

# An Agency + MSR Mortgage REIT

Fourth Quarter 2022  
Earnings Call

FEBRUARY 9, 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, 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; 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.

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# Financials Overview

## TIGHTENING MORTGAGE SPREADS DROVE INCREASE IN BOOK VALUE



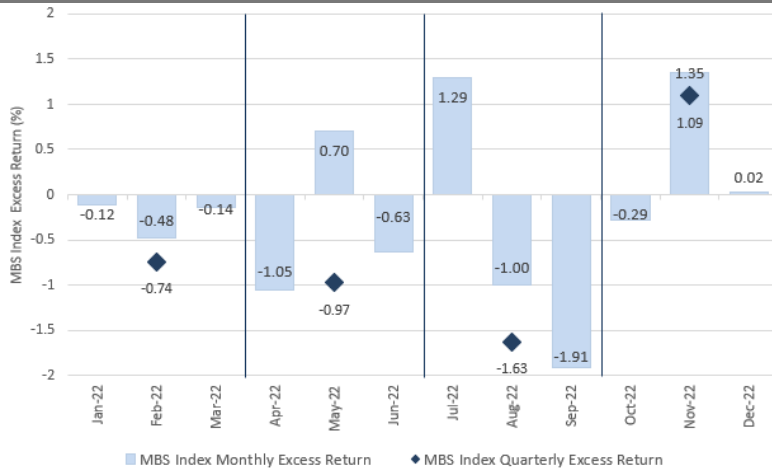
Note: Financial data throughout this presentation is as of or for the quarter ended December 31, 2022, unless otherwise noted. Per share metrics utilize basic common shares as the denominator. In accordance with generally accepted accounting principles, all common share and per common share amounts presented 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 28 through 33 at the back of this presentation for information related to certain financial metrics and defined terms used herein.

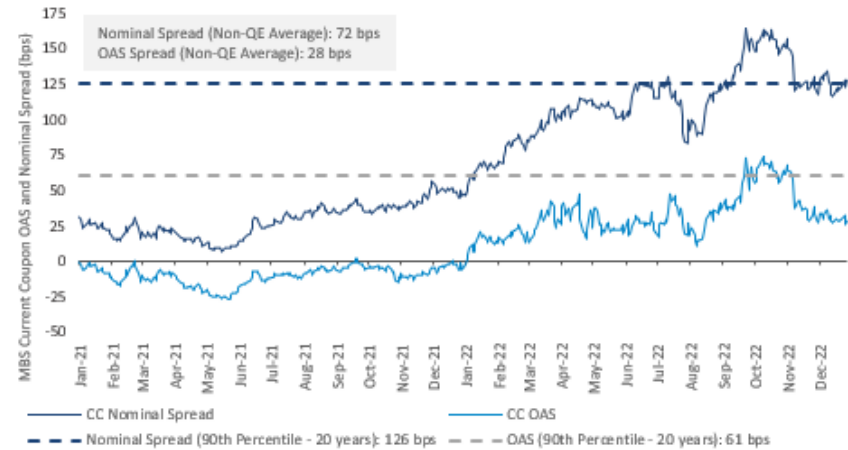
# Key Market Highlights

## STRONG QUARTER FOR MBS PERFORMANCE AS INFLATION FEARS MODERATE

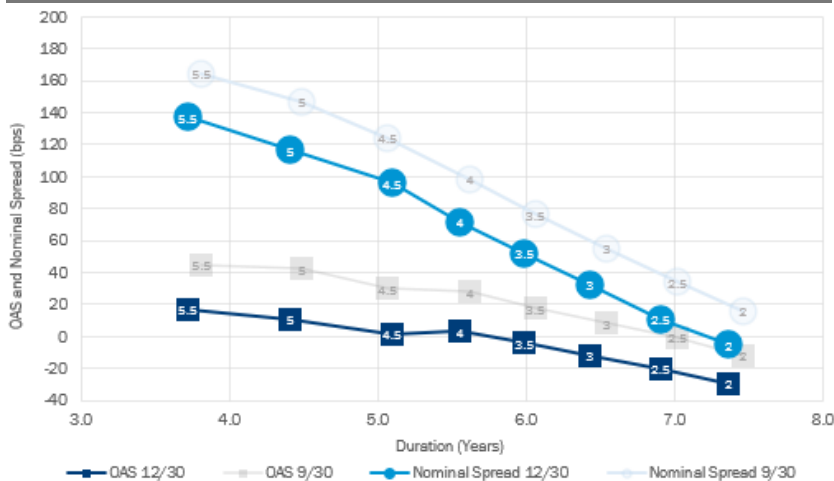
### I. RMBS PERFORMANCE REMAINS VOLATILE<sup>(1)</sup>



