \$63.2 million, or \$0.69 per weighted average common share

Results and Return Contributions



| (\$ in thousands) | GAAP Net Income (Loss) | Other Comprehensive Income | Total Comprehensive Income | Market-Driven Value Changes and Nonrecurring Operating Expenses | Income Excluding Market-Driven Value Changes ⁽¹⁾ |
|---|------------------------|----------------------------|----------------------------|---|---|
| RMBS and other Agency securities⁽²⁾ | | | | | |
| RMBS and other Agency securities (loss) income | \$ 109,316 | \$ 125,931 | \$ 235,247 | \$ 107,556 | \$ 127,691 |
| RMBS and other Agency securities funding expense | (98,759) | | (98,759) | — | (98,759) |
| MSR | | | | | |
| MSR income | 96,875 | | 96,875 | 30,323 | 66,552 |
| MSR funding expense | (38,895) | | (38,895) | — | (38,895) |
| Derivatives and other | | | | | |
| Swaps and swaptions | (82,154) | | (82,154) | (82,174) | 20 |
| TBA's | (17,164) | | (17,164) | (33,764) | 16,600 |
| Futures | (140,087) | | (140,087) | (140,087) | — |
| Interest on cash, reverse repurchase agreements and other | 19,555 | | 19,555 | — | 19,555 |
| Expenses | | | | | |
| Convertible debt interest expense | (4,836) | | (4,836) | — | (4,836) |
| Operating expenses | (24,567) | | (24,567) | (5,418) | (19,149) |
| Tax expense | 3,908 | | 3,908 | 5,929 | (2,021) |
| (Losses) earnings attributable to Two Harbors | (176,808) | 125,931 | (50,877) | (117,635) | 66,758 |
| Dividends on preferred stock | (12,365) | | (12,365) | — | (12,365) |
| (Losses) earnings attributable to common stockholders | \$ (189,173) | \$ 125,931 | \$ (63,242) | \$ (117,635) | \$ 54,393 |
| Annualized return on common equity | | | | | 13.3% |
| Quarterly return per weighted average basic common share | | | | | \$ 0.59 |

Comparison of GAAP and non-GAAP Measures



| (\$ in thousands) | Comprehensive Income | Comprehensive Income, Excluding Realized, Unrealized and Nonrecurring Expenses | Earnings Available for Distribution (EAD) ⁽⁴⁾ | Income Excluding Market-Driven Value Changes (IXM) ⁽²⁾ |
|--|----------------------|--|--|---|
| RMBS and other Agency securities⁽³⁾ | | | | |
| Coupon income | \$ 105,913 | \$ 105,913 | \$ 105,913 | \$ 105,913 |
| Amortization | (8,810) | (8,810) | (8,810) | 21,777 ⁽⁴⁾ |
| Realized and unrealized, including reversal of provision for credit losses | 138,144 | — | — | — |
| Funding expense | (98,759) | (98,759) | (98,759) | (98,759) |
| MSR | | | | |
| Servicing fee income | 129,237 | 129,237 | 129,237 | 129,237 |
| Float, ancillary and other income | 24,083 | 24,083 | 24,083 | 24,083 |
| Servicing expenses | (26,802) | (26,802) | (26,802) | (24,220) ⁽⁵⁾ |
| Amortization | (47,661) | (47,661) | (76,558) | (62,547) ⁽⁶⁾ |
| Realized and unrealized, including change in servicing reserves | 18,018 | — | — | — |
| Funding expense | (38,895) | (38,895) | (38,895) | (38,895) |
| Derivatives and other | | | | |
| Swaps net interest spread | 3,610 | 3,610 | 3,610 | 3,610 |
| Swaps and swaptions realized and unrealized | (85,764) | — | — | (3,590) ⁽⁷⁾ |
| TBAs | (17,164) | — | 6,341 | 16,600 ⁽⁸⁾ |
| U.S. Treasury futures | (127,215) | — | 403 | — |
| Other futures | (12,872) | — | — | — |
| Interest on cash, reverse repurchase agreements and other | 19,555 | 19,555 | 19,555 | 19,555 |
| Expenses | | | | |
| Convertible debt interest expense | (4,836) | (4,836) | (4,836) | (4,836) |
| Operating expenses | (24,567) | (19,149) | (13,097) | (19,149) ⁽⁹⁾ |
| Tax benefit (expense) ⁽¹⁰⁾ | 3,908 | (3,388) | (747) | (2,021) |
| (Losses) earnings attributable to Two Harbors | (50,877) | 34,098 | 20,638 | 66,758 |
| Dividends on preferred stock | (12,365) | (12,365) | (12,365) | (12,365) |
| (Losses) earnings attributable to common stockholders | \$ (63,242) | \$ 21,733 | \$ 8,273 | \$ 54,393 |
| Annualized return on common equity | (15.5)% | 5.3% | 2.0% | 13.3% |
| Quarterly return per weighted average basic common share | \$ (0.69) | \$ 0.23 | \$ 0.09 | \$ 0.59 |

Earnings Available for Distribution

| (\$ millions, except per share data) | Q1-2023 | Q4-2022 | Variance |
|---|----------------|----------------|------------------|
| Interest income | \$ 116.6 | \$ 99.3 | \$ 17.3 |
| Interest expense | 142.5 | 115.6 | (26.9) |
| Net interest (expense) income | (25.9) | (16.3) | (9.6) |
| Servicing income | 153.3 | 160.9 | (7.6) |
| MSR amortization ⁽¹⁾ | (76.5) | (83.2) | 6.7 |
| Interest spread income on interest rate swaps | 3.6 | — | 3.6 |
| TBA dollar roll income ⁽²⁾ | 6.3 | 16.2 | (9.9) |
| U.S. Treasury futures income ⁽³⁾ | 0.4 | (6.4) | 6.8 |
| Other derivatives income | 0.1 | 0.1 | — |
| Total other income | 87.2 | 87.6 | (0.4) |
| Servicing expenses | 26.8 | 24.6 | (2.2) |
| Operating expenses | 13.1 | 10.4 | (2.7) |
| Total expenses | 39.9 | 35.0 | (4.9) |
| Provision for income taxes | 0.8 | 1.7 | 0.9 |
| Earnings Available for Distribution⁽⁴⁾ | \$ 20.6 | \$ 34.6 | \$ (14.0) |
| Dividends on preferred stock | (12.3) | (12.4) | (0.1) |
| Earnings Available for Distribution available to common stockholders | \$ 8.3 | \$ 22.2 | \$ (13.9) |
| Earnings Available for Distribution per weighted average basic common share | \$ 0.09 | \$ 0.26 | |
| Earnings Available for Distribution annualized return on average common equity | 2.0 % | 5.9 % | |
| Operating expenses, excluding non-cash LTIP amortization and nonrecurring expenses, as a percentage of average equity | 2.3 % | 1.9 % | |

- First quarter EAD primarily driven by:
 - Increased interest income due to: (i) higher rates on cash and reverse repurchase agreements, (ii) increase in RMBS portfolio size, (iii) rotation to higher net yielding RMBS and (iv) slower prepayment speeds
 - Increased interest expense on higher financing rates and higher borrowing balances on RMBS, partly offset by lower borrowing balances on MSR financing
- EAD is expected to continue to diverge from ongoing earnings power⁽⁵⁾
 - EAD for assets utilizes concepts of amortized cost and yield-to-maturity at purchase (RMBS) or amortized cost and original pricing yield (MSR), as opposed to market value and expected return
 - EAD may not reflect total return of hedging derivatives, and impacts to EAD differ depending on the instrument utilized

Portfolio Yields and Financing Costs



- Portfolio yield increased 17 bps to 5.09% primarily due to sales of lower coupon Agency RMBS with high unamortized premium, purchases of higher coupon Agency RMBS with lower unamortized premium, lower experienced CPR on Agency RMBS and a higher proportion of the total portfolio amortized cost invested in higher yielding assets
- Net spread narrowed by 45 bps due to higher rates on financing

| (\$ thousands) | Q1-2023 | | | Q4-2022 | | |
|--|-----------------------------|------------------------|---------------|-----------------------------|------------------------|---------------|
| | Average Amortized Cost | Income ⁽¹⁾ | Average Yield | Average Amortized Cost | Income ⁽¹⁾ | Average Yield |
| Portfolio Asset Type | | | | | | |
| Available-for-sale securities | \$ 8,649,865 | \$ 97,038 | 4.49% | \$ 8,118,269 | \$ 83,712 | 4.12% |
| Mortgage servicing rights ⁽²⁾ | 1,900,434 | 50,004 | 10.52% | 1,921,462 | 53,222 | 11.08% |
| Agency derivatives ⁽³⁾ | 20,158 | 65 | 1.29% | 21,463 | 74 | 1.38% |
| TBAs ⁽⁴⁾ | 4,109,533 | 39,539 | 3.85% | 4,066,675 | 36,852 | 3.62% |
| Total portfolio | \$ 14,679,990 | \$ 186,646 | 5.09% | \$ 14,127,869 | \$ 173,860 | 4.92% |
| | | | | | | |
| Financing Collateral Type | Average Outstanding Balance | Expense ⁽⁵⁾ | Average Cost | Average Outstanding Balance | Expense ⁽⁵⁾ | Average Cost |
| Available-for-sale securities | \$ 8,181,110 | \$ 92,023 | 4.50% | \$ 7,664,204 | \$ 68,627 | 3.58% |
| Mortgage servicing rights and advances | 1,878,322 | 38,895 | 8.28% | 1,917,069 | 36,938 | 7.71% |
| Agency derivatives ⁽³⁾ | 12,463 | 159 | 5.10% | 14,618 | 155 | 4.24% |
| Other - unsecured ⁽⁶⁾ | 282,729 | 4,836 | 6.84% | 282,363 | 4,892 | 6.93% |
| Interest rate swaps ⁽⁷⁾ | | (3,610) | (0.10)% | | — | —% |
| U.S. Treasury futures ⁽⁸⁾ | | (403) | (0.01)% | | 6,408 | 0.18% |
| TBAs ⁽⁴⁾ | 4,109,533 | 33,198 | 3.23% | 4,066,675 | 20,659 | 2.03% |
| Total financing | \$ 14,464,157 | \$ 165,098 | 4.57% | \$ 13,944,929 | \$ 137,679 | 3.95% |
| | | | | | | |
| Net Spread | | | 0.52% | | | 0.97% |

