



# An Agency + MSR Mortgage REIT

Second Quarter 2022  
Investor Presentation

AUGUST 4, 2022



**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, 2021, 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; the ongoing impact of the COVID-19 pandemic, and the actions taken by federal and state governmental authorities and GSEs in response, on the U.S. economy, financial markets and our target assets; 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 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.

# Key Company Highlights



Industry-leading Mortgage REIT	<ul style="list-style-type: none"><li>◦ Leading residential mortgage REIT by total assets and total investable equity</li><li>◦ \$1.8 billion common equity market capitalization and ~\$18.4 billion investment portfolio<sup>(1)</sup></li><li>◦ Attractive risk-adjusted levered returns</li></ul>
Seasoned Leadership	<ul style="list-style-type: none"><li>◦ Investment team with an average of 20 years of industry experience</li><li>◦ Experienced and majority independent board of which 25% are women</li><li>◦ Diverse management team comprised of 40%+ women</li></ul>
Differentiated Investment Strategy	<ul style="list-style-type: none"><li>◦ Strategic pairing of Agency RMBS + MSR results in long-term book value stability</li><li>◦ MSR exposure lowers mortgage spread risk for a given amount of nominal portfolio leverage</li><li>◦ Flexible approach to capital allocation that optimizes relative value opportunities</li></ul>
Sophisticated Risk Management And Governance	<ul style="list-style-type: none"><li>◦ Robust infrastructure to support risk management and MSR servicing oversight</li><li>◦ Strong governance model and controls with in-house legal and compliance teams</li><li>◦ Internalized management structure aligns interests with stockholders</li></ul>
Strong Balance Sheet And Liquidity	<ul style="list-style-type: none"><li>◦ Limited credit risk given Agency RMBS + MSR investment focus</li><li>◦ Diversified funding sources with 20 repo counterparties and 5 MSR-related lending facilities</li><li>◦ Robust capital and liquidity framework and oversight</li></ul>

<sup>(1)</sup> As of June 30, 2022.



An aerial night view of a city skyline, showing a dense grid of buildings and streets. The image is overlaid with a semi-transparent dark blue layer. The text "Second Quarter 2022 Financial Results" is centered in white.

# Second Quarter 2022 Financial Results

# Executive Overview



## *Continued Spread Widening Impacted Book Value but Results in Attractive Opportunities*

### *Quarterly Summary*

- Reported book value of \$5.10 per common share, representing a (4.7)% quarterly return on book value<sup>(1)</sup>
- Generated Comprehensive Loss of \$90.4 million, representing an annualized return on average common equity of (19.1)%
- Reported Earnings Available for Distribution (EAD) of \$75.3 million, or \$0.22 per weighted average basic common share<sup>(2)</sup>
- Declared a second quarter common stock dividend of \$0.17 per share
- Grew RMBS portfolio, including TBA, by \$3.4 billion, increasing economic debt-to-equity from 5.3x to 6.4x, as spreads widened out to attractive levels<sup>(3)</sup>

### *Post-Quarter End Update*

- Matrix Financial Services Corporation, a wholly owned subsidiary of Two Harbors, agreed to acquire all equity interests in RoundPoint Mortgage Servicing Corporation

Note: Financial data throughout this presentation is as of or for the quarter ended June 30, 2022, unless otherwise noted.

Note: The End Notes are an integral part of this presentation. See slide [30](#) through [33](#) at the back of this presentation for information related to certain financial metrics and defined terms herein.

# Acquisition of RoundPoint Mortgage Servicing



DELIVERING LONG-TERM FINANCIAL AND STRATEGIC BENEFITS TO TWO HARBORS



## DETAILS

- Matrix Financial Services Corporation, a wholly owned subsidiary of Two Harbors, agreed to acquire RoundPoint Mortgage Servicing Corporation from Freedom Mortgage Corporation
- Purchase price equal to book value plus a \$10.5 million premium, subject to certain purchase price adjustments at closing
- The parties expect to close the transaction in 2023, subject to the receipt of required regulatory and GSE approvals
- RoundPoint's will divest its retail origination business and the RPX servicing exchange prior to closing
- We will engage RoundPoint as a subservicer prior to closing, and expect to begin transferring loans in Q4-2022 and complete by second half of 2024, subject to GSE approvals

## ABOUT ROUNDPOINT <sup>(1)</sup>

- Founded in 2007
- Lifetime Customers Served: 1.3 Million+
- Comprehensive Licensing
  - Licensed to service loans in all 50 states, the District of Columbia, and the U.S. Virgin Islands
  - Licensed to originate loans in 49 states
- A recognized mortgage servicer



A 2021 STAR performer for mortgage servicing excellence. An FHA approved servicer with a Tier 1 ranking

- Experienced leadership and assembled workforce

## COMPLEMENTARY BUSINESS MODEL

- By vertically integrating a servicer as a part of our business, we expect to achieve incremental annual pre-tax earnings of approximately \$20 million once our portfolio has been transferred
- Self-servicing will allow us to exercise greater control over our servicing portfolio
- The RoundPoint platform will allow us to explore opportunities to expand our business offerings, such as
  - Third-party subservicing
  - Recapture/Origination

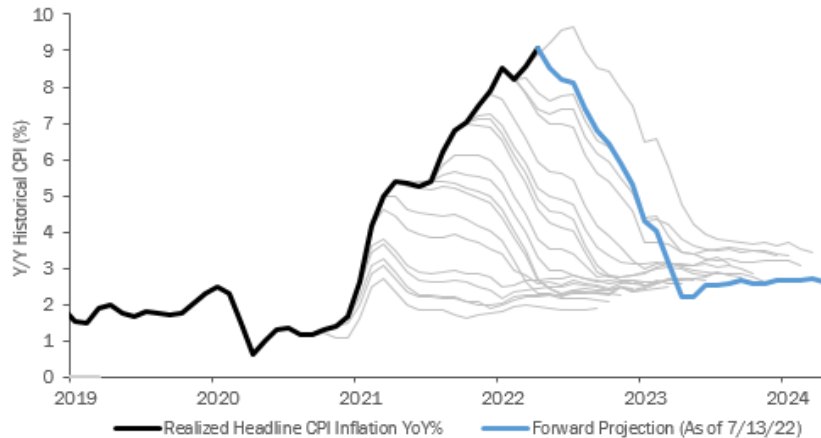


# Key Market Highlights



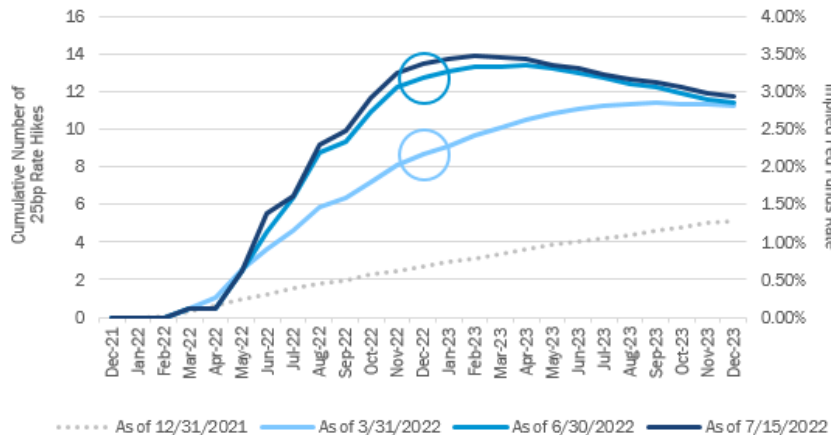
## HIGH INFLATION COMBINED WITH GROWING RECESSION RISK DRIVE ELEVATED VOLATILITY

### I. MARKET EXPECTATIONS OF HIGHER INFLATION<sup>(1)</sup>

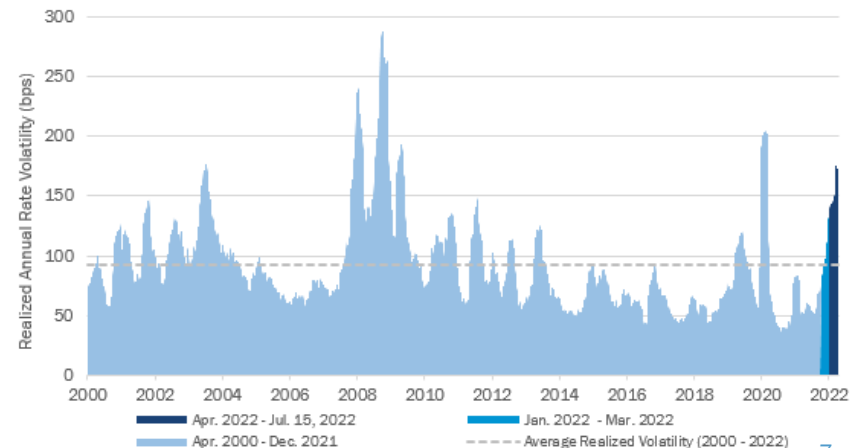


- Inflation continued to outpace expectations in the second quarter. The Consumer Price Index (CPI) grew at its fastest rate since 1981, with year-over-year increases of 8.6% in May and 9.1% in June
- Market expectations reflect the tension between accelerated pace of monetary tightening to combat inflation and rising recessionary fears
  - The Fed has hiked rates by 225 bps in 2022 and is expected to raise rates by another 100 bps by year-end. No hikes are anticipated beyond 2022, reflecting expectations for slower economic growth in 2023
- Bond market volatility, which was elevated in the first quarter, continued to increase and approached multi-decade highs in the second quarter