### II. RMBS SPREADS PEAKED IN OCTOBER THEN TIGHTENED<sup>(2)</sup>



### III. HIGHER COUPONS HAVE WIDER SPREADS<sup>(3)</sup>



- Interest rate expectations have leveled off; market anticipates Fed Funds Rate of approximately 5% in mid-2023
- Mortgage spreads remain volatile; in Q4-2022 nominal spreads tightened 30 basis points
- Option-adjusted spreads (OAS) are less compelling having tightened to long-term averages as volatility remains high
- Expect rate volatility to moderate in 2023, which could result in tighter spreads and a positive tailwind to book value

# Book Value Summary

(\$ millions, except per share data)	Q4-2022 Book Value	Q4-2022 Book Value per share	YTD-2022 Book Value	YTD-2022 Book Value per share
<b>Beginning common stockholders' equity</b>	<b>\$ 1,418.2</b>	<b>\$ 16.42</b>	<b>\$ 2,017.7</b>	<b>\$ 23.47</b>
Earnings Available for Distribution, net of tax <sup>(1)</sup>	34.6		268.0	
Dividend declaration - preferred	(12.4)		(53.6)	
Earnings Available for Distribution to common stockholders, net of tax <sup>(1)</sup>	22.2		214.4	
Realized and unrealized gains and losses, net of tax	(304.8)		(47.8)	
Other comprehensive income (loss), net of tax	422.7		(465.0)	
Gain on repurchase and retirement of preferred stock	20.1		20.1	
Comprehensive income (loss)	160.2		(278.3)	
Common stock dividends declared	(52.1)		(228.9)	
Other	1.7		11.7	
Repurchase and retirement of preferred stock	2.4		2.4	
Issuance of common stock, net of offering costs	0.8		6.6	
<b>Ending common stockholders' equity</b>	<b>\$ 1,531.2</b>	<b>\$ 17.72</b>	<b>\$ 1,531.2</b>	<b>\$ 17.72</b>
Total preferred stock liquidation preference	652.3		652.3	
<b>Ending total equity</b>	<b>\$ 2,183.5</b>		<b>\$ 2,183.5</b>	

- Book value of \$17.72 per common share, resulting in an 11.6% quarterly economic return on book value<sup>(2)</sup>
  - Quarterly performance driven primarily by mortgage spread tightening
- Generated Comprehensive Income of \$160.2 million, or \$1.85 per weighted average common share
- Repurchased 2,957,950 shares of preferred stock, contributing approximately \$0.26 to common book value and lowering the ratio of preferred stock to total equity<sup>(3)</sup>

# 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 <sup>(1)</sup>
<b>RMBS<sup>(2)</sup></b>					
RMBS (loss) income	\$ (263,686)	\$ 422,672	\$ 158,986	\$ 62,660	\$ 96,326
RMBS funding expense	(73,797)		(73,797)	—	(73,797)
<b>MSR</b>					
MSR income	71,569		71,569	(12,989)	84,558
MSR funding expense	(36,938)		(36,938)	—	(36,938)
<b>Derivatives and other</b>					
Swaps and swaptions	—		—	—	—
TBAs	48,233		48,233	32,040	16,193
Futures	5,016		5,016	11,001	(5,985)
Interest on cash, reverse repurchase agreements and other	15,703		15,703	—	15,703
<b>Expenses</b>					
Operating expenses	(22,951)		(22,951)	(10,836)	(12,115)
Tax expense	(8,480)		(8,480)	(4,498)	(3,982)
<b>(Losses) earnings before convertible debt interest expense</b>	<b>(265,331)</b>	<b>422,672</b>	<b>157,341</b>	<b>77,378</b>	<b>79,963</b>
Convertible debt interest expense	(4,892)		(4,892)	—	(4,892)
<b>(Losses) earnings attributable to Two Harbors</b>	<b>(270,223)</b>	<b>422,672</b>	<b>152,449</b>	<b>77,378</b>	<b>75,071</b>
Dividends on preferred stock	(12,365)		(12,365)	—	(12,365)
Gain on repurchase and retirement of preferred stock	20,149		20,149	20,149	—
<b>(Losses) earnings attributable to common stockholders</b>	<b>\$ (262,439)</b>	<b>\$ 422,672</b>	<b>\$ 160,233</b>	<b>\$ 97,527</b>	<b>\$ 62,706</b>
<b>Annualized return on common equity</b>					<b>16.7%</b>
<b>Quarterly return per weighted average basic common share</b>					<b>\$ 0.73</b>