Strong Balance Sheet and Liquidity Position

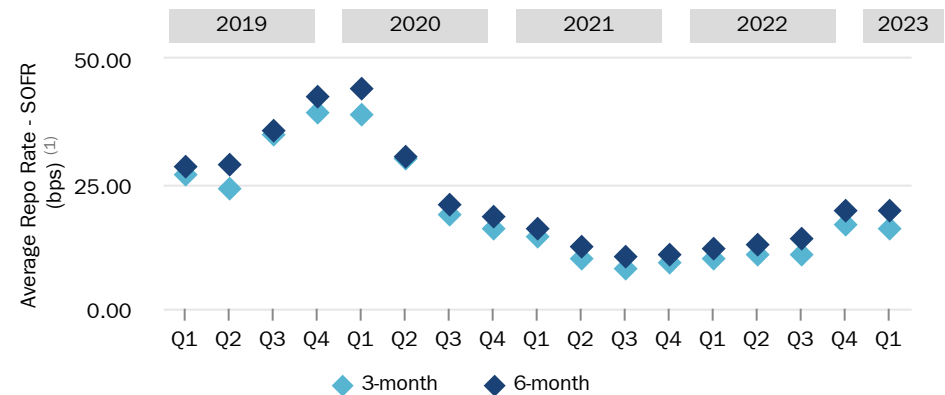


BALANCE SHEET AS OF MARCH 31, 2023

| | |
|---------------------------------------|---|
| Agency RMBS \$8.7 billion | Agency RMBS repurchase agreements \$8.6 billion |
| MSR \$3.1 billion | MSR financing \$1.9 billion |
| Cash & cash equivalents \$0.7 billion | Convertible debt \$0.3 billion |
| All other assets \$1.5 billion | All other liabilities \$0.9 billion |
| | Preferred equity \$0.7 billion |
| | Common equity \$1.6 billion |

AGENCY RMBS

- \$8.6 billion of outstanding repurchase agreements with 19 counterparties
- Weighted average days to maturity of 81 days



MORTGAGE SERVICING RIGHTS

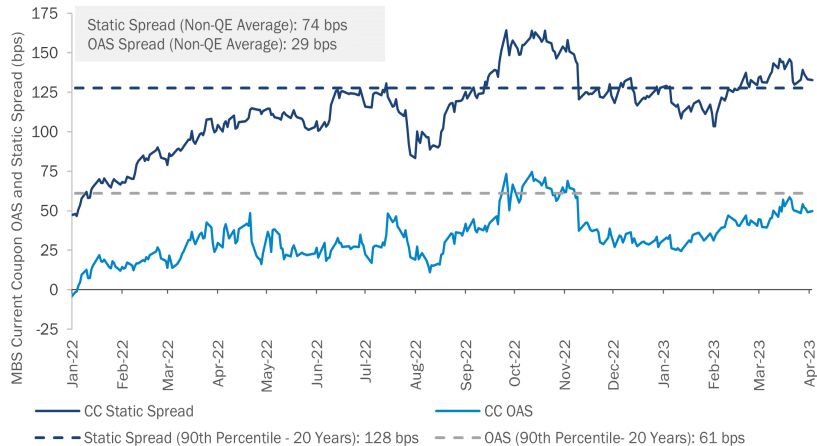
- \$1.5 billion of outstanding borrowings under bilateral MSR asset financing facilities
- \$400 million of outstanding 5-year MSR term notes⁽²⁾
- \$606 million of unused MSR asset financing capacity; \$165 million committed and \$441 million uncommitted
- \$49 million outstanding borrowings and \$151 million of unused, committed capacity for servicing advance receivables

RMBS Market Conditions

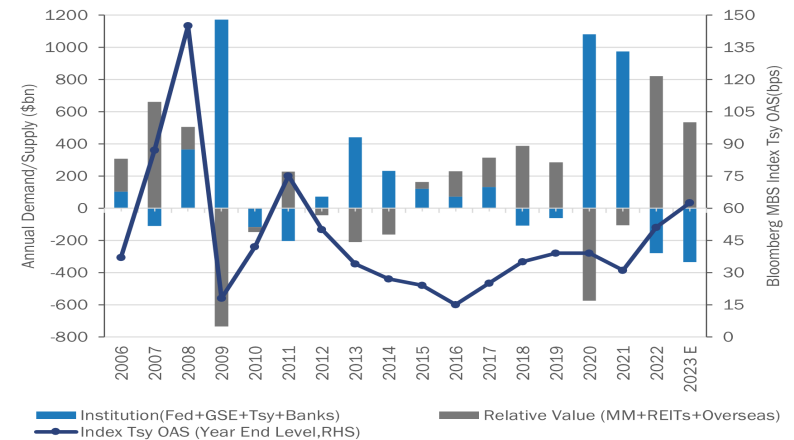
ANTICIPATE THAT SUPPLY AND DEMAND FOR RMBS WILL RESULT IN SPREADS BEING WIDER FOR LONGER

- Mortgage spreads narrowed early in the first quarter on lower volatility and higher demand for RMBS, but rapidly widened in March following the banking crisis, resulting in net underperformance for the quarter
- By quarter-end, both nominal and option-adjusted spreads were at the wide end of long-term history, but not as wide as October 2022 levels
- Including sales from the liquidation of seized bank assets and Fed paydowns, annual RMBS supply is expected to exceed \$500 billion, with near-term pressure on deep discount passthroughs and CMOs
- Money managers, REITs and hedge funds are likely to absorb most of the supply, as banks remain sidelined and, historically, when this investor group becomes the marginal buyer, spreads widen; for this reason, we believe that spreads may stay wide to historical averages, and could potentially widen further from quarter-end levels

I. HISTORICAL RMBS SPREADS⁽¹⁾



II. HISTORICAL SUPPLY AND DEMAND OF RMBS⁽²⁾



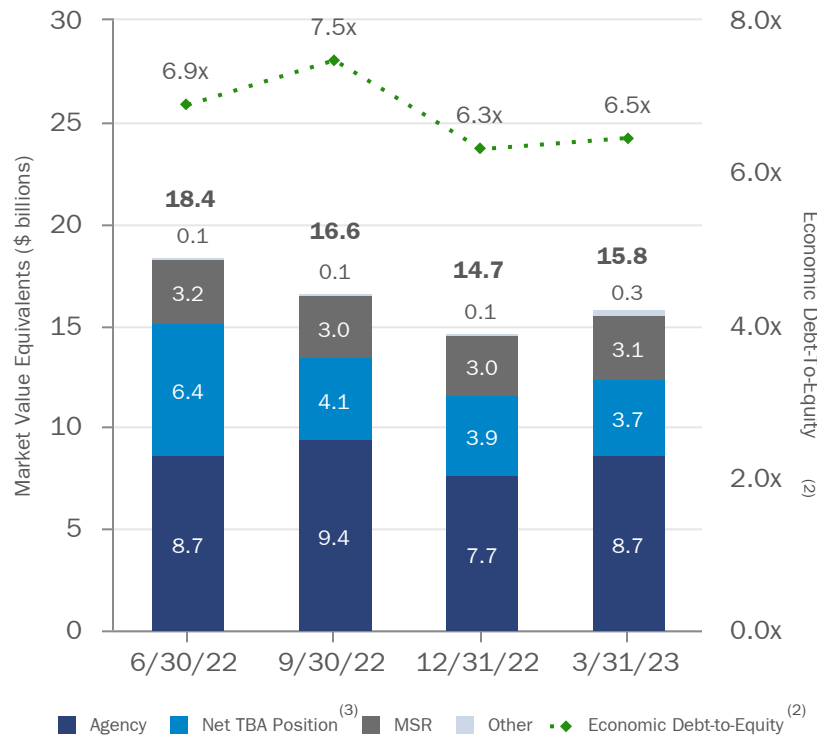
Quarterly Activity and Portfolio Composition



PORTFOLIO COMPOSITION⁽¹⁾

At March 31, 2023, \$15.8 billion portfolio

Includes \$12.1 billion settled positions



LEVERAGE AND RISK POSITIONING

- Quarter-end economic debt-to-equity increased slightly to 6.5x from 6.3x⁽²⁾
 - Average economic debt-to-equity of 6.3x in the first quarter, compared to 6.5x in the fourth quarter⁽²⁾
 - Maintained a neutral leverage position, balancing the wide nominal spreads available in the market versus high degree of macroeconomic uncertainty
- Moved approximately 30% of our hedges from U.S. Treasury futures to swaps to take advantage of deeply negative swap spreads