### II. ADDITIONAL RATE HIKES EXPECTED IN 2022<sup>(2)</sup>



### III. ABOVE-AVERAGE MARKET VOLATILITY<sup>(3)</sup>

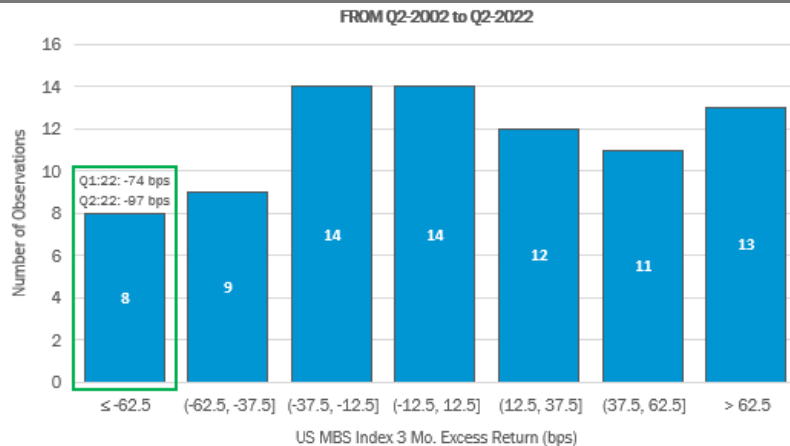


# Key Market Highlights



## INVESTMENT OPPORTUNITIES AMID SPREAD WIDENING AND DIFFERENTIATED PERFORMANCE ACROSS THE STACK

### I. CHALLENGING MARKET ENVIRONMENT IN 2022<sup>(1)</sup>

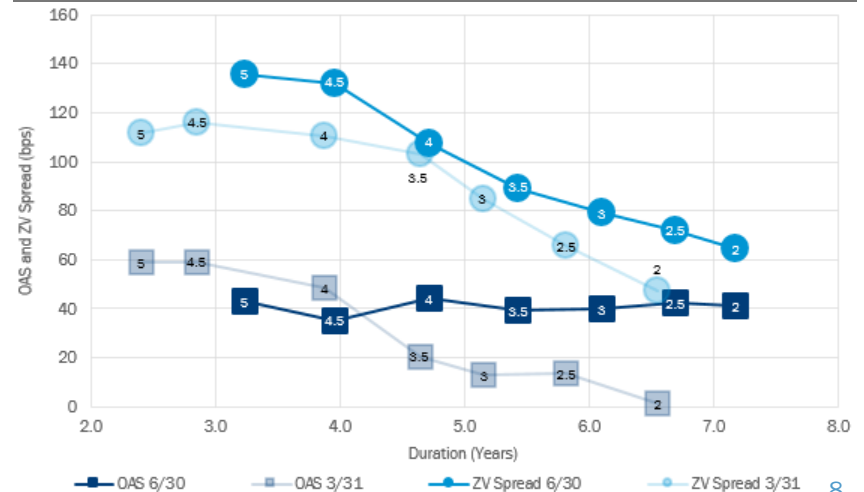


- Heightened volatility and overall risk-off sentiment across asset classes contributed to another quarter of poor RMBS performance
- As measured by the Bloomberg US MBS Index, mortgages had the fourth worst quarter of the past 20 years, while the first half of 2022 was the fourth worst six-month period
- In the third quarter, current coupon (CC) static spreads are approximately 50 bps wider than the historical non-QE average and option-adjusted spreads (OAS) are 14 bps wider
- Low coupon zero volatility spread (ZV) and OAS are similar whereas there is a large difference in the higher coupons

### II. SPREADS HAVE WIDENED BEYOND HISTORICAL AVERAGES<sup>(2)</sup>



### III. VALUATION DIFFERS ACROSS THE COUPON STACK<sup>(3)</sup>







# Book Value Summary

(\$ millions, except per share data)	Q2-2022 Book Value	Q2-2022 Book Value per share	YTD-2022 Book Value	YTD-2022 Book Value per share
<b>Beginning common stockholders' equity</b>	<b>\$ 1,903.0</b>	<b>\$ 5.53</b>	<b>\$ 2,017.7</b>	<b>\$ 5.87</b>
Earnings Available for Distribution, net of tax <sup>(1)</sup>	89.0		164.5	
Dividend declaration - preferred	(13.7)		(27.5)	
Earnings Available for Distribution to common stockholders, net of tax <sup>(1)</sup>	75.3		137.0	
Realized and unrealized gains and losses, net of tax	(161.5)		48.3	
Other comprehensive loss, net of tax	(4.2)		(336.0)	
Comprehensive loss	(90.4)		(150.7)	
Common stock dividends declared	(58.9)		(117.7)	
Other	3.5		7.6	
Issuance of common stock, net of offering costs	0.1		0.4	
<b>Ending common stockholders' equity</b>	<b>\$ 1,757.3</b>	<b>\$ 5.10</b>	<b>\$ 1,757.3</b>	<b>\$ 5.10</b>
Total preferred stock liquidation preference	726.3		726.3	
<b>Ending total equity</b>	<b>\$ 2,483.6</b>		<b>\$ 2,483.6</b>	

- Book value of \$5.10 per common share, resulting in a (4.7)% quarterly return on book value<sup>(2)</sup>
  - Quarterly performance was driven primarily by mortgage spread widening
  - Hedging costs resulting from historically high rate volatility also contributed to the negative returns
- Generated Comprehensive Loss of \$90.4 million, representing an annualized return on average common equity of (19.1)%



# Earnings Available for Distribution

(\$ millions, except per share data)	Q1-2022	Q2-2022	Variance
Interest income	\$ 44.8	\$ 57.0	\$ 12.2
Interest expense	22.3	37.1	(14.8)
Net interest income	22.5	19.9	(2.6)
Servicing income	136.6	157.5	20.9
MSR amortization <sup>(1)</sup>	(67.2)	(81.4)	(14.2)
Interest spread income on interest rate swaps	(0.7)	(4.3)	(3.6)
TBA dollar roll income <sup>(2)</sup>	22.4	57.7	35.3
U.S. Treasury futures income <sup>(3)</sup>	(0.3)	(20.6)	(20.3)
Other derivatives income	0.8	0.3	(0.5)
Total other income	91.6	109.2	17.6
Servicing expenses	24.1	24.1	—
Operating expenses	13.9	14.3	(0.4)
Total expenses	38.0	38.4	(0.4)
Provision for income taxes	0.6	1.7	(1.1)
<b>Earnings Available for Distribution<sup>(4)</sup></b>	<b>\$ 75.5</b>	<b>\$ 89.0</b>	<b>\$ 13.5</b>
Dividends on preferred stock	13.8	13.7	0.1
<b>Earnings Available for Distribution available to common stockholders</b>	<b>\$ 61.7</b>	<b>\$ 75.3</b>	<b>\$ 13.6</b>
<b>Earnings Available for Distribution per weighted average basic common share</b>	<b>\$ 0.18</b>	<b>\$ 0.22</b>	
<b>Earnings Available for Distribution annualized return on average common equity</b>	<b>12.5 %</b>	<b>15.9 %</b>	
Operating expenses, excluding non-cash LTIP amortization and nonrecurring expenses, as a percentage of average equity	2.1 %	2.2 %	

- Second quarter EAD reflects:
  - An increase in interest income driven by investment in up-in-coupon RMBS as well as lower amortization due to slower prepayment speeds
  - Higher interest expense associated with growth in MSR borrowing balances and overall rate increases
  - Increased TBA dollar roll income due to a higher notional balance and a shift to higher coupon TBA, which benefited from roll specialness
  - Reduction in U.S. Treasury futures income as short position increased to hedge lengthening mortgage duration
  - Higher servicing income, net of amortization, driven primarily by a higher average MSR portfolio



# Portfolio Yields and Financing Costs

- Portfolio yield increased 94 bps to 4.39% primarily due to a greater amount of higher coupon available-for-sale securities and higher yields on a larger average MSR portfolio
- Net spread widened by 51 bps as a higher portfolio yield offset increased financing costs. Net spread at June 30, 2022 is estimated at 3.18%<sup>(1)</sup>