# Earnings Available for Distribution

(\$ millions, except per share data)	Q4-2022	Q3-2022	Variance
Interest income	\$ 99.3	\$ 94.4	\$ 4.9
Interest expense	115.6	83.4	(32.2)
Net interest (expense) income	(16.3)	11.0	(27.3)
Servicing income	160.9	148.8	12.1
MSR amortization <sup>(1)</sup>	(83.2)	(75.6)	(7.6)
Interest spread income on interest rate swaps	—	0.2	(0.2)
TBA dollar roll income <sup>(2)</sup>	16.2	37.8	(21.6)
U.S. Treasury futures income <sup>(3)</sup>	(6.4)	(16.6)	10.2
Other derivatives income	0.1	0.2	(0.1)
Total other income	87.6	94.8	(7.2)
Servicing expenses	24.6	22.2	(2.4)
Operating expenses	10.4	13.4	3.0
Total expenses	35.0	35.6	0.6
Provision for income taxes	1.7	1.3	(0.4)
<b>Earnings Available for Distribution<sup>(4)</sup></b>	<b>\$ 34.6</b>	<b>\$ 68.9</b>	<b>\$ (34.3)</b>
Dividends on preferred stock	(12.4)	(13.7)	(1.3)
<b>Earnings Available for Distribution available to common stockholders</b>	<b>\$ 22.2</b>	<b>\$ 55.2</b>	<b>\$ (33.0)</b>
<b>Earnings Available for Distribution per weighted average basic common share</b>	<b>\$ 0.26</b>	<b>\$ 0.64</b>	
<b>Earnings Available for Distribution annualized return on average common equity</b>	<b>5.9 %</b>	<b>13.0 %</b>	
Operating expenses, excluding non-cash LTIP amortization and nonrecurring expenses, as a percentage of average equity	1.9 %	2.2 %	

- Fourth quarter EAD reflects:
  - Increased interest income due to higher rates on cash, partly offset by decreased RMBS portfolio size
  - Increased interest expense on higher financing rates and higher average borrowing balances on MSR, partly offset by lower average borrowing balances on RMBS
  - Increased net servicing revenue on higher MSR float income, partly offset by increased amortization due to EAD calculation based on original pricing yield
  - Decreased TBA dollar roll income reflecting a decline in notional balances and lower price drop
  - Spread compression between cost to deliver and implied repo for U.S. Treasury futures
  - Increased servicing expense due to deboarding costs associated with portfolio transfers to RoundPoint Mortgage Servicing Corporation
- EAD is expected to moderate over the next several quarters and may continue to diverge from expected ongoing earnings power<sup>(5)</sup>
  - EAD for assets utilizes concepts of amortized cost and yield-to-maturity at purchase, as opposed to market value and expected return, and are therefore slower to respond to rate and spread changes
  - Financing costs are quick to react to changes in rates; a majority of debt is floating rate and short-term
  - 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 31 bps to 4.92% primarily due to sales of lower coupon available-for-sale securities (AFS) with high unamortized premium, purchases of higher coupon AFS with lower unamortized premium, lower CPR experienced on AFS and higher proportion of total portfolio amortized cost invested in higher yielding assets
- Net spread narrowed by 80 bps due to higher rates on financing