PORTFOLIO ACTIVITY

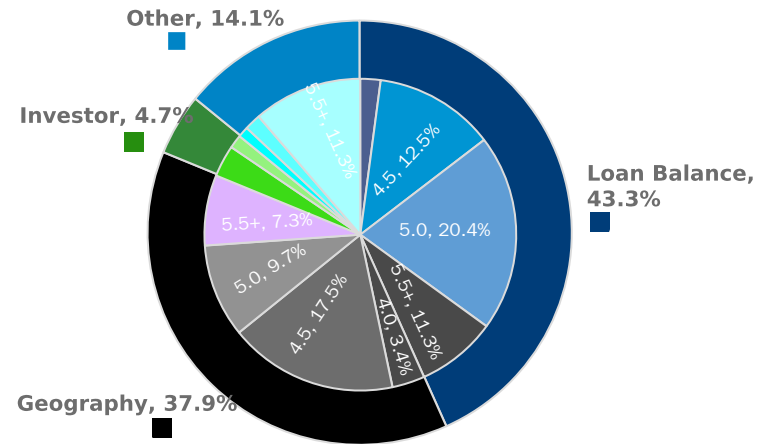
- Issued 10 million shares of common stock through an underwritten offering for net proceeds of \$175.6 million
 - Settled \$10.7 billion UPB of MSR through a bulk acquisition, paired with an additional \$1.1 billion notional current coupon TBA⁽³⁾
- Moved \$2.3 billion notional of higher coupon TBAs into specified pools with lower loan balances, higher LTVs, certain geographic concentrations and lower FICO scores, to capture relative spread pick-up and mitigate future prepayment risk⁽³⁾⁽⁴⁾
- Moved \$1.0 billion in 4.0% to 4.5% “fully valued” specified pools to TBA position⁽³⁾⁽⁴⁾
- Covered short position in FNMA 2.0% TBAs after sharp underperformance of lower coupons during March banking crisis
- Settled \$668.9 million UPB in MSR recapture and flow sale purchases

Specified Pools

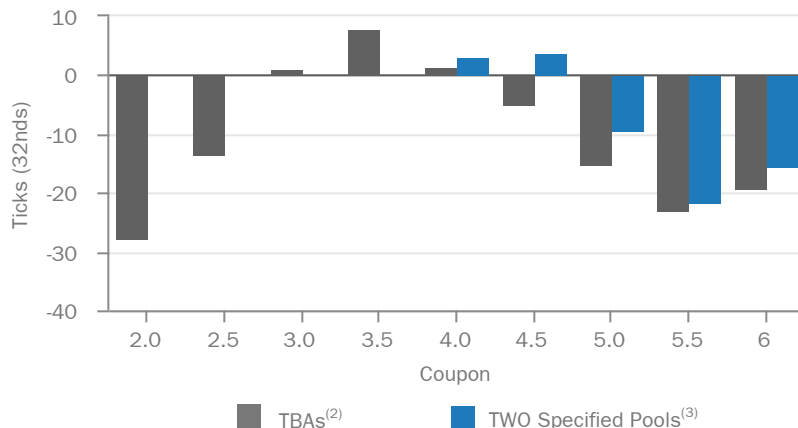
QUARTERLY HIGHLIGHTS

- Mortgage performance was mixed across the coupon stack
 - Low coupon 2.0% and 2.5% RMBS widened by around 5/8 of a point, driven primarily by supply concerns from the sale of assets from seized bank portfolios
 - Current coupon RMBS widened by a similar magnitude from persistent production supply
 - Without the supply pressures, the belly coupons of 3.0% through 4.5% were roughly on spread
- Specified pools modestly outperformed same coupon TBAs
- Weighted average specified pool portfolio speeds declined to 5.3% in the first quarter, from 5.9% in the fourth quarter

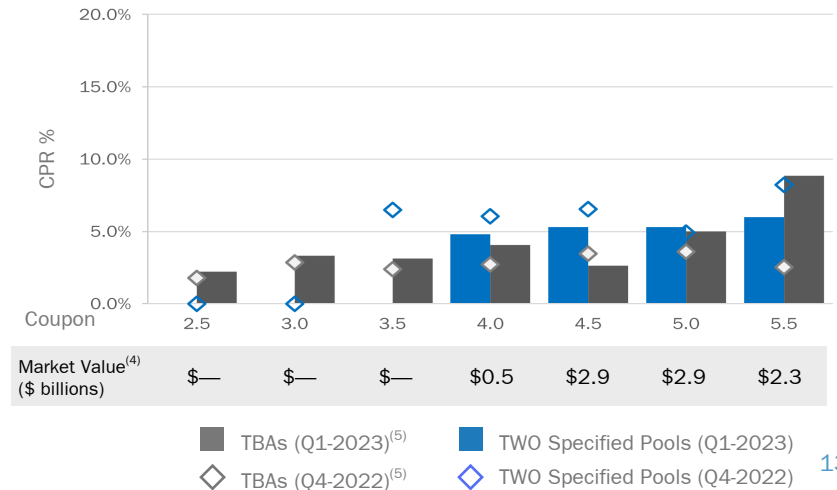
I. SPECIFIED POOL PORTFOLIO⁽¹⁾



II. RMBS QUARTERLY PERFORMANCE



III. SPECIFIED POOL PREPAYMENT SPEEDS



Mortgage Servicing Rights

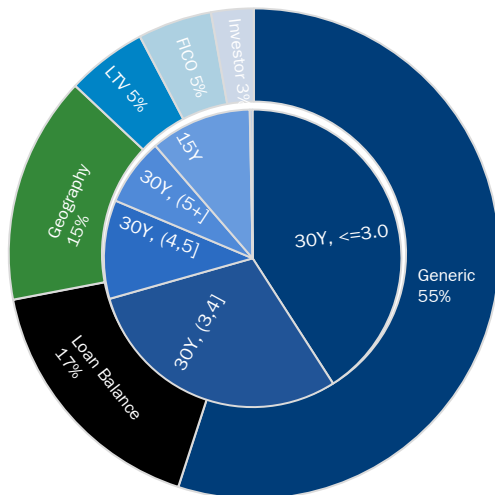
QUARTERLY HIGHLIGHTS

- \$224 billion UPB of conventional MSR offered in the first quarter, compared to \$166 billion UPB in the fourth quarter 2022
- Settled \$10.7 billion UPB of MSR through a bulk purchase; committed to purchase an additional \$14.7 billion UPB through three bulk purchases
- Flow channel purchases and recaptured MSR of \$668.9 million offset much of the portfolio runoff experienced during the quarter
- MSR price multiple decreased slightly quarter-over-quarter to 5.4x from 5.5x
- MSR speeds declined again to 4.1% in the first quarter, from 4.6% in the fourth quarter

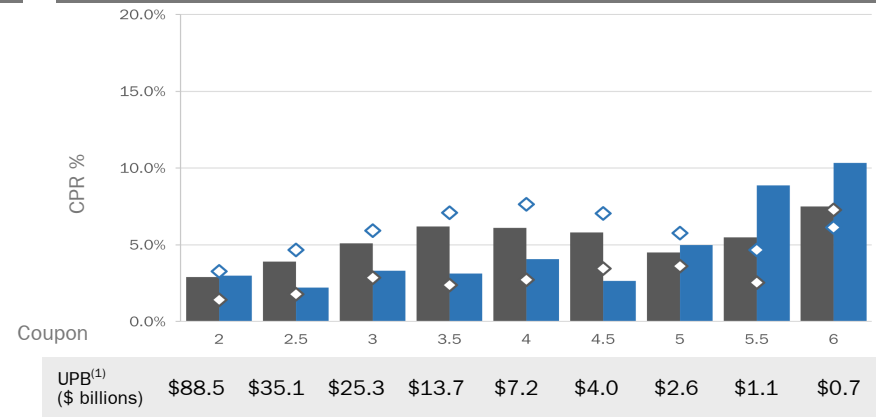
I. MSR PORTFOLIO CHARACTERISTICS⁽¹⁾

| | 3/31/2023 | 12/31/2022 |
|----------------------------------|------------|------------|
| Fair value (\$ millions) | \$ 3,072 | \$ 2,985 |
| Price multiple | 5.4x | 5.5x |
| UPB (\$ millions) | \$ 213,905 | \$ 206,143 |
| Gross coupon rate | 3.38% | 3.27% |
| Current loan size (\$ thousands) | \$ 338 | \$ 334 |
| Original FICO ⁽²⁾ | 760 | 760 |
| Original Loan-to-Value (LTV) | 72% | 72% |
| 60+ day delinquencies | 0.7% | 0.7% |
| Net servicing fee (bps) | 26.5 | 26.5 |
| Loan age (months) | 34 | 33 |
| 3-month CPR | 4.1% | 4.6% |

II. MSR PORTFOLIO⁽³⁾



III. 30-YEAR MSR PREPAYMENT SPEEDS



■ TBAs (Q1-2023)⁽⁴⁾

■ TWO MSR (Q1-2023)

◇ TBAs (Q4-2022)⁽⁴⁾

◇ TWO MSR (Q4-2022)