(\$ thousands)	Q1-2022			Q2-2022			As of June 30, 2022 <sup>(1)</sup>
Portfolio Asset Type	Average Amortized Cost	Income <sup>(2)</sup>	Average Yield	Average Amortized Cost	Income <sup>(2)</sup>	Average Yield	Average Yield
Available-for-sale securities	\$ 7,313,318	\$ 44,647	2.44%	\$ 7,248,502	\$ 55,399	3.06%	
Mortgage servicing rights <sup>(3)</sup>	1,983,600	45,395	9.15%	2,113,912	52,008	9.84%	
Agency derivatives <sup>(4)</sup>	31,548	853	10.82%	28,663	304	4.24%	
Total portfolio	\$ 9,328,466	\$ 90,895	3.90%	\$ 9,391,077	\$ 107,711	4.59%	
TBAs <sup>(5)</sup>	3,730,450	21,872	2.35%	5,686,796	57,646	4.05%	
Total portfolio, including TBAs	\$ 13,058,916	\$ 112,767	3.45%	\$ 15,077,873	\$ 165,357	4.39%	4.73%
Financing Collateral Type	Average Outstanding Balance	Expense <sup>(6)</sup>	Average Cost	Average Outstanding Balance	Expense <sup>(6)</sup>	Average Cost	Average Cost
Available-for-sale securities	\$ 7,590,560	\$ 4,787	0.25%	\$ 7,012,474	\$ 12,955	0.74%	
Mortgage servicing rights and advances	1,210,160	12,423	4.11%	1,628,474	19,252	4.73%	
Agency derivatives <sup>(4)</sup>	34,920	65	0.74%	27,074	93	1.37%	
Other - unsecured <sup>(7)</sup>	303,665	5,042	6.64%	281,608	4,801	6.82%	
Interest rate swaps <sup>(8)</sup>		741	0.03%		4,267	0.19%	
Total financing	\$ 9,139,305	\$ 23,058	1.01%	\$ 8,949,630	\$ 41,368	1.85%	
TBAs <sup>(5)</sup>	3,730,450	(533)	(0.06)%	5,686,796	(56)	—%	
Total financing, including TBAs	\$ 12,869,755	\$ 22,525	0.70%	\$ 14,636,426	\$ 41,312	1.13%	1.55%
<b>Net Spread</b>			<b>2.75%</b>			<b>3.26%</b>	<b>3.18%</b>

Note: Beginning with the second quarter of 2022, the above presentation of portfolio yields and financing costs includes the implied asset yield and financing benefit/cost of TBAs. First quarter 2022 comparative data has been updated to reflect this change. Refer to the End Notes at the back of this presentation for more information.





# Financing Profile

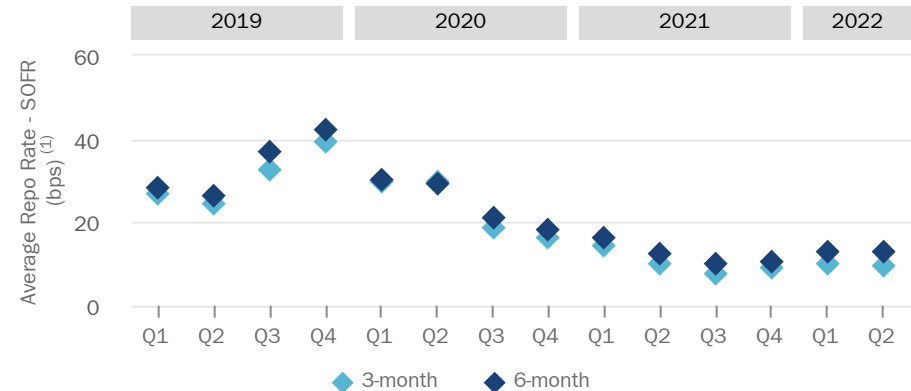
## BALANCE SHEET AS OF JUNE 30, 2022

### STRONG LIQUIDITY POSITION

Agency RMBS \$8.7 billion	Agency repurchase agreements \$7.5 billion
MSR \$3.2 billion	MSR financing \$1.6 billion
Cash & cash equivalents \$0.5 billion	Convertible debt \$0.3 billion
Restricted cash \$0.6 billion	All other liabilities \$1.8 billion
All other assets \$0.7 billion	Preferred equity \$0.7 billion
	Common equity \$1.8 billion

## AGENCY RMBS

- \$7.5 billion of outstanding repurchase agreements with 21 counterparties
- Although repo term rates increased during the quarter in anticipation of more rate hikes, spread to SOFR remains low



## MORTGAGE SERVICING RIGHTS

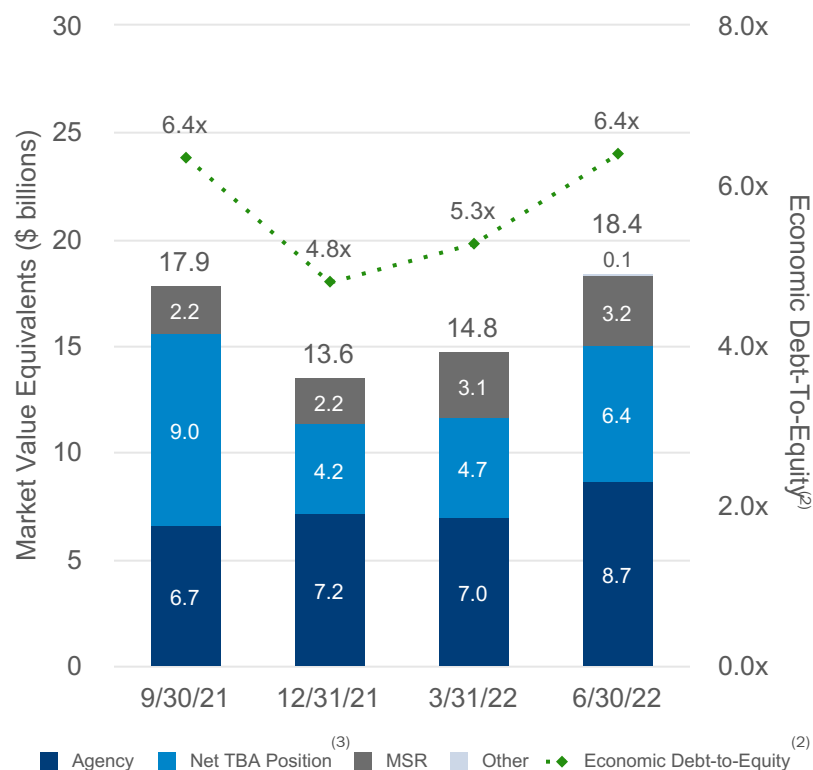
- \$1.2 billion of outstanding borrowings under bilateral MSR asset financing facilities
- \$400 million of outstanding 5-year MSR term notes<sup>(2)</sup>
- \$219 million of unused, committed MSR asset financing capacity
- \$29 million outstanding borrowings and \$171 million of unused, committed capacity for servicing advance receivables



# Quarterly Activity and Portfolio Composition

## PORTFOLIO COMPOSITION<sup>(1)</sup>

At June 30, 2022, \$18.4 billion portfolio  
Includes \$12.0 billion settled positions



## LEVERAGE

- Growth in RMBS and TBA positions brings leverage to a roughly “neutral” level
  - Portfolio leverage increased to 6.4x
  - Average economic debt-to-equity of 5.6x in the second quarter, compared to 4.8x in the first quarter<sup>(2)</sup>

## PORTFOLIO ACTIVITY

- Increased RMBS position by \$1.7 billion in specified pools and \$1.7 billion in TBA<sup>(3)</sup>
- As rates rose, continued to move up in coupon which offered the most value
  - Rotated pool positions up in coupon by adding 4.0-5.0% specified pools at ZV spreads in the 125 to 150 bps area, while reducing 3.0-3.5% pool positions which had ZV spread 50 bps tighter
  - Added to TBA notional in 4.5-5.0% coupon both as basis and coupon swaps vs. 3.5-4.0% TBAs, in order to capture relative value opportunities on the coupon stack
  - Added FN 2.5% pools after material widening during the quarter
- Committed to sell \$20.7 billion UPB of MSR at attractive levels to reallocate capital to RMBS
- While MSR balances were modestly lower, MSR portfolio value rose to \$3.2 billion, reflecting the impact of higher rates and its lower price sensitivity