(\$ thousands)	Q4-2022			Q3-2022		
	Average Amortized Cost	Income <sup>(1)</sup>	Average Yield	Average Amortized Cost	Income <sup>(1)</sup>	Average Yield
Portfolio Asset Type						
Available-for-sale securities	\$ 8,118,269	\$ 83,712	4.12%	\$ 9,323,193	\$ 88,472	3.80%
Mortgage servicing rights <sup>(2)</sup>	1,921,462	53,222	11.08%	1,925,372	51,159	10.63%
Agency derivatives <sup>(3)</sup>	21,463	74	1.38%	26,096	153	2.35%
TBAs <sup>(4)</sup>	4,066,675	36,852	3.62%	5,762,726	56,776	3.94%
Total portfolio	\$ 14,127,869	\$ 173,860	4.92%	\$ 17,037,387	\$ 196,560	4.61%
Financing Collateral Type	Average Outstanding Balance	Expense <sup>(5)</sup>	Average Cost	Average Outstanding Balance	Expense <sup>(5)</sup>	Average Cost
Available-for-sale securities	\$ 7,664,204	\$ 68,627	3.58%	\$ 8,951,012	\$ 51,769	2.31%
Mortgage servicing rights and advances	1,917,069	36,938	7.71%	1,718,842	26,579	6.19%
Agency derivatives <sup>(3)</sup>	14,618	155	4.24%	21,601	125	2.31%
Other - unsecured <sup>(6)</sup>	282,363	4,892	6.93%	281,961	4,877	6.92%
Interest rate swaps <sup>(7)</sup>		—	—%		(178)	—%
U.S. Treasury futures <sup>(8)</sup>		6,408	0.18%		16,643	0.40%
TBAs <sup>(4)</sup>	4,066,675	20,659	2.03%	5,762,726	18,944	1.31%
Total financing	\$ 13,944,929	\$ 137,679	3.95%	\$ 16,736,142	\$ 118,759	2.84%
<b>Net Spread</b>			<b>0.97%</b>			<b>1.77%</b>



# Strong Balance Sheet and Liquidity Position

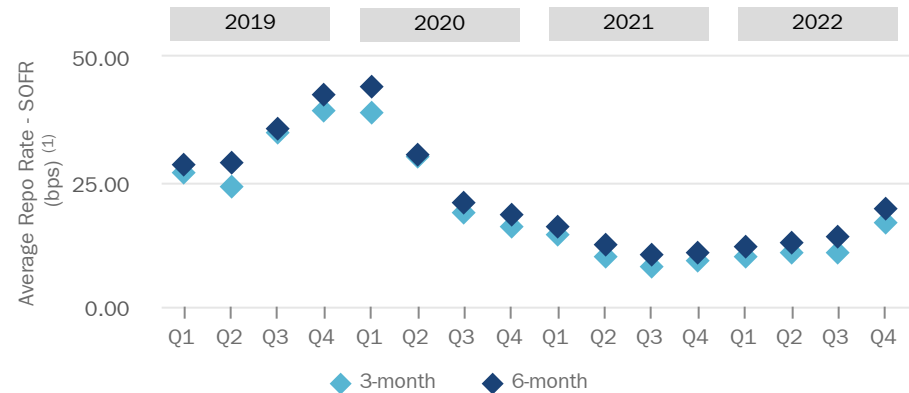


## BALANCE SHEET AS OF DECEMBER 31, 2022

Agency RMBS \$7.7 billion	Agency repurchase agreements \$8.2 billion
MSR \$3.0 billion	MSR financing \$1.8 billion
Cash & cash equivalents \$0.7 billion	Convertible debt \$0.3 billion
Restricted cash \$0.4 billion	All other liabilities \$1.0 billion
All other assets \$1.7 billion	Preferred equity \$0.7 billion
	Common equity \$1.5 billion

## AGENCY RMBS

- \$8.2 billion of outstanding repurchase agreements with 20 counterparties
- Weighted average days to maturity of 48 days