Return Potential and Outlook

HISTORICALLY WIDE MORTGAGE SPREADS OFFER ATTRACTIVE OPPORTUNITIES BUT RISKS REMAIN

| PROSPECTIVE MARKET RETURNS As of March 31, 2023 | INVESTED CAPITAL ALLOCATED ⁽¹⁾ | PORTFOLIO MARKET VALUE (\$ millions) | STATIC MARKET RETURN ESTIMATE ⁽²⁾ | | |
|--|---|---|---|---|------------|
| RMBS + MSR | | | | | |
| MSR | | 3,220 | | | |
| TBA ⁽³⁾ | | 5,333 | | | |
| Hedged MSR | 61% | 8,553 | 14% | - | 17% |
| RMBS + RATES | | | | | |
| Pools | | 8,655 | | | |
| TBA ⁽³⁾ | | (1,633) | | | |
| Other Securities | | 355 | | | |
| Hedged Securities | 39% | 7,377 | 12% | - | 14% |

PROSPECTIVE MARKET RETURNS

- Market return estimates reflect static assumptions using quarter-end spreads and market data
- Both hedged MSR and RMBS offer gross return potential in the mid-teens

| PROSPECTIVE TWO HARBORS RETURNS As of March 31, 2023 | INVESTED CAPITAL (\$ millions) | STATIC TWO HARBORS RETURN ESTIMATE ⁽⁴⁾ | | | |
|--|--------------------------------------|---|---------------|---|---------------|
| Total Portfolio Before Expenses | | | 13.1% | - | 15.9% |
| Operating and Tax Expenses ⁽⁵⁾ | | | (2.8)% | - | (2.8)% |
| Total Portfolio After Expenses | | | 10.4% | - | 13.1% |
| INVESTED CAPITAL | | | | | |
| Convertible Notes | 288 | | 6.3% | | |
| Preferred Equity | 652 | | 7.6% | | |
| Common Equity | 1,593 | | 12.3% | - | 16.6% |
| PROSPECTIVE QUARTERLY STATIC RETURN PER BASIC COMMON SHARE⁽⁶⁾: | | | \$0.50 | - | \$0.69 |

PROSPECTIVE TWO HARBORS RETURNS

- After including the effects of expenses, convertible notes and preferred equity, our prospective static return estimates are 12.3% to 16.6% on common equity
- Changes in market prices can cause realized returns to differ from these static estimates, sometimes meaningfully

Note: This slide presents estimates for illustrative purposes only, using Two Harbors' base case assumptions (e.g., spreads, prepayment speeds, financing costs and expenses), and does not contemplate market-driven value changes, active portfolio management, nonrecurring expenses or future impacts from the acquisition of RoundPoint Mortgage Servicing Corporation. Actual results may differ materially.

An aerial photograph of a suburban residential neighborhood. The houses are mostly two-story, light-colored buildings with dark roofs, arranged in a winding street pattern. The area is surrounded by lush green trees. A large, semi-transparent blue rectangle is overlaid on the center of the image, containing the word "Appendix" in white text.

Appendix

Effective Coupon Positioning

| Coupon (%) | TBA Market Price ⁽¹⁾ | TBA Notional (\$m) | Specified Pools Par Value (\$m) ⁽²⁾ | MSR/Agency IO UPB (\$m) ⁽³⁾ | Combined (\$m) |
|--------------|---------------------------------|--------------------|--|--|-----------------|
| 2.0% | \$ 82.60 | \$ — | \$ — | \$ — | \$ — |
| 2.5% | \$ 86.18 | — | — | — | — |
| 3.0% | \$ 89.64 | — | — | — | — |
| 3.5% | \$ 92.84 | — | — | — | — |
| 4.0% | \$ 95.58 | 353 | 535 | — | 888 |
| 4.5% | \$ 97.92 | 564 | 2,957 | (46) | 3,475 |
| 5.0% | \$ 99.69 | 2,352 | 2,846 | (5,336) | (138) |
| 5.5% | \$ 101.00 | 99 | 1,437 | — | 1,536 |
| 6.0% | \$ 102.06 | 350 | 826 | — | 1,176 |
| Total | | \$ 3,718 | \$ 8,601 | \$ (5,382) | \$ 6,937 |

Risk Positioning



BOOK VALUE EXPOSURE TO CHANGES IN RATES

| | | | % Change in Common Book Value | | | |
|----------------------------|-----------------------------|-------------------------------|-------------------------------|-----------------------------------|----------------------|----------|
| 2-Year Rate (basis points) | 10-Year Rate (basis points) | | Agency P&I RMBS/TBA | MSR/Agency IO RMBS ⁽¹⁾ | Other ⁽²⁾ | Combined |
| -25 | 0 | Bull Steepener ⁽³⁾ | 2.7 % | 0.6 % | (2.2)% | 1.1 % |
| 0 | -25 | Bull Flattener ⁽⁴⁾ | 5.0 % | (3.8)% | (2.9)% | (1.7)% |
| -50 | -50 | Parallel Shift ⁽⁵⁾ | 14.8 % | (7.1)% | (10.2)% | (2.5)% |
| -25 | -25 | Parallel Shift ⁽⁵⁾ | 7.7 % | (3.3)% | (5.0)% | (0.6)% |
| 0 | 0 | Base | — % | — % | — % | — % |
| +25 | +25 | Parallel Shift ⁽⁵⁾ | (8.3)% | 3.2 % | 5.0 % | (0.1)% |
| +50 | +50 | Parallel Shift ⁽⁵⁾ | (17.3)% | 5.6 % | 9.9 % | (1.8)% |
| +25 | 0 | Bear Flattener ⁽³⁾ | (2.6)% | — % | 2.4 % | (0.2)% |
| 0 | +25 | Bear Steepener ⁽⁴⁾ | (5.8)% | 3.2 % | 2.6 % | — % |

BOOK VALUE EXPOSURE TO CURRENT COUPON SPREAD⁽⁶⁾

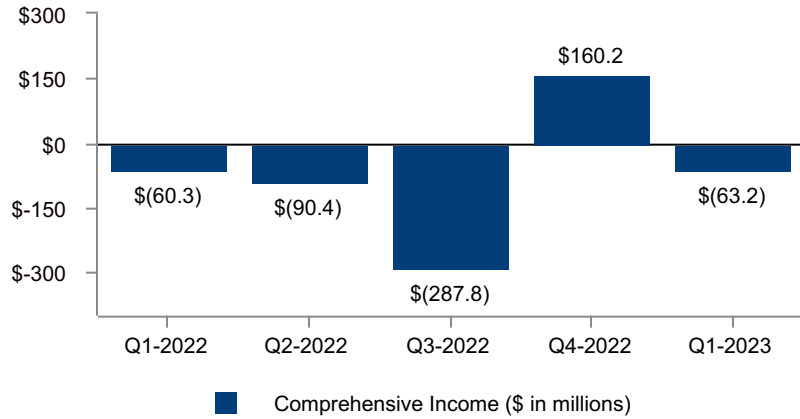
| | | % Change in Common Book Value | | |
|--|--|-------------------------------|-----------------------------------|----------|
| Parallel Shift in Spreads (basis points) | | Agency P&I RMBS/TBA | MSR/Agency IO RMBS ⁽¹⁾ | Combined |
| -25 | | 6.7 % | (3.2)% | 3.5 % |
| 0 | | — % | — % | — % |
| +25 | | (7.3)% | 2.9 % | (4.4)% |

Note: Sensitivity data as of March 31, 2023. The above scenarios are provided for illustration purposes only and is not necessarily indicative of Two Harbors' financial condition and operating results, nor are they necessarily indicative of the financial condition or results of operations that may be expected for any future period or date.

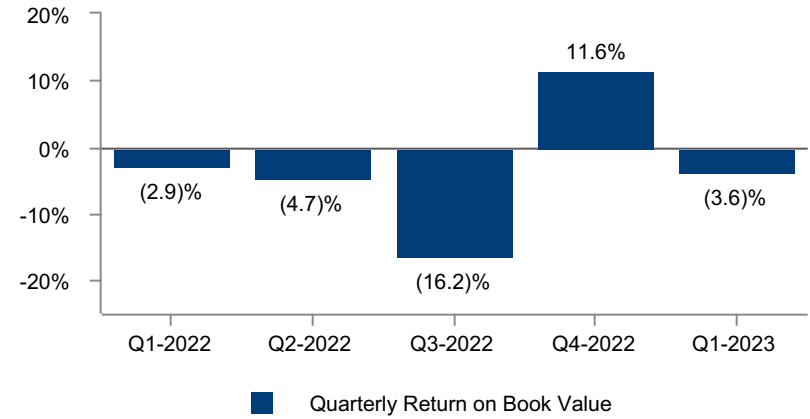
Financial Performance



COMPREHENSIVE (LOSS) INCOME



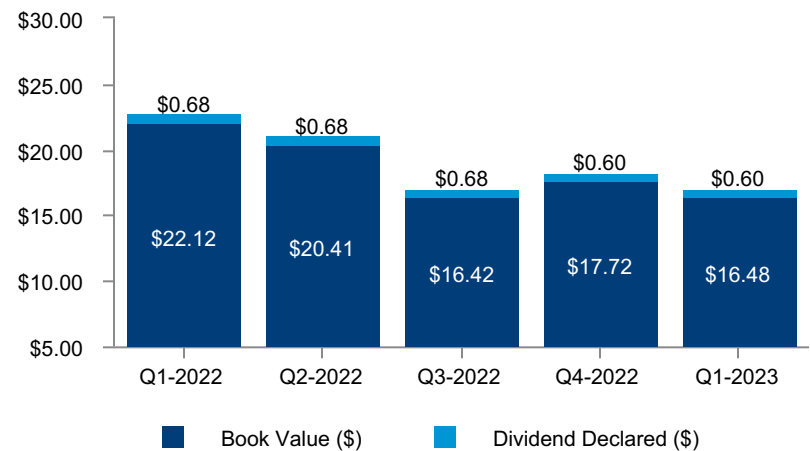
QUARTERLY ECONOMIC RETURN ON BOOK VALUE⁽¹⁾