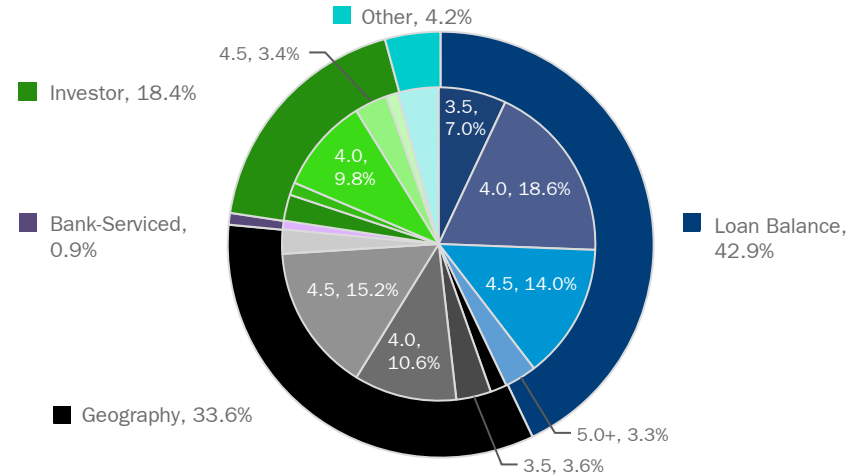
# Specified Pools



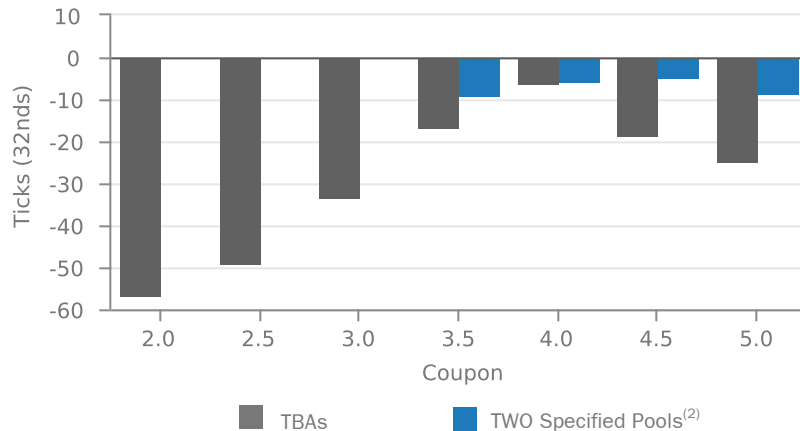
## QUARTERLY HIGHLIGHTS

- Mortgages underperformed across the stack
  - 2.0 through 3.0 coupons underperformed around 30 to 60 ticks, as market participants rotated into higher coupons with rising rates
  - 3.5 and higher coupons, which comprised substantially all of the portfolio, performed comparatively better, underperforming around 5 to 25 ticks
- Specified pool purchases were concentrated in Loan Balance, Investor, and Geography categories, which have the most favorable combination of prepay protection and low payups<sup>(1)</sup>
- Weighted average specified pool portfolio speeds declined 17.9%, to 14.2% in the second quarter, from 17.3% in the first quarter

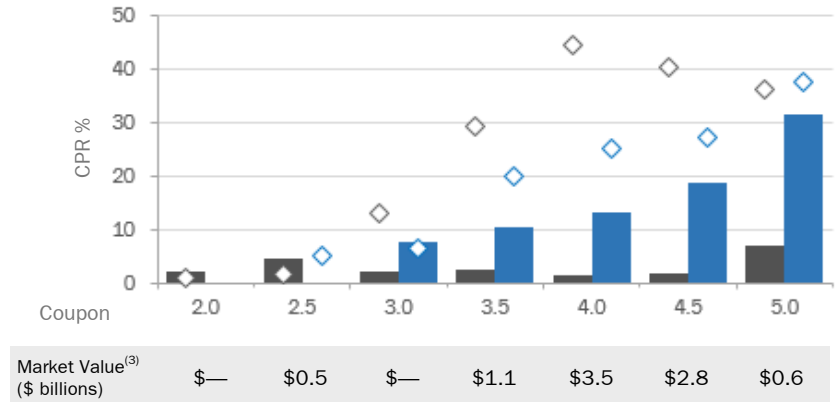
## I. SPECIFIED POOL PORTFOLIO<sup>(1)</sup>



## II. MBS QUARTERLY PERFORMANCE



## III. SPECIFIED POOL PREPAYMENT SPEEDS



Market Value <sup>(3)</sup> (\$ billions)	\$—	\$0.5	\$—	\$1.1	\$3.5	\$2.8	\$0.6
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- TBA (Q2-2022)<sup>(4)</sup>
- TWO Specified Pools (Q2-2022)
- TBA (Q1-2022)<sup>(4)</sup>
- TWO Specified Pools (Q1-2022)



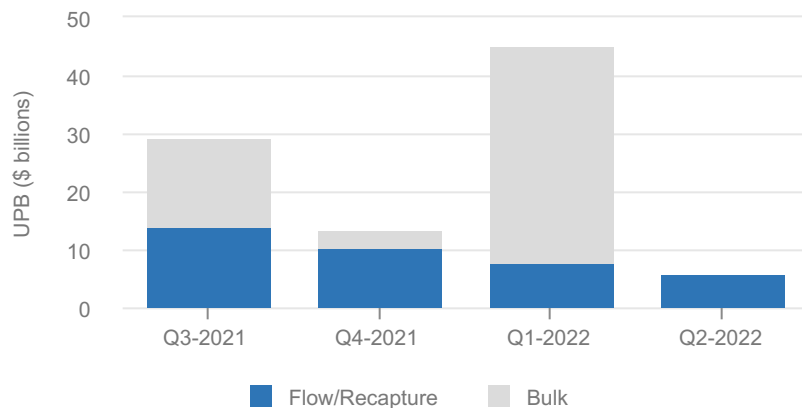


# Mortgage Servicing Rights

## QUARTERLY HIGHLIGHTS

- Supply of MSR in the bulk market was consistent with recent quarters, with \$144 billion being offered. An additional \$56 billion has been offered in July
- Flow channel purchases and recaptured MSR of \$5.7 billion offset a majority of portfolio run-off
- MSR price multiple increased to 5.4x as rates increased and mortgage spreads widened
- MSR speeds declined 30% from 14.2% in the first quarter to 10.0%
- Executed two term sheets to sell a total of \$20.7 billion UPB, with both trades expected to settle in the third quarter

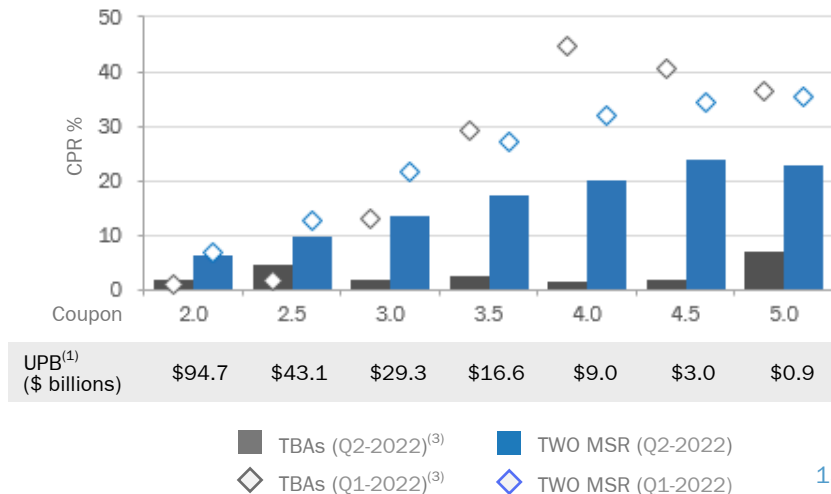
## II. MSR SETTLEMENT ACTIVITY



## I. MSR PORTFOLIO<sup>(1)</sup>

	3/31/2022	6/30/2022
Fair value (\$ millions)	\$ 3,090	\$ 3,226
Price multiple	5.1x	5.4x
UPB (\$ millions)	\$ 232,864	\$ 229,459
Gross coupon rate	3.20%	3.21%
Current loan size (\$ thousands)	\$ 330	\$ 330
Original FICO <sup>(2)</sup>	760	760
Original LTV	71%	71%
60+ day delinquencies	1.1%	0.8%
Net servicing fee (bps)	26.3	26.3
Loan age (months)	26	28
CPR	14.2%	10.0%