## MORTGAGE SERVICING RIGHTS

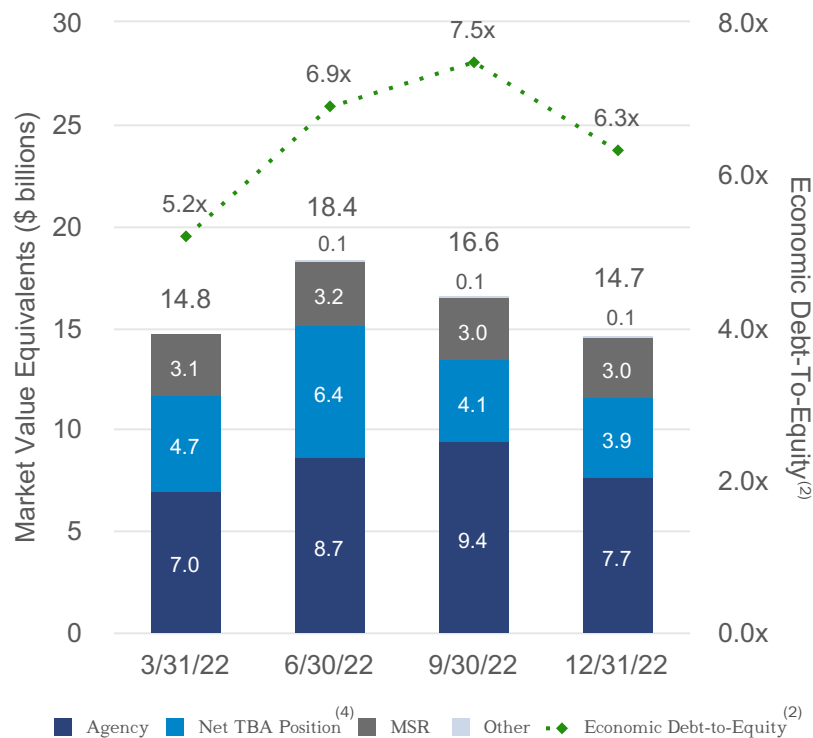
- \$1.4 billion of outstanding borrowings under bilateral MSR asset financing facilities
- \$400 million of outstanding 5-year MSR term notes<sup>(2)</sup>
- \$402 million of unused, uncommitted MSR asset financing capacity
- \$294 million of unused, committed MSR asset financing capacity
- \$24 million outstanding borrowings and \$176 million of unused, committed capacity for servicing advance receivables

# Quarterly Activity and Portfolio Composition



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

At December 31, 2022, \$14.7 billion portfolio  
Includes \$10.8 billion settled positions



## LEVERAGE

- Mortgage spread tightening resulted in lower portfolio leverage: shifted from “overweight” to a more “neutral” position
  - Quarter-end economic debt-to-equity declined to 6.3x from 7.5x due to an increase in book value concurrent with a decline in our Agency RMBS and TBA position<sup>(2)</sup>
  - Average economic debt-to-equity of 6.5x in the fourth quarter, compared to 6.8x in the third quarter<sup>(2)</sup>

## PORTFOLIO ACTIVITY

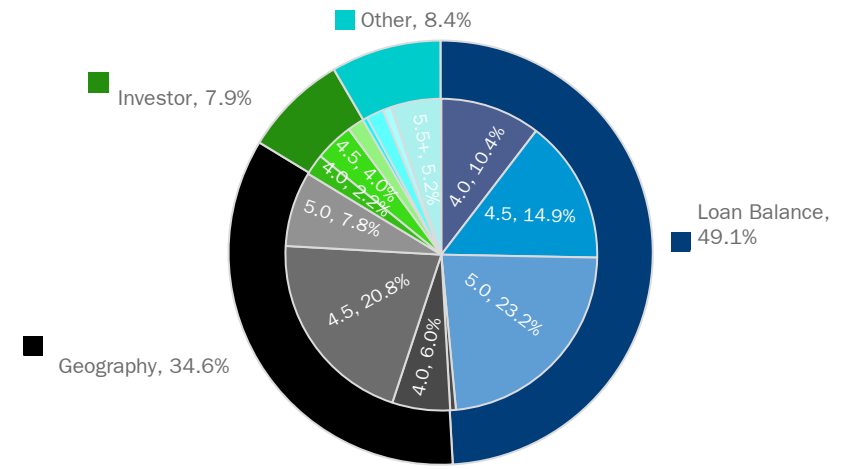
- Reduced RMBS specified pool exposure by \$1.8 billion<sup>(3)</sup> and TBAs by \$0.2 billion<sup>(4)</sup>
  - Decreased balances partially attributed to the repurchase of 2.96 million shares of preferred stock<sup>(5)</sup>
  - Continued to rotate up-in-coupon in specified pools, with net additions to exposure in 4.5-6% coupons versus 3.5-4% coupons
  - Added long position in TBA 5% and 6% coupons to capture attractive relative value opportunity
- Settled \$2.7 billion UPB in MSR recapture and flow sale purchases