DIVIDEND YIELD⁽²⁾



BOOK VALUE AND DIVIDEND PER COMMON SHARE⁽²⁾



Q1-2023 Operating Performance



| (\$ millions, except for per common share data) | Q1-2023 | | | |
|--|--|-------------------------|------------------|-------------------|
| | Earnings Available for Distribution ⁽¹⁾ | Realized Gains (Losses) | Unrealized MTM | Total |
| Interest income | \$ 116.6 | \$ — | \$ — | \$ 116.6 |
| Interest expense | 142.5 | — | — | 142.5 |
| Net interest income | (25.9) | — | — | (25.9) |
| (Loss) gain on investment securities | — | (31.8) | 42.6 | 10.8 |
| Servicing income | 153.3 | — | — | 153.3 |
| (Loss) gain on servicing asset | (76.5) | 0.5 | 47.9 | (28.1) |
| Gain (loss) on interest rate swap and swaption agreements | 3.6 | (18.6) | (67.2) | (82.2) |
| Gain (loss) on other derivative instruments | 6.8 | (86.1) | (76.5) | (155.8) |
| Other income | — | — | — | — |
| Total other income (loss) | 87.2 | (136.0) | (53.2) | (102.0) |
| Servicing expenses | 26.8 | 1.5 | — | 28.3 |
| Operating expenses | 13.1 | 11.5 | — | 24.6 |
| Total expenses | 39.9 | 13.0 | — | 52.9 |
| Income (loss) before income taxes | 21.4 | (149.0) | (53.2) | (180.8) |
| Provision for (benefit from) income taxes | 0.8 | (2.2) | (2.5) | (3.9) |
| Net income (loss) | 20.6 | (146.8) | (50.7) | (176.9) |
| Dividends on preferred stock | (12.3) | — | — | (12.3) |
| Gain on repurchase and retirement of preferred stock | — | — | — | — |
| Net income (loss) attributable to common stockholders | \$ 8.3 | \$ (146.8) | \$ (50.7) | \$ (189.2) |
| Earnings (loss) per weighted average basic common share | \$ 0.09 | \$ (1.59) | \$ (0.55) | \$ (2.05) |

Q4-2022 Operating Performance



| (\$ millions, except for per common share data) | Q4-2022 | | | |
|--|--|-------------------------|------------------|-------------------|
| | Earnings Available for Distribution(1) | Realized Gains (Losses) | Unrealized MTM | Total |
| Interest income | \$ 99.3 | \$ — | \$ — | \$ 99.3 |
| Interest expense | 115.6 | — | — | 115.6 |
| Net interest income | (16.3) | — | — | (16.3) |
| Loss on investment securities | — | (341.0) | (6.4) | (347.4) |
| Servicing income | 160.9 | — | — | 160.9 |
| (Loss) gain on servicing asset | (83.2) | 3.3 | 15.8 | (64.1) |
| Gain on interest rate swap and swaption agreements | — | — | — | — |
| Gain (loss) on other derivative instruments | 9.9 | 119.6 | (76.2) | 53.3 |
| Other income | — | 0.1 | — | 0.1 |
| Total other income (loss) | 87.6 | (218.0) | (66.8) | (197.2) |
| Servicing expenses | 24.6 | 0.7 | — | 25.3 |
| Operating expenses | 10.4 | 12.5 | — | 22.9 |
| Total expenses | 35.0 | 13.2 | — | 48.2 |
| Income (loss) before income taxes | 36.3 | (231.2) | (66.8) | (261.7) |
| Provision for (benefit from) income taxes | 1.7 | (2.6) | 9.4 | 8.5 |
| Net income (loss) | 34.6 | (228.6) | (76.2) | (270.2) |
| Dividends on preferred stock | (12.4) | — | — | (12.4) |
| Gain on repurchase and retirement of preferred stock | — | 20.1 | — | 20.1 |
| Net income (loss) attributable to common stockholders | \$ 22.2 | \$ (208.5) | \$ (76.2) | \$ (262.5) |
| Earnings (loss) per weighted average basic common share | \$ 0.26 | \$ (2.42) | \$ (0.88) | \$ (3.04) |

GAAP to EAD Reconciliation



| Reconciliation of GAAP to non-GAAP Information (\$ thousands, except for per common share data) | Three Months Ended March 31, 2023 | Three Months Ended December 31, 2022 |
|--|--------------------------------------|---|
| Comprehensive (loss) income attributable to common stockholders | \$ (63,242) | \$ 160,233 |
| Adjustment for other comprehensive income attributable to common stockholders: | | |
| Unrealized gain on available-for-sale securities | (125,931) | (422,672) |
| Net loss attributable to common stockholders | \$ (189,173) | \$ (262,439) |
| Adjustments to exclude reported realized and unrealized (gains) losses: | | |
| Realized loss on securities | 31,909 | 341,316 |
| Unrealized (gain) loss on securities | (42,565) | 6,453 |
| Reversal of provision for credit losses | (142) | (318) |
| Realized and unrealized loss on mortgage servicing rights | 28,079 | 64,084 |
| Realized loss on termination or expiration of interest rate swaps and swaptions | 18,580 | — |
| Unrealized loss on interest rate swaps and swaptions | 67,184 | — |
| Realized and unrealized loss (gain) on other derivative instruments | 155,836 | (53,226) |
| Gain on repurchase and retirement of preferred stock | — | (20,149) |
| Other realized and unrealized gains | — | (112) |
| Other adjustments: | | |
| MSR amortization ⁽¹⁾ | (76,558) | (83,190) |
| TBA dollar roll income ⁽²⁾ | 6,341 | 16,193 |
| U.S. Treasury futures income ⁽³⁾ | 403 | (6,408) |
| Change in servicing reserves | 1,564 | 713 |
| Non-cash equity compensation expense | 6,052 | 1,653 |
| Other nonrecurring expenses | 5,418 | 10,836 |
| Net (benefit from) provision for income taxes on non-EAD | (4,655) | 6,803 |
| Earnings available for distribution to common stockholders | \$ 8,273 | \$ 22,209 |
| Weighted average basic common shares | 92,575,840 | 86,391,405 |
| Earnings available for distribution to common stockholders per weighted average basic common share | \$ 0.09 | \$ 0.26 |

Note: Earnings Available for Distribution, or EAD, is a non-GAAP measure that we define as comprehensive (loss) income attributable to common stockholders, excluding realized and unrealized gains and losses on the aggregate portfolio, gains and losses on repurchases of preferred stock, provision for (reversal of) credit losses, reserve expense for representation and warranty obligations on MSR, non-cash compensation expense related to restricted common stock, and other nonrecurring expenses. As defined, EAD includes net interest income, accrual and settlement of interest on derivatives, dollar roll income on TBAs, U.S. Treasury futures income, servicing income, net of estimated amortization on MSR and recurring cash related operating expenses. EAD provides supplemental information to assist investors in analyzing the Company's results of operations and helps facilitate comparisons to industry peers. EAD is one of several measures our board of directors considers to determine the amount of dividends to declare on our common stock and should not be considered an indication of our taxable income or as a proxy for the amount of dividends we may declare.

GAAP to IXM Reconciliation

| Reconciliation of GAAP to non-GAAP Information (\$ thousands, except for per common share data) | Three Months Ended March 31, 2023 | Three Months Ended December 31, 2022 |
|--|--------------------------------------|---|
| Comprehensive (loss) income attributable to common stockholders | \$ (63,242) | \$ 160,233 |
| Adjustments to exclude market-driven value changes and nonrecurring operating expenses: | | |
| RMBS and other Agency securities market-driven value changes ⁽¹⁾ | (107,556) | (60,991) |
| MSR market-driven value changes ⁽²⁾ | (32,904) | 3,330 |
| Swap and swaption market-driven value changes ⁽³⁾ | 82,174 | — |
| TBA market-driven value changes ⁽⁴⁾ | 33,764 | (33,063) |
| Realized and unrealized losses (gains) on futures | 140,087 | (5,016) |
| Change in servicing reserves | 1,564 | 713 |
| Nonrecurring deboarding fees ⁽⁵⁾ | 1,017 | 2,460 |
| Other nonrecurring expenses | 5,418 | 10,836 |
| Gain on repurchase and retirement of preferred stock | — | (20,149) |
| Net benefit from income taxes associated with market-driven value changes | (5,929) | 4,975 |
| Income Excluding Market-Driven Value Changes to common stockholders | \$ 54,393 | \$ 63,328 |
| Weighted average basic common shares | 92,575,840 | 86,391,405 |
| Income Excluding Market-Driven Value Changes per weighted average basic common share | \$ 0.59 | \$ 0.73 |

Note: Income Excluding Market-Driven Value Changes, or IXM, is a non-GAAP measure defined as total comprehensive income attributable to common stockholders, excluding market-driven value changes on the aggregate portfolio, provision for income taxes associated with market-driven value changes, nonrecurring operating expenses and gain on the repurchase and retirement of preferred stock. As defined, IXM includes the realization of portfolio cash flows which incorporates actual prepayments, changes in portfolio accrued interest, recurring servicing income and servicing expenses, and certain modeled price changes. These modeled price changes are measured daily based on a “Realized Forwards” methodology, which includes the assumption that spreads, forward interest rates and volatility factored into the previous day ending fair value are unchanged. Assumptions for spreads, forward interest rates, volatility and the previous day ending fair value include applicable market data, data from third-party brokers and pricing vendors and management’s assessment. This applies to RMBS, MSR and derivatives, as applicable, and is net of all recurring operating expenses and provision for income taxes associated with IXM. IXM provides supplemental information to assist investors in analyzing the company’s results of operations and helps facilitate comparisons to industry peers. IXM is one of several measures the company’s board of directors considers to determine the amount of dividends to declare on the company’s common stock and should not be considered an indication of taxable income or as a proxy for the amount of dividends the company may declare.