## III. 30-YEAR MSR PREPAYMENT SPEEDS

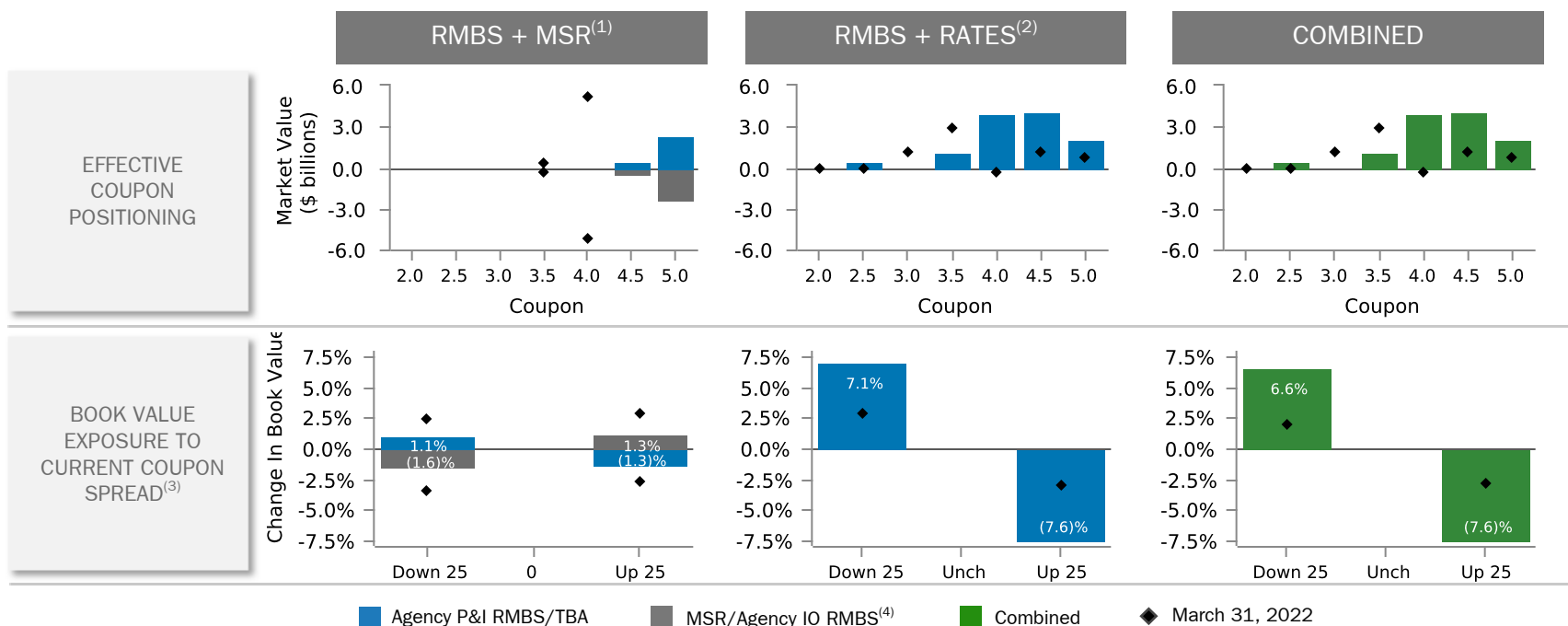


# Agency + MSR Advantage



## GREATER EXPOSURE TO CURRENT COUPON SPREAD

- Overall exposure to a 25 bps widening of mortgages increased from (2.8)% in the first quarter to (7.6)% driven by two factors
  - MSR has less sensitivity to mortgage rates with note rates being far out-of-the-money, hedging 1.3% of book value in a 25 bps mortgage spread widening scenario, down from 2.9% in the first quarter
  - Increased leverage and allocation to RMBS, growing specified pools and TBA by \$3.4 billion



Note: Sensitivity data as of June 30, 2022. The above spread scenario is provided for illustration purposes only and is not necessarily indicative of Two Harbors' financial condition and operating results, nor is it necessarily indicative of the financial condition or results of operations that may be expected for any future period or date.

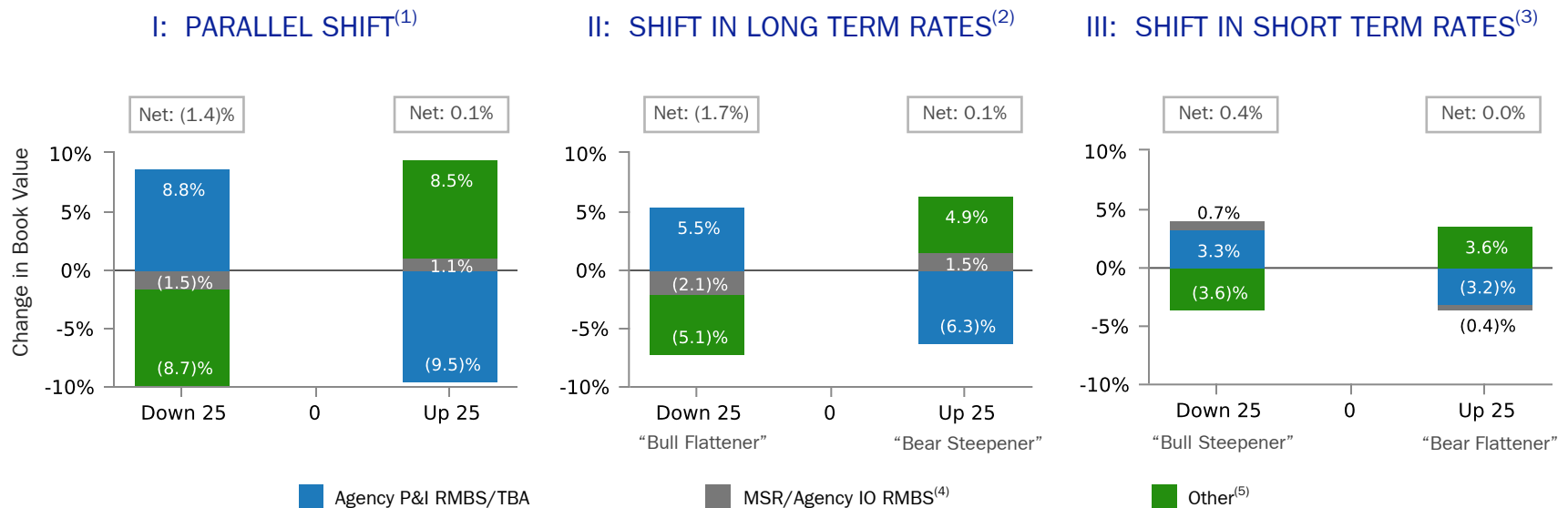
# Risk Positioning



## INTEREST RATE AND CURVE EXPOSURE REMAINS LOW

- During this period of heightened movement in the front end of the yield curve, portfolio exposure is well-hedged
- Greater use of U.S. Treasury futures and swaps due to increased allocation to RMBS and lower interest rate sensitivity of MSR
  - Net interest rate exposure of 0.1% in a parallel shift and 0.0% in a +25 bps bear flattening scenario

### BOOK VALUE EXPOSURE TO CHANGES IN RATES



Note: Sensitivity data as of June 30, 2022. 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. 17