# Specified Pools

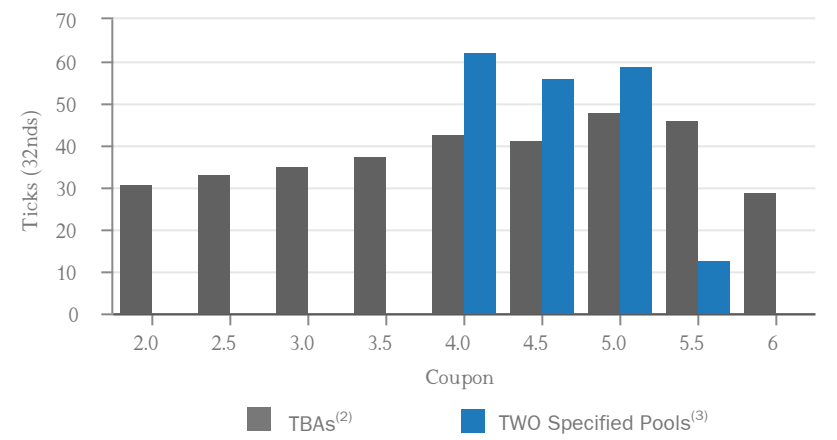
## QUARTERLY HIGHLIGHTS

- Mortgages reversed much of the widening experienced during the third and early part of the fourth quarter
  - Majority of portfolio allocated to 4.0% to 5.0% coupon specified pools, which were the best performers on the stack
- Specified pools outperformed TBA by 10 to 20 ticks
  - Worsening TBA deliverable due to high conforming loan limits improved relative value
  - Longer spread durations in specified pools benefited payups as spreads tightened
- Weighted average specified pool portfolio speeds declined 35.2%, to 5.9% in the fourth quarter, from 9.1% in the third quarter

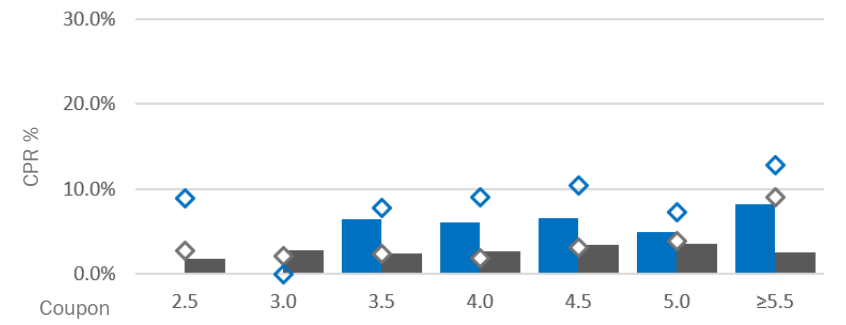
## I. SPECIFIED POOL PORTFOLIO<sup>(1)</sup>



## II. RMBS QUARTERLY PERFORMANCE



## III. SPECIFIED POOL PREPAYMENT SPEEDS



Market Value <sup>(4)</sup> (\$ billions)	2.5	3.0	3.5	4.0	4.5	5.0	≥5.5
TBA (Q4-2022) <sup>(5)</sup>	\$—	\$—	\$—	\$1.4	\$3.0	\$2.4	\$0.4
TWO Specified Pools (Q4-2022)							
TBA (Q3-2022) <sup>(5)</sup>							
TWO Specified Pools (Q3-2022)							