The methodology for determining the modeled price changes may be computed based on either of two commonly assumed scenarios: Realized Forwards and an Unchanged Term Structure. The Unchanged Term Structure methodology assumes that the term structure of the yield curve is unchanged day over day. The Realized Forwards methodology assumes that the term structure of the yield curve on a certain day is given by the one-day forward rates determined from the term structure of the yield curve on the previous day. For the fourth quarter of 2022, IXM as originally reported using the Unchanged Term Structure methodology was \$0.73 per weighted average basic common share. Starting with the first quarter of 2023, IXM is calculated using the Realized Forwards methodology, and fourth quarter 2022 comparative data presented herein has been updated to reflect this change. IXM as restated under the Realized Forwards methodology for the fourth quarter of 2022 was also \$0.73 per weighted average basic common share.

Agency RMBS Portfolio



| | Par Value (\$ millions) | Market Value (\$ millions) | Weighted Average CPR ⁽¹⁾ | % Prepay Protected ⁽²⁾ | Amortized Cost Basis (\$ millions) | Gross Weighted Average Coupon | Weighted Average Age (Months) |
|------------------------------------|----------------------------|-------------------------------|--|--------------------------------------|--|----------------------------------|-------------------------------------|
| 30-Year Fixed | | | | | | | |
| 4.0% | \$ 535 | \$ 516 | 4.1 % | 100.0 % | \$ 541 | 4.6 % | 40 |
| 4.5% | 2,957 | 2,921 | 6.7 % | 100.0 % | 3,019 | 5.2 % | 28 |
| 5.0% | 2,846 | 2,862 | 5.1 % | 100.0 % | 2,901 | 5.8 % | 11 |
| ≥ 5.5% | 2,273 | 2,320 | 7.2 % | 99.8 % | 2,310 | 6.6 % | 10 |
| | 8,611 | 8,619 | 6.2 % | 99.9 % | 8,771 | 5.7 % | 18 |
| Other P&I⁽³⁾ | 7 | 7 | 3.4 % | — % | 7 | 5.5 % | 215 |
| IOs and IIOs⁽⁴⁾ | 1,064 | 50 | 9.4 % | — % | 62 | 4.7 % | 142 |
| Total Agency RMBS | <u>\$ 9,682</u> | <u>\$ 8,676</u> | | <u>99.3 %</u> | <u>\$ 8,840</u> | | |

| | Notional Amount (\$ millions) | Bond Equivalent Value (\$ millions) ⁽⁵⁾ | Through-the-Box Speeds ⁽⁶⁾ |
|-------------------------|----------------------------------|--|--|
| TBA Positions | | | |
| 4.0% | \$ 353 | \$ 337 | 1.9 % |
| 4.5% | 564 | 555 | 3.2 % |
| 5.0% | 2,352 | 2,345 | 3.8 % |
| ≥ 5.5% | 449 | 456 | 9.0 % |
| Net TBA Position | <u>\$ 3,718</u> | <u>\$ 3,693</u> | |

Mortgage Servicing Rights Portfolio⁽¹⁾



| | Number of Loans | Unpaid Principal Balance (\$ millions) | Gross Coupon Rate | Current Loan Size (\$ thousands) | Loan Age (months) | Original FICO ⁽²⁾ | Original LTV | 60+ Day Delinquencies | 3-Month CPR | Net Servicing Fee (bps) |
|------------------------|-----------------|--|-------------------|----------------------------------|-------------------|------------------------------|--------------|-----------------------|-------------|-------------------------|
| 30-Year Fixed | | | | | | | | | | |
| ≤ 3.25% | 296,930 | \$ 95,564 | 2.8% | \$ 379 | 26 | 768 | 71% | 0.4% | 3.0% | 25.8 |
| 3.25% - 3.75% | 138,942 | 35,923 | 3.4% | 325 | 41 | 754 | 74% | 0.8% | 4.1% | 26.3 |
| 3.75% - 4.25% | 106,613 | 22,128 | 3.9% | 271 | 64 | 751 | 76% | 1.1% | 5.4% | 27.3 |
| 4.25% - 4.75% | 59,241 | 10,495 | 4.4% | 248 | 66 | 736 | 77% | 2.1% | 6.4% | 26.4 |
| 4.75% - 5.25% | 42,431 | 9,945 | 4.9% | 356 | 30 | 745 | 79% | 1.4% | 6.3% | 26.8 |
| > 5.25% | 49,988 | 13,881 | 5.8% | 383 | 12 | 745 | 81% | 0.8% | 5.6% | 30.1 |
| | 694,145 | 187,936 | 3.5% | 348 | 35 | 759 | 74% | 0.7% | 4.0% | 26.5 |
| 15-Year Fixed | | | | | | | | | | |
| ≤ 2.25% | 23,041 | 6,372 | 2.0% | 325 | 23 | 777 | 59% | 0.1% | 2.7% | 25.2 |
| 2.25% - 2.75% | 38,540 | 8,550 | 2.4% | 272 | 27 | 772 | 59% | 0.2% | 3.9% | 25.9 |
| 2.75% - 3.25% | 35,572 | 5,080 | 2.9% | 198 | 55 | 766 | 61% | 0.2% | 6.2% | 26.2 |
| 3.25% - 3.75% | 20,845 | 2,193 | 3.4% | 156 | 68 | 757 | 64% | 0.6% | 8.2% | 26.9 |
| 3.75% - 4.25% | 9,766 | 866 | 3.9% | 144 | 64 | 742 | 65% | 0.8% | 8.4% | 28.6 |
| > 4.25% | 6,521 | 785 | 4.8% | 225 | 28 | 741 | 66% | 0.9% | 11.1% | 32.0 |
| | 134,285 | 23,846 | 2.6% | 254 | 37 | 769 | 60% | 0.2% | 4.8% | 26.2 |
| Total ARMs | 2,598 | 663 | 3.7% | 337 | 57 | 761 | 69% | 1.1% | 12.4% | 25.5 |
| Total Portfolio | 831,028 | \$ 212,445 | 3.4% | \$ 337 | 35 | 760 | 72% | 0.7% | 4.1% | 26.5 |

Mortgage Servicing Rights UPB Roll-Forward



| <i>\$ millions</i> | Q1-2023 | Q4-2022 | Q3-2022 | Q2-2022 | Q1-2022 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|
| UPB at beginning of period | \$ 204,877 | \$ 206,614 | \$ 227,074 | \$ 229,416 | \$ 193,771 |
| Bulk purchases of mortgage servicing rights | 10,713 | — | — | — | 37,197 |
| Flow purchases of mortgage servicing rights | 669 | 2,678 | 4,449 | 5,720 | 7,940 |
| Sales of mortgage servicing rights | (143) | — | (19,807) | — | — |
| Scheduled payments | (1,527) | (1,538) | (1,565) | (1,697) | (1,573) |
| Prepaid | (2,120) | (2,440) | (3,709) | (6,027) | (8,250) |
| Other changes | (24) | (437) | 172 | (338) | 331 |
| UPB at end of period | <u>\$ 212,445</u> | <u>\$ 204,877</u> | <u>\$ 206,614</u> | <u>\$ 227,074</u> | <u>\$ 229,416</u> |

Financing



| \$ millions | | | | | | |
|--|--------------------------------------|--|--------------------|-------------------|------------------------------|----------------|
| Outstanding Borrowings and Maturities ⁽¹⁾ | Repurchase Agreements | Revolving Credit Facilities | Term Notes Payable | Convertible Notes | Total Outstanding Borrowings | Percent (%) |
| Within 30 days | \$ 1,713.3 | \$ — | \$ — | \$ — | \$ 1,713.3 | 15.5 % |
| 30 to 59 days | 1,558.5 | — | — | — | 1,558.5 | 14.1 % |
| 60 to 89 days | 1,303.6 | — | — | — | 1,303.6 | 11.8 % |
| 90 to 119 days | 2,401.4 | 329.0 | — | — | 2,730.4 | 24.7 % |
| 120 to 364 days | 2,107.9 | — | — | — | 2,107.9 | 19.0 % |
| One to three years | — | 963.8 | 398.3 | — | 1,362.1 | 12.3 % |
| Three to five years | — | — | — | 282.9 | 282.9 | 2.6 % |
| | <u>\$ 9,084.7</u> | <u>\$ 1,292.8</u> | <u>\$ 398.3</u> | <u>\$ 282.9</u> | <u>\$ 11,058.7</u> | <u>100.0 %</u> |
| Collateral Pledged for Borrowings | Repurchase Agreements ⁽²⁾ | Revolving Credit Facilities ⁽²⁾ | Term Notes Payable | Convertible Notes | Total Collateral Pledged | Percent (%) |
| Available-for-sale securities, at fair value | \$ 8,952.6 | \$ — | \$ — | n/a | \$ 8,952.6 | 73.0 % |
| Mortgage servicing rights, at fair value | 430.8 | 2,009.9 | 500.0 | n/a | 2,940.7 | 24.0 % |
| Restricted cash | 77.4 | — | 1.4 | n/a | 78.8 | 0.6 % |
| Due from counterparties | 29.5 | — | — | n/a | 29.5 | 0.2 % |
| Derivative assets, at fair value | 15.3 | — | — | n/a | 15.3 | 0.1 % |
| Other assets (includes servicing advances) | — | 58.0 | — | n/a | 58.0 | 0.5 % |
| U.S. Treasuries ⁽³⁾ | 195.3 | — | — | n/a | 195.3 | 1.6 % |
| | <u>\$ 9,700.9</u> | <u>\$ 2,067.9</u> | <u>\$ 501.4</u> | <u>n/a</u> | <u>\$ 12,270.2</u> | <u>100.0 %</u> |