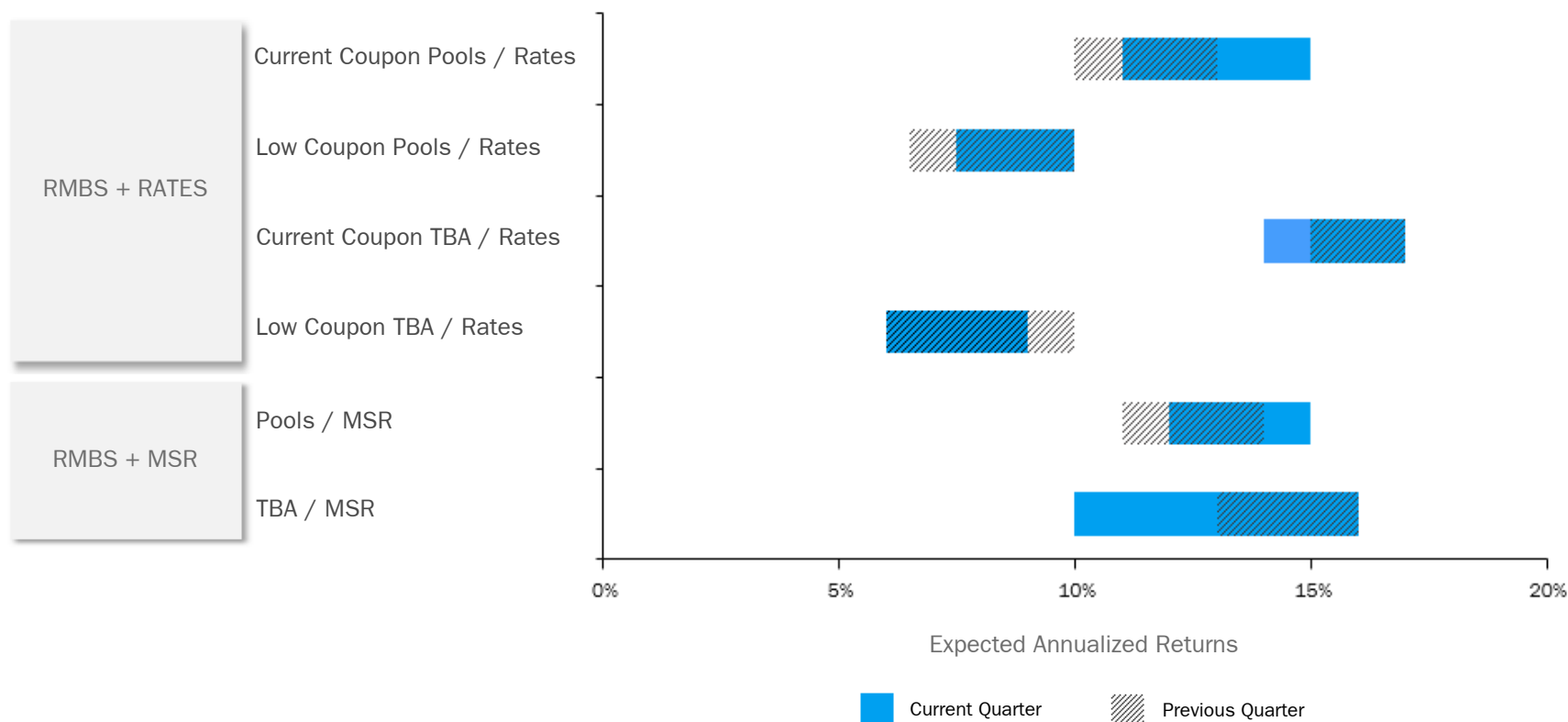
# Two Harbors Outlook



## HISTORICALLY WIDE MORTGAGE SPREADS OFFER ATTRACTIVE OPPORTUNITIES

- Current coupon MBS offers high static spreads and stand to benefit the most when volatility subsides
- TBA static returns no longer have significant roll specialness, with static returns driven primarily by wide spread

### STATIC GROSS LEVERED RETURN OUTLOOK FOR TARGET ASSETS<sup>(1)</sup>



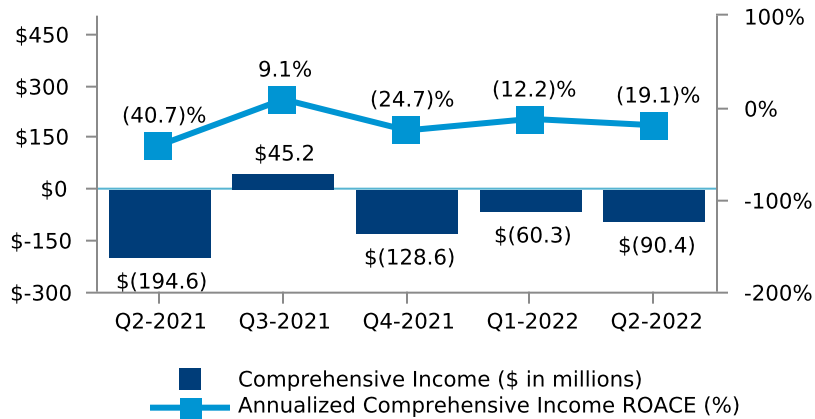
An aerial night photograph of a city grid, likely New York City, showing a dense arrangement of buildings and streets. The image is overlaid with a semi-transparent dark blue rectangle that covers most of the frame. The word "Appendix" is centered in white text within this rectangle.

# Appendix

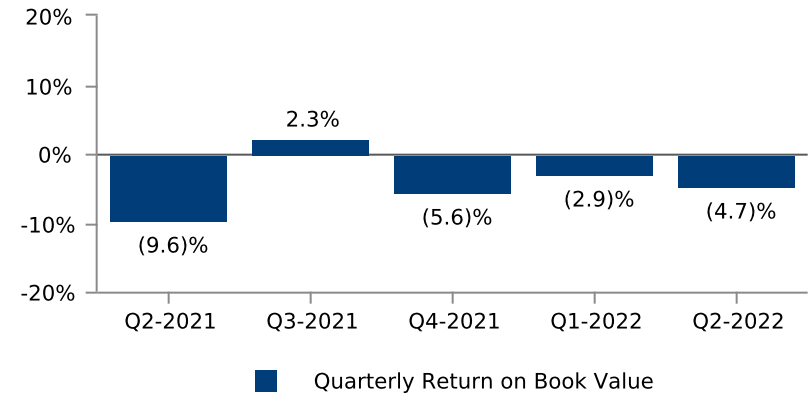
# Financial Performance



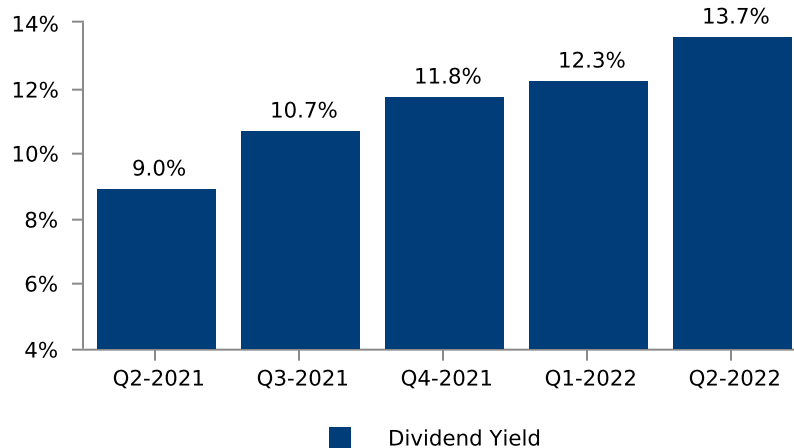
## COMPREHENSIVE (LOSS) INCOME



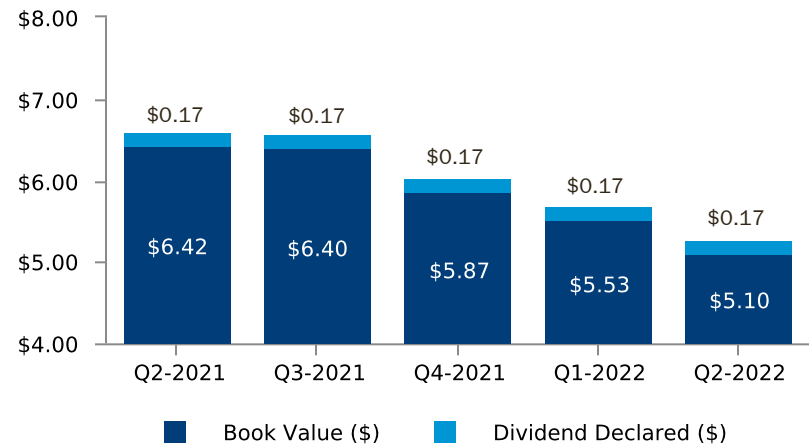
## QUARTERLY RETURN ON BOOK VALUE<sup>(1)</sup>



## DIVIDEND YIELD<sup>(2)</sup>



## BOOK VALUE AND DIVIDEND PER COMMON SHARE<sup>(2)</sup>



# Q2-2022 Operating Performance



	Q2-2022			
\$ millions, except for per common share data)	Earnings Available for Distribution <sup>(1)</sup>	Realized Gains (Losses)	Unrealized MTM	Total
Interest income	\$ 57.0	\$ —	\$ —	\$ 57.0
Interest expense	37.1	—	—	37.1
Net interest income	19.9	—	—	19.9
Loss on investment securities	—	(188.1)	(9.6)	(197.7)
Servicing income	157.5	—	—	157.5
(Loss) gain on servicing asset	(81.4)	—	167.0	85.6
(Loss) gain on interest rate swap and swaption agreements	(4.3)	246.2	(209.2)	32.7
Gain (loss) on other derivative instruments	37.4	(105.5)	(33.2)	(101.3)
Other income	—	—	(0.1)	(0.1)
Total other income (loss)	109.2	(47.4)	(85.1)	(23.3)
Servicing expenses	24.1	(1.1)	—	23.0
Operating expenses	14.3	5.9	—	20.2
Total expenses	38.4	4.8	—	43.2
Income (loss) before income taxes	90.7	(52.2)	(85.1)	(46.6)
Provision for (benefit from) income taxes	1.7	(7.6)	31.8	25.9
<b>Net income (loss)</b>	<b>89.0</b>	<b>(44.6)</b>	<b>(116.9)</b>	<b>(72.5)</b>
Dividends on preferred stock	13.7	—	—	13.7
<b>Net income (loss) attributable to common stockholders</b>	<b>\$ 75.3</b>	<b>\$ (44.6)</b>	<b>\$ (116.9)</b>	<b>\$ (86.2)</b>
Earnings (loss) per weighted average basic common share	\$ 0.22	\$ (0.13)	\$ (0.34)	\$ (0.25)