# Mortgage Servicing Rights

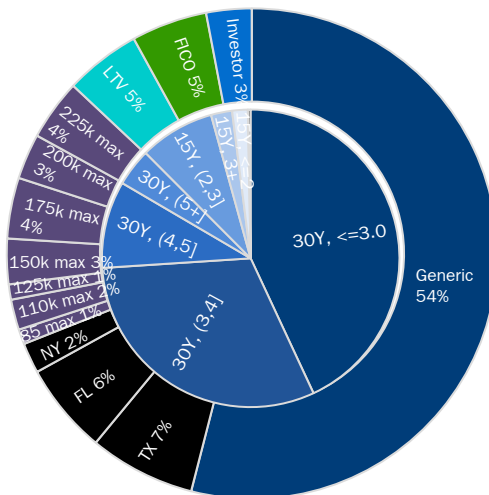
## QUARTERLY HIGHLIGHTS

- \$166 billion UPB of conventional MSR offered in the fourth quarter, bringing the 2022 full year total to just over \$600 billion, a record annual amount
- Flow channel purchases and recaptured MSR of \$2.7 billion offset much of the portfolio runoff experienced during the quarter
- MSR price multiple stable at 5.5x
- MSR speeds declined by 33.3%, to 4.6% from 6.9% in the third quarter
- Executed three MSR transfers totaling approximately 133,000 loans from our subservicing network to RoundPoint Mortgage Servicing Corporation

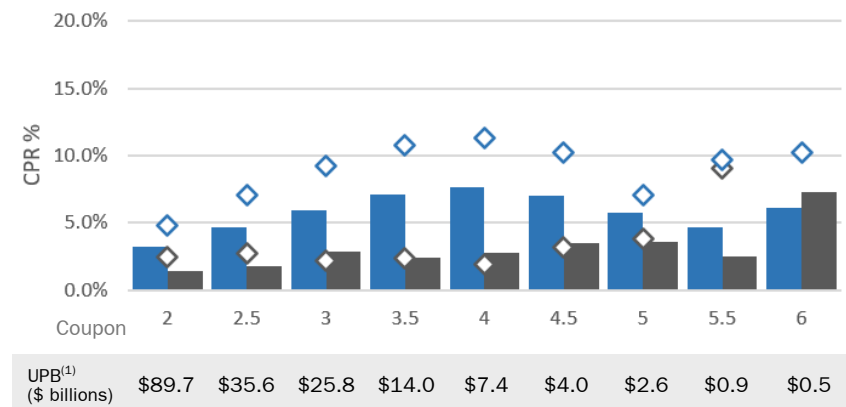
## I. MSR PORTFOLIO CHARACTERISTICS<sup>(1)</sup>

	12/31/2022	9/30/2022
Fair value (\$ millions)	\$ 2,985	\$ 3,022
Price multiple	5.5x	5.5x
UPB (\$ millions)	\$ 206,143	\$ 208,229
Gross coupon rate	3.27%	3.24%
Current loan size (\$ thousands)	\$ 334	\$ 336
Original FICO <sup>(2)</sup>	760	760
Original Loan-to-Value (LTV)	72%	72%
60+ day delinquencies	0.7%	0.7%
Net servicing fee (bps)	26.5	26.4
Loan age (months)	33	30
3-month CPR	4.6%	6.9%

## II. MSR PORTFOLIO<sup>(3)</sup>



## III. 30-YEAR MSR PREPAYMENT SPEEDS



UPB <sup>(1)</sup> (\$ billions)	\$89.7	\$35.6	\$25.8	\$14.0	\$7.4	\$4.0	\$2.6	\$0.9	\$0.5
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- TBAs (Q4-2022)<sup>(4)</sup>
- TWO MSR (Q4-2022)
- ◇ TBAs (Q3-2022)<sup>(4)</sup>
- ◇ TWO MSR (Q3-2022)