Futures

| Type & Maturity | Notional Amount (\$M) | Carrying Value (\$M) ⁽¹⁾ | Weighted Average Days to Expiration |
|---------------------------------|--------------------------|--|---|
| U.S. Treasury futures - 2 year | \$ (1,530) | \$ — | 97 |
| U.S. Treasury futures - 5 year | (2,021) | — | 97 |
| U.S. Treasury futures - 10 year | (1,005) | — | 91 |
| U.S. Treasury futures - 20 year | 183 | — | 91 |
| Eurodollar futures - 3 month | | | |
| < 1 year | (2,238) | — | 185 |
| > 1 and < 2 years | (333) | — | 444 |
| Total futures | \$ (6,944) | \$ — | 139 |

Interest Rate Swaps and Swaptions



| INTEREST RATE SWAPS | | | | |
|---------------------|------------------------|------------------------|----------------------------|--------------------------|
| Maturities | Notional Amounts (\$B) | Average Fixed Pay Rate | Average Receive Rate | Average Maturity (Years) |
| Payers | | | | |
| 2024 | \$ — | — % | — % | — |
| 2025 | — | — % | — % | — |
| 2026 | 2.6 | 4.730 % | 4.870 % | 2.0 |
| 2027 | — | — % | — % | — |
| 2028 and Thereafter | 2.7 | 3.510 % | 4.870 % | 6.5 |
| | <u>\$ 5.3</u> | <u>4.118 %</u> | <u>4.870 %</u> | <u>4.2</u> |
| Maturities | Notional Amounts (\$B) | Average Pay Rate | Average Fixed Receive Rate | Average Maturity (Years) |
| Receivers | | | | |
| 2024 | \$ — | — % | — % | — |
| 2025 | — | — % | — % | — |
| 2026 | 1.8 | 4.870 % | 3.805 % | 2.0 |
| 2027 | — | — % | — % | — |
| 2028 and Thereafter | 1.3 | 4.870 % | 3.313 % | 6.1 |
| | <u>\$ 3.1</u> | <u>4.870 %</u> | <u>3.692 %</u> | <u>8.1</u> |

| INTEREST RATE SWAPTIONS | | | | | | | |
|----------------------------|------------|------------|------------------|------------------------------|-----------------------|-----------------------------------|----------------------|
| Option | | | | | Underlying Swap | | |
| Swaption | Expiration | Cost (\$M) | Fair Value (\$M) | Average Months to Expiration | Notional Amount (\$M) | Average Fixed Rate ⁽¹⁾ | Average Term (Years) |
| Purchase Contracts: | | | | | | | |
| Payer | <6 Months | \$ 0.7 | \$ 0.1 | 5.2 | \$ 200.0 | 5.19 % | 1.0 |
| Sale Contracts: | | | | | | | |
| Payer | <6 Months | \$ (0.6) | \$ (0.1) | 5.2 | \$ (400.0) | 5.72 % | 1.0 |

PAGE 3 - Financials Overview

1. Includes \$12.1 billion in settled positions and \$3.7 billion net TBA position, which represents the bond equivalent value of the company's TBA position. Bond equivalent value is defined as notional amount multiplied by market price. Accounted for as derivative instruments in accordance with GAAP. For additional detail on the portfolio, see slide 12 and Appendix slides 24 and 25.
2. Economic return on book value is defined as the increase (decrease) in book value per common share from the beginning to the end of the given period, plus dividends declared in the period, divided by book value as of the beginning of the period.
3. Economic debt-to-equity is defined as total borrowings to fund Agency and non-Agency investment securities and MSR, plus the implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity.
4. Income Excluding Market-Driven Value Changes, or IXM, is a non-GAAP measure. Please Appendix slide 23 for a definition of IXM and a reconciliation of GAAP to non-GAAP financial information.
5. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of EAD and a reconciliation of GAAP to non-GAAP financial information.

PAGE 4 - Key Market Highlights

1. Bloomberg data as of the dates noted.
2. Price multiples in the scenarios in this chart are hypothetical projections based on internal models and are not based on our financial results, nor are they projections of our results. The scenarios are provided for illustration purposes only and may not represent all assumptions used. Actual results of a portfolio may differ.

PAGE 5 - Book Value Summary

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of EAD and a reconciliation of GAAP to non-GAAP financial information.
2. Economic return on book value is defined as the increase (decrease) in book value per common share from the beginning to the end of the given period, plus dividends declared in the period, divided by book value as of the beginning of the period.

PAGE 6 - Results and Return Contributions

1. Income Excluding Market-Driven Value Changes, or IXM, is a non-GAAP measure. Please Appendix slide 23 for a definition of IXM and a reconciliation of GAAP to non-GAAP financial information.
2. RMBS and other Agency securities includes inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.

End Notes (continued)



PAGE 7 - Comparison of GAAP and non-GAAP Measures

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of EAD and a reconciliation of GAAP to non-GAAP financial information.
2. Income Excluding Market-Driven Value Changes, or IXM, is a non-GAAP measure. Please Appendix slide 23 for a definition of IXM and a reconciliation of GAAP to non-GAAP financial information.
3. RMBS and other Agency securities includes inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.
4. RMBS and other Agency securities daily amortization for IXM is equal to the previous day ending fair value multiplied by the sum of the risk-free rate and zero-volatility OAS, less coupon income.
5. Servicing expenses for IXM excludes deboarding fees associated with one-time transfers of MSR.
6. MSR daily amortization for IXM is equal to the previous day ending fair value multiplied by the the sum of the risk-free rate and zero-volatility OAS, less service fee income and recurring servicing expenses.
7. Swaps daily IXM is equal to the previous day ending fair value multiplied by the overnight SOFR, which is reflected as the sum of swap net interest spread and swap realized and unrealized. Swaptions daily IXM is equal to the previous day ending fair value multiplied by the realized forward rate.
8. TBAs daily income for IXM is equal to the zero-volatility OAS less the implied repo spread, multiplied by the previous day ending fair value.
9. Operating expenses for IXM excludes other nonrecurring expenses.
10. Tax benefit (expense) for each GAAP and non-GAAP metric includes the estimated tax expense associated with each pre-tax GAAP and non-GAAP metric earned or incurred in the company's taxable REIT subsidiaries, or TRSs.

PAGE 8 - Earnings Available for Distribution

1. MSR amortization refers to the portion of change in fair value of MSR primarily attributed to the realization of expected cash flows (runoff) of the portfolio, which is deemed a non-GAAP measure due to the company's decision to account for MSR at fair value.
2. TBA dollar roll income is the economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
3. U.S. Treasury futures income is the economic equivalent to holding and financing a relevant cheapest-to-deliver U.S. Treasury note or bond using short-term repurchase agreements.
4. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of EAD and a reconciliation of GAAP to non-GAAP financial information.
5. Agency fixed-rate RMBS use the GAAP concept of amortized cost and yield-to-maturity determined at time of purchase. Net servicing income and MSR amortization is based on original pricing yield and does not include the benefit of increased float income and lower compensating interest. Financing costs are largely variable and short-term, responding more quickly to rising rates than our longer term assets. U.S. Treasury futures income represents the sum of the implied net cash and expected change in price of a financed U.S. Treasury security, but excludes unexpected price change.