# Q1-2022 Operating Performance



	Q1-2022			
(\$ millions, except for per common share data)	Earnings Available for Distribution <sup>(1)</sup>	Realized Gains (Losses)	Unrealized MTM	Total
Interest income	\$ 44.8	\$ —	\$ —	\$ 44.8
Interest expense	22.3	—	—	22.3
Net interest income	22.5	—	—	22.5
(Loss) gain on investment securities	—	(53.5)	1.2	(52.3)
Servicing income	136.6	—	—	136.6
(Loss) gain on servicing asset	(67.2)	—	477.8	410.6
(Loss) gain on interest rate swap and swaption agreements	(0.7)	(56.3)	19.0	(38.0)
Gain (loss) on other derivative instruments	22.9	(194.6)	69.9	(101.8)
Other income	—	—	—	—
Total other income (loss)	91.6	(304.4)	567.9	355.1
Servicing expenses	24.1	0.6	—	24.7
Operating expenses	13.9	4.9	—	18.8
Total expenses	38.0	5.5	—	43.5
Income (loss) before income taxes	76.1	(309.9)	567.9	334.1
Provision for (benefit from) income taxes	0.6	(6.9)	55.1	48.8
<b>Net income (loss)</b>	<b>75.5</b>	<b>(303.0)</b>	<b>512.8</b>	<b>285.3</b>
Dividends on preferred stock	13.8	—	—	13.8
<b>Net income (loss) attributable to common stockholders</b>	<b>\$ 61.7</b>	<b>\$ (303.0)</b>	<b>\$ 512.8</b>	<b>\$ 271.5</b>
Earnings (loss) per weighted average basic common share	\$ 0.18	\$ (0.88)	\$ 1.49	\$ 0.79

# GAAP to EAD Reconciliation



Reconciliation of GAAP to non-GAAP Information (\$ thousands, except for per common share data)	Three Months Ended March 31, 2022	Three Months Ended June 30, 2022
<b>Comprehensive loss attributable to common stockholders</b>	<b>\$ (60,322)</b>	<b>\$ (90,379)</b>
Adjustment for other comprehensive loss attributable to common stockholders:		
Unrealized loss on available-for-sale securities	331,845	4,211
<b>Net income (loss) attributable to common stockholders</b>	<b>\$ 271,523</b>	<b>\$ (86,168)</b>
Adjustments to exclude reported realized and unrealized (gains) losses:		
Realized loss on securities	52,394	187,542
Unrealized (gain) loss on securities	(1,166)	9,640
Provision for credit losses	1,114	537
Realized and unrealized gain on mortgage servicing rights	(410,624)	(85,557)
Realized loss (gain) on termination or expiration of interest rate swaps and swaptions	56,264	(246,211)
Unrealized (gain) loss on interest rate swaps and swaptions	(18,964)	209,210
Realized and unrealized loss on other derivative instruments	102,615	101,577
Other realized and unrealized losses	44	73
Other adjustments:		
MSR amortization <sup>(1)</sup>	(67,179)	(81,452)
TBA dollar roll income <sup>(2)</sup>	22,405	57,702
U.S. Treasury futures income <sup>(3)</sup>	(329)	(20,602)
Change in servicing reserves	608	(1,120)
Non-cash equity compensation expense	4,161	3,461
Other nonrecurring expenses	689	2,428
Net provision for income taxes on non-Core Earnings	48,191	24,190
<b>Earnings available for distribution to common stockholders</b>	<b>\$ 61,746</b>	<b>\$ 75,250</b>
Weighted average basic common shares	343,998,511	344,277,723
Earnings available for distribution to common stockholders per weighted average basic common share	\$ 0.18	\$ 0.22

Note: Earnings Available for Distribution, or EAD, is a non-GAAP measure that we define as comprehensive loss attributable to common stockholders, excluding realized and unrealized gains and losses on the aggregate portfolio, 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.

# Agency RMBS Portfolio



	Par Value (\$ millions)	Market Value (\$ millions)	Weighted Average CPR <sup>(1)</sup>	% Prepay Protected <sup>(2)</sup>	Amortized Cost Basis (\$ millions)	Gross Weighted Average Coupon	Weighted Average Age (Months)
<b>30-Year fixed</b>							
2.5% & below	\$ 512	\$ 464	9.9 %	84.2 %	\$ 460	3.4 %	16
3.0%	—	—	— %	— %	—	— %	—
3.5%	1,194	1,157	6.4 %	100.0 %	1,233	4.1 %	10
4.0%	3,490	3,477	9.3 %	100.0 %	3,553	4.6 %	21
4.5%	2,730	2,782	10.7 %	100.0 %	2,812	5.1 %	23
≥ 5.0%	630	655	13.4 %	99.1 %	654	5.9 %	40
	8,556	8,535	9.7 %	99.1 %	8,712	4.7 %	22
<b>Other P&amp;I<sup>(3)</sup></b>	47	50	12.8 %	— %	52	6.5 %	232
<b>IOs and IIOs<sup>(4)</sup></b>	1,884	141	13.7 %	— %	144	4.3 %	95
<b>Total Agency RMBS</b>	<u>\$ 10,487</u>	<u>\$ 8,726</u>		<u>96.9 %</u>	<u>\$ 8,908</u>		

	Notional Amount (\$ millions)	Bond Equivalent Value (\$ millions) <sup>(5)</sup>	Through-the-Box Speeds <sup>(6)</sup>
<b>TBA Positions</b>			
2.5% & below	\$ —	\$ —	4.7 %
3.0%	—	—	2.0 %
3.5%	—	—	2.5 %
4.0%	422	416	1.6 %
4.5%	1,941	1,951	1.8 %
5.0%	3,954	4,030	7.0 %
<b>Net TBA position</b>	<u>\$ 6,317</u>	<u>\$ 6,397</u>	

# Mortgage Servicing Rights Portfolio<sup>(1)</sup>



	Number of Loans	Unpaid Principal Balance (\$ millions)	Gross Coupon Rate	Current Loan Size (\$ thousands)	Loan Age (months)	Original FICO <sup>(2)</sup>	Original LTV	60+ Day Delinquencies	3-Month CPR	Net Servicing Fee (bps)
<b>30-Year Fixed</b>										
≤ 3.25%	317,255	\$ 103,225	2.8%	\$ 384	17	768	71%	0.3%	6.5%	25.8
3.25% - 3.75%	166,905	43,438	3.4%	323	31	754	74%	0.7%	10.6%	26.3
3.75% - 4.25%	121,848	25,817	3.9%	272	54	752	76%	1.3%	14.6%	27.3
4.25% - 4.75%	73,644	13,481	4.4%	247	58	737	77%	2.6%	18.8%	26.3
4.75% - 5.25%	36,249	6,123	4.9%	248	50	725	79%	3.9%	21.0%	27.2
> 5.25%	17,658	2,993	5.6%	273	34	718	80%	4.0%	24.0%	29.4
	733,559	195,077	3.3%	340	29	758	73%	80.0%	10.1%	26.2
<b>15-Year Fixed</b>										
≤ 2.25%	26,448	7,771	2.0%	344	14	777	59%	0.1%	5.2%	25.1
2.25% - 2.75%	49,704	11,528	2.4%	285	18	773	59%	0.1%	7.4%	25.8
2.75% - 3.25%	45,008	7,159	2.9%	216	43	767	61%	0.2%	11.0%	26.2
3.25% - 3.75%	26,269	3,163	3.4%	170	58	757	64%	0.6%	15.2%	27.4
3.75% - 4.25%	11,889	1,191	3.89%	152	57	743	65%	1.0%	16.4%	28.8
> 4.25%	5,462	467	4.5%	135	49	727	66%	1.9%	19.2%	31.2
	164,780	31,279	2.6%	265	29	769	60%	0.3%	9.1%	26.1
<b>Total ARMs</b>	2,905	718	3.1%	321	55	762	68%	1.6%	25.1%	25.4
<b>Total Portfolio</b>	901,244	\$ 227,074	3.2%	\$ 330	29	760	71%	0.8%	10.0%	26.2



# Mortgage Servicing Rights UPB Roll-Forward

\$ millions	Q2-2021	Q3-2021	Q4-2021	Q1-2022	Q2-2022
UPB at beginning of period	\$ 179,014	\$ 185,210	\$ 194,394	\$ 193,771	\$ 229,416
Bulk purchases of mortgage servicing rights	6,548	15,328	3,214	37,197	—
Flow purchases of mortgage servicing rights	16,435	14,019	10,349	7,940	5,720
Sales of mortgage servicing rights	—	(3,634)	9	—	—
Scheduled payments	(1,283)	(1,408)	(1,442)	(1,573)	(1,697)
Prepaid	(15,119)	(14,564)	(11,967)	(8,250)	(6,027)
Other changes	(385)	(557)	(786)	331	(338)
UPB at end of period	\$ 185,210	\$ 194,394	\$ 193,771	\$ 229,416	\$ 227,074

# Financing



\$ millions						
Outstanding Borrowings and Maturities <sup>(1)</sup>	Repurchase Agreements	Revolving Credit Facilities	Term Notes Payable	Convertible Notes	Total Outstanding Borrowings	Percent (%)
Within 30 days	\$ 2,373.3	\$ —	\$ —	\$ —	\$ 2,373.3	25.1 %
30 to 59 days	976.0	—	—	—	976.0	10.3 %
60 to 89 days	2,040.3	—	—	—	2,040.3	21.5 %
90 to 119 days	1,037.0	29.2	—	—	1,066.2	11.3 %
120 to 364 days	1,531.6	—	—	—	1,531.6	16.2 %
One to three years	—	796.6	397.4	—	1,194.0	12.6 %
Three to five years	—	—	—	281.7	281.7	3.0 %
	\$ 7,958.2	\$ 825.8	\$ 397.4	\$ 281.7	\$ 9,463.1	100.0 %
Collateral Pledged for Borrowings	Repurchase Agreements <sup>(2)</sup>	Revolving Credit Facilities <sup>(2)</sup>	Term Notes Payable	Convertible Notes	Total Collateral Pledged	Percent (%)
Available-for-sale securities, at fair value	\$ 7,420.5	\$ —	\$ —	n/a	\$ 7,420.5	66.6 %
Mortgage servicing rights, at fair value	1,089.4	1,589.8	500.0	n/a	3,179.2	28.6 %
Restricted cash	362.9	—	0.2	n/a	363.1	3.3 %
Due from counterparties	111.7	—	—	n/a	111.7	1.0 %
Derivative assets, at fair value	23.3	—	—	n/a	23.3	0.2 %
Other assets (includes servicing advances)	—	34.1	—	n/a	34.1	0.3 %
	\$ 9,007.8	\$ 1,623.9	\$ 500.2	n/a	\$ 11,131.9	100.0 %





# Interest Rate Swaps and Swaptions

INTEREST RATE SWAPS									
Maturities		Notional Amounts (\$B)		Average Fixed Pay Rate		Average Receive Rate		Average Maturity (Years)	
Payers									
2023		\$ 0.3		0.793 %		1.500 %		1.2	
2024		0.5		0.948 %		1.500 %		1.6	
2025		0.7		2.120 %		1.500 %		3.2	
2026		0.5		0.767 %		1.500 %		4.2	
2027 and Thereafter		6.0		2.107 %		1.500 %		8.4	
		\$ 8.0		1.904 %		1.500 %		7.0	
Maturities		Notional Amounts (\$B)		Average Pay Rate		Average Fixed Receive Rate		Average Maturity (Years)	
Receivers									
2023		\$ —		— %		— %		—	
2024		—		— %		— %		—	
2025		—		— %		— %		—	
2026		1.6		1.500 %		0.982 %		4.4	
2027 and Thereafter		5.2		1.526 %		1.619 %		9.3	
		\$ 6.8		1.523 %		1.540 %		8.7	
INTEREST RATE SWAPTIONS									
Option						Underlying Swap			
Swaption	Expiration	Cost (\$M)	Fair Value (\$M)	Average Months to Expiration	Notional Amount (\$M)	Average Fixed Rate <sup>(1)</sup>	Average Term (Years)		
Purchase Contracts:									
Receiver	<6 Months	\$ 1.2	\$ 0.6	1.1	\$ 100.0	2.60 %	10.0		
Sale Contracts:									
Payer	≥6 Months	\$ (35.8)	\$ (82.8)	18.2	\$ (840.0)	1.86 %	10.0		
Receiver	<6 Months	\$ (0.4)	\$ (0.1)	1.1	\$ (100.0)	2.20 %	10.0		
Receiver	≥6 Months	\$ (35.8)	\$ (11.4)	18.9	\$ (840.0)	1.86 %	10.0		

# Futures



Type & Maturity	Notional Amount (\$M)	Carrying Value (\$M) <sup>(1)</sup>	Weighted Average Days to Expiration
U.S. Treasury futures - 2 year	\$ (730)	\$ —	97
U.S. Treasury futures - 5 year	(3,369)	—	97
U.S. Treasury futures - 10 year	(2,988)	—	92
U.S. Treasury futures - 20 year	(413)	—	92
Federal Funds futures - 30 day	(2,000)	—	215
Eurodollar futures - 3 month			
< 1 year	(5,395)	—	174
> 1 and < 2 years	(1,832)	—	549
> 2 and < 3 years	—	—	0
Total futures	\$ (16,727)	\$ —	185



## PAGE 5 - Executive Overview

1. 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.
2. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 23 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.
3. Economic debt-to-equity is defined as total borrowings to fund RMBS, MSR and Agency Derivatives, plus the implied debt on net TBA cost basis, divided by total equity.

## PAGE 6 - Acquisition of RoundPoint Mortgage Servicing

1. Source: RoundPoint Mortgage Servicing Corporation

## PAGE 7 - Key Market Highlights

1. Source: J.P. Morgan; Realized headline CPI inflation versus inflation implied by current and historical inflation swap curves. As of July 13, 2022.
2. Source: Bloomberg, Implied Federal Reserve Hikes from Fed Funds futures pricing. As of July 15, 2022.
3. Source: Bloomberg 30Y FNCL Par Coupon Index (MTGEFNCL Index); current coupon index representing the semi-annually compounded coupon on a hypothetical T+30 day settle, 0-day delay, \$100 priced 30 Year FNCL TBA. As of July 15, 2022.

## PAGE 8 - Key Market Highlights

1. Source: Bloomberg US MBS Index Total Return Value Unhedged USD (LUMSTRUU Index); includes quarterly observations of monthly excess returns (bps), between Q2 2002 and Q2 2022 (4/1/2002 to 6/30/2022).
2. Source: J.P. Morgan DataQuery current coupon OAS (as of July 15, 2022).
3. Source: Two Harbors internal data.

## PAGE 9 - Book Value Summary

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 23 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.
2. 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 10 - 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 23 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

# End Notes (continued)



## PAGE 11 - Portfolio Yields and Financing Costs

1. Portfolio yields on the portfolio held as of June 30, 2022 and projected over the remaining life of the investments. Assumes a static portfolio and, as a result, does not represent a projection of future yields due to excluding portfolio reinvestment.
2. Includes interest income, net of premium amortization/discount accretion, on available-for-sale securities and Agency Derivatives, 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.
3. 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.
4. Represents inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.
5. 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.
6. Includes interest expense and amortization of deferred debt issuance costs on borrowings, 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.
7. Unsecured convertible senior notes.
8. 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.

## PAGE 12 - Financing Profile

1. Source: Bloomberg. Represents the average spread between repo rates and the Secured Overnight Financing Rate (SOFR) over trailing 3-month and 6-month periods between Q1 2019 and Q2 2022 (as of July 15).
2. Balance of 5-year MSR term notes excludes deferred debt issuance costs.

## PAGE 13 - 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 RMBS, MSR and Agency Derivatives, plus the implied debt on net TBA cost basis, 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.



# End Notes (continued)

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## PAGE 14 - Specified Pools

1. Specified pools include securities with implicit or explicit protection including lower loan balances (securities collateralized by loans less than or equal to \$200K 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. Specified pool performance excludes certain coupons in which we were not invested for the full duration of the quarter.
3. Specified pool market value by coupon as of June 30, 2022.
4. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

## PAGE 15 - 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. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

## PAGE 16 - Agency + MSR Advantage

1. RMBS + MSR represents an internally calculated exposure of a synthetic TBA position and the current coupon equivalents of our MSR and Agency IO RMBS.
2. RMBS + RATES represents our investment portfolio after excluding the internally calculated exposure of a synthetic TBA position and the current coupon equivalents of our MSR / Agency IO RMBS.
3. Book value exposure to current coupon represents estimated change in common book value for theoretical parallel shifts in spreads.
4. MSR/Agency IO RMBS includes the effect of unsettled MSR.

## PAGE 17 - Risk Positioning

1. Parallel shift represents estimated change in common book value for theoretical parallel shift in interest rates.
2. Shift in long term rates 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.
3. Shift in short term rates 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. MSR/Agency IO RMBS includes the effect of unsettled MSR.
5. Other includes all other derivative assets and liabilities and borrowings. Other excludes TBAs, which are included in the Agency P&I RMBS/TBA category.

## PAGE 18 - Two Harbors Outlook

1. Source: Company's indicative estimates based on portfolio assumptions and market conditions, for illustrative purposes only. RMBS + Rates and RMBS + MSR assume a debt-to-equity ratio of approximately 8x to 9x and 6x to 7x, respectively.



# End Notes (continued)

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## PAGE 20 - Financial Performance

1. 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.

## PAGE 21 - Q2-2022 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 23 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

## PAGE 22 - Q1-2022 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 23 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

## PAGE 23 - 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 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 protection including lower loan balances (securities collateralized by loans less than or equal to \$200K 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 \$24.1 million of Agency Derivatives and \$117.5 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.





# End Notes (continued)

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## PAGE 27 - Financing

1. Outstanding borrowings have a weighted average of 6.3 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.

## PAGE 28 - Interest Rate Swaps and Swaptions

1. As of June 30, 2022, 63.8% and 36.2% of the underlying swap floating rates were tied to SOFR and 3-Month LIBOR, respectively.

## PAGE 29 - 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.



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