End Notes (continued)



PAGE 9 - Portfolio Yields and Financing Costs

1. Includes interest income, net of premium amortization/discount accretion, on Agency and non-Agency investment securities, servicing income, net of estimated amortization and servicing expenses, on MSR, and the implied asset yield portion of dollar roll income on TBAs. Amortization on MSR refers to the portion of change in fair value of MSR primarily attributed to the realization of expected cash flows (runoff) of the portfolio, which is deemed a non-GAAP measure due to the company's decision to account for MSR at fair value. TBA dollar roll income is the non-GAAP economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
2. Amortized cost on MSR for a given period equals the net present value of the remaining future cash flows (obtained by applying original prepayment assumptions to the actual unpaid principal balance at the start of the period) using a discount rate equal to the original pricing yield. Original pricing yield is the discount rate which makes the net present value of the cash flows projected at purchase equal to the purchase price. MSR amortized cost is deemed a non-GAAP measure due to the company's decision to account for MSR at fair value.
3. Represents inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.
4. Both the implied asset yield and implied financing benefit/cost of dollar roll income on TBAs are calculated using the average cost basis of TBAs as the denominator. TBA dollar roll income is the non-GAAP economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements. TBAs are accounted for as derivative instruments in accordance with GAAP.
5. Includes interest expense and amortization of deferred debt issuance costs on borrowings under repurchase agreements (excluding those collateralized by U.S. Treasuries), revolving credit facilities, term notes payable and convertible senior notes, interest spread income/expense and amortization of upfront payments made or received upon entering into interest rate swap agreements, and the implied financing benefit/cost portion of dollar roll income on TBAs. TBA dollar roll income is the non-GAAP economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
6. Unsecured convertible senior notes.
7. The cost of financing on interest rate swaps held to mitigate interest rate risk associated with the company's outstanding borrowings is calculated using average borrowings balance as the denominator.
8. The cost of financing on U.S. Treasury futures held to mitigate interest rate risk associated with the company's outstanding borrowings is calculated using average borrowings balance as the denominator. U.S. Treasury futures income is the economic equivalent to holding and financing a relevant cheapest-to-deliver U.S. Treasury note or bond using short-term repurchase agreements.

PAGE 10 - Strong Balance Sheet and Liquidity Position

1. Source: Bloomberg. Represents the average spread between repurchase rates and the Secured Overnight Financing Rate (SOFR) over trailing 3-month and 6-month periods between Q1 2019 and Q1 2023 (as of March 31, 2023).
2. Balance of 5-year MSR term notes excludes deferred debt issuance costs.

End Notes (continued)



PAGE 11 - RMBS Market Conditions

1. Represents universal mortgage-backed securities (UMBS) TBA spreads as of the dates noted.
2. Source: Mizuho projections. OAS numbers from Bloomberg Agency MBS Index Prepayment Model (BAM).

PAGE 12 - Quarterly Activity and Portfolio Composition

1. For additional detail on the portfolio, see Appendix slides 24 and 25.
2. Economic debt-to-equity is defined as total borrowings to fund Agency and non-Agency investment securities and MSR, plus the implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity.
3. Net TBA position represents the bond equivalent value of the company's TBA position. Bond equivalent value is defined as notional amount multiplied by market price. Accounted for as derivative instruments in accordance with GAAP.
4. Specified pools include securities with implicit or explicit prepayment protection including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores, as well as securities without such protection, including large bank-serviced and others.

PAGE 13 - Specified Pools

1. Specified pools include securities with implicit or explicit prepayment protection including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores, as well as securities without such protection, including large bank-serviced and others.
2. Represents UMBS generic TBA performance during the quarter.
3. Specified pool performance excludes certain coupons in which we were not invested for the full duration of the quarter.
4. Specified pool market value by coupon as of March 31, 2023.
5. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

PAGE 14 - Mortgage Servicing Rights

1. MSR portfolio based on the loans underlying the MSR reported by subservicers on a month lag, adjusted for current month purchases. Portfolio metrics, other than fair value and UPB, represent averages weighted by UPB.
2. FICO represents a mortgage industry accepted credit score of a borrower.
3. MSR portfolio based on the loans underlying the MSR reported by subservicers on a month lag, adjusted for current month purchases and excluding unsettled MSR on loans for which the company is the named servicer.
4. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

End Notes (continued)



PAGE 15 - Return Potential and Outlook

1. 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.
2. Market return estimates reflect static assumptions using quarter-end spreads and market data.
3. Net TBA position represents the bond equivalent value of the company's TBA position. Bond equivalent value is defined as notional amount multiplied by market price. Accounted for as derivative instruments in accordance with GAAP.
4. Estimated return on invested capital reflects static return assumptions using quarter end portfolio valuations.
5. Total expenses includes operating expenses and tax expense within the company's taxable REIT subsidiaries.
6. Prospective quarterly static return estimate per basic common share reflects portfolio performance expectations given current market conditions and represents the comprehensive income attributable to common stockholders (net of dividends on preferred stock).

PAGE 17 - Effective Coupon Positioning

1. Represents UMBS TBA market prices as of March 31, 2023.
2. Specified pools include securities with implicit or explicit prepayment protection including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores, as well as securities without such protection, including large bank-serviced and others.
3. MSR/Agency IO represents an internally calculated exposure of a synthetic TBA position and the current coupon equivalents of our MSR, including the effect of unsettled MSR, and Agency IO RMBS.

PAGE 18 - Risk Positioning

1. MSR/Agency IO RMBS includes the effect of unsettled MSR.
2. Other includes all other derivative assets and liabilities and borrowings. Other excludes TBAs, which are included in the Agency P&I RMBS/TBA category.
3. Bull Steepener/Bear Flattener is a shift in short-term rates that represents estimated change in common book value for theoretical non-parallel shifts in the yield curve. Analysis uses a +/- 25 basis point shift in 2-year rates while holding long-term rates constant.
4. Bull Flattener/Bear Steepener is a shift in long-term rates that represents estimated change in common book value for theoretical non-parallel shifts in the yield curve. Analysis uses a +/- 25 basis point shift in 10-year rates while holding short-term rates constant.
5. Parallel shift represents estimated change in common book value for theoretical parallel shift in interest rates.
6. Book value exposure to current coupon represents estimated change in common book value for theoretical parallel shifts in spreads.

PAGE 19 - Financial Performance

1. Economic return on book value is defined as the increase (decrease) in book value per common share from the beginning to the end of the given period, plus dividends declared in the period, divided by the book value as of the beginning of the period.
2. Historical dividends may not be indicative of future dividend distributions. The company ultimately distributes dividends based on its taxable income per common share, not GAAP earnings. The annualized dividend yield on the company's common stock is calculated based on the closing price of the last trading day of the relevant quarter.

End Notes (continued)



PAGE 20 - Q1-2023 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

PAGE 21 - Q4-2022 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 22 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

PAGE 22 - GAAP to EAD Reconciliation

1. MSR amortization refers to the portion of change in fair value of MSR primarily attributed to the realization of expected cash flows (runoff) of the portfolio, which is deemed a non-GAAP measure due to the company's decision to account for MSR at fair value.
2. TBA dollar roll income is the economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
3. U.S. Treasury futures income is the economic equivalent to holding and financing a relevant cheapest-to-deliver U.S. Treasury note or bond using short-term repurchase agreements.

PAGE 23 - GAAP to IXM Reconciliation

1. RMBS and other Agency securities market-driven value changes refers to the sum of interest income, realized and unrealized gains and losses on RMBS and other Agency securities, less the sum of the realization of RMBS and other Agency securities cash flows which incorporates actual prepayments, changes in RMBS and other Agency securities accrued interest, and modeled price changes. Modeled price changes are measured daily based on a "Realized Forwards" methodology, which includes the assumption that spreads, forward interest rates and volatility factored into the previous day ending fair value are unchanged. RMBS and other Agency securities includes inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.
2. MSR market-driven value changes refers to the sum of servicing income, servicing expenses, realized and unrealized gains and losses on MSR, less the sum of the realization of MSR cash flows which incorporates actual prepayments, recurring servicing income and servicing expenses, and modeled price changes. Modeled price changes are measured daily based on a "Realized Forwards" methodology, which includes the assumption that spreads, forward interest rates and volatility factored into the previous day ending fair value are unchanged.
3. Swap and swaption market-driven value changes refers to the net interest spread and realized and unrealized gains and losses on interest rate swap and swaption agreements, less the swaps daily IXM that is equal to the previous day ending fair value multiplied by the overnight SOFR and swaptions daily IXM that is equal to the previous day ending fair value multiplied by the realized forward rate.
4. TBA market-driven value changes refers to the total realized and unrealized gains and losses, less the daily zero-volatility OAS less the implied repo spread, multiplied by the previous day ending fair value.
5. Nonrecurring deboarding fees are associated with one-time transfers of MSR.

End Notes (continued)



PAGE 24 - Agency RMBS Portfolio

1. Weighted average actual 1 month CPR released at the beginning of the following month based on RMBS held as of the preceding month-end.
2. Determination of the percentage of prepay protected 30-year fixed Agency RMBS includes securities with implicit or explicit prepayment protection including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores.
3. Other P&I includes 15-year fixed, Hybrid ARMs, CMO and DUS pools.
4. IOs and IIOs represent market value of \$15.8 million of Agency Derivatives and \$33.9 million of IOs.
5. Bond equivalent value is defined as the notional amount multiplied by market price. Accounted for as derivative instruments in accordance with GAAP.
6. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

PAGE 25 - Mortgage Servicing Rights Portfolio

1. MSR portfolio excludes residential mortgage loans for which the company is the named servicing administrator. Portfolio metrics, other than fair value and UPB, represent averages weighted by UPB.
2. FICO represents a mortgage industry accepted credit score of a borrower.

PAGE 27 - Financing

1. Outstanding borrowings have a weighted average of 5.9 months to maturity.
2. Repurchase agreements and revolving credit facilities secured by MSR and/or other assets may be over-collateralized due to operational considerations.
3. U.S. Treasury securities effectively borrowed under reverse repurchase agreements.

PAGE 28 - Futures

1. Exchange-traded derivative instruments (futures and options on futures) require the posting of 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 receipt or payment of variation margin is accounted for as a direct reduction to the carrying value of the exchange-traded derivative asset or liability.

PAGE 29 - Interest Rate Swaps and Swaptions

1. As of March 31, 2023, 100.0% of the underlying swap floating rates were tied to SOFR.



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