# Return Potential and Outlook

## HISTORICALLY WIDE MORTGAGE SPREADS OFFER ATTRACTIVE OPPORTUNITIES BUT RISKS REMAIN

PROSPECTIVE MARKET RETURNS As of December 31, 2022	INVESTED CAPITAL ALLOCATED <sup>(1)</sup>	PORTFOLIO MARKET VALUE (\$ millions)	STATIC MARKET RETURN ESTIMATE <sup>(2)</sup>		
<b>RMBS + MSR</b>					
MSR		2,985			
TBA <sup>(3)</sup>		1,867			
<b>Hedged MSR</b>	<b>53%</b>	<b>4,852</b>	<b>14%</b>	-	<b>16%</b>
<b>RMBS + RATES</b>					
Pools		7,273			
TBA <sup>(3)</sup>		2,042			
Other Securities		549			
<b>Hedged Securities</b>	<b>47%</b>	<b>9,864</b>	<b>14%</b>	-	<b>15%</b>
<b>PROSPECTIVE TWO HARBORS RETURNS</b> As of December 31, 2022		INVESTED CAPITAL (\$ millions)	STATIC TWO HARBORS RETURN ESTIMATE <sup>(4)</sup>		
<b>Total Portfolio Before Expenses</b>			<b>13.9%</b>	-	<b>15.3%</b>
Operating and Tax Expenses <sup>(5)</sup>			(3.2)%	-	(3.2)%
<b>Total Portfolio After Expenses</b>			<b>10.7%</b>	-	<b>12.1%</b>
<b>INVESTED CAPITAL</b>					
Convertible Notes		288	6.2%		
Preferred Equity		652	7.6%		
<b>Common Equity</b>		<b>1,531</b>	<b>12.9 %</b>	-	<b>15.1%</b>
<b>PROSPECTIVE QUARTERLY STATIC RETURN PER BASIC COMMON SHARE<sup>(6)</sup>:</b>			<b>\$0.57</b>	-	<b>\$0.67</b>

### 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

- After including the effects of expenses, convertible notes and preferred equity, our prospective static return estimates are 12.9% - 15.1% 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. Actual results may differ materially.

An aerial night photograph of a city grid, likely New York City, showing building footprints highlighted in white. The scene is illuminated with a blue and purple color palette, with some lights from buildings and streets visible. The word "Appendix" is centered in white text.

# Appendix

# Effective Coupon Positioning

Coupon (%)	TBA Market Price <sup>(1)</sup>	TBA Notional (\$m)	Specified Pools Par Value (\$m) <sup>(2)</sup>	MSR/Agency IO UPB (\$m) <sup>(3)</sup>	Combined (\$m)
2.0%	\$ 81.78	\$ (600)	\$ —	\$ —	\$ (600)
2.5%	\$ 84.97	\$ —	\$ —	\$ —	\$ —
3.0%	\$ 88.04	\$ —	\$ —	\$ —	\$ —
3.5%	\$ 91.10	\$ —	\$ —	\$ —	\$ —
4.0%	\$ 94.03	\$ (400)	\$ 1,460	\$ —	\$ 1,060
4.5%	\$ 96.52	\$ 1,188	\$ 3,087	\$ —	\$ 4,275
5.0%	\$ 98.70	\$ 2,425	\$ 2,440	\$ (803)	\$ 4,062
5.5%	\$ 100.39	\$ 641	\$ 207	\$ (1,085)	\$ (237)
6.0%	\$ 101.64	\$ 572	\$ 195	\$ —	\$ 767
<b>Total</b>		<b>\$ 3,826</b>	<b>\$ 7,389</b>	<b>\$ (1,888)</b>	<b>\$ 9,327</b>

# 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 <sup>(1)</sup>	Other <sup>(2)</sup>	Combined
-25	0	Bull Steepener <sup>(3)</sup>	3.3 %	0.5 %	(3.9)%	(0.1)%
0	-25	Bull Flattener <sup>(4)</sup>	5.0 %	(2.2)%	(3.8)%	(1.0)%
-25	-25	Parallel Shift <sup>(5)</sup>	8.3 %	(1.7)%	(7.7)%	(1.1)%
0	0	Base	— %	— %	— %	— %
+25	+25	Parallel Shift <sup>(5)</sup>	(8.9)%	1.4 %	7.6 %	0.1 %
+25	0	Bear Flattener <sup>(3)</sup>	(3.2)%	(0.2)%	3.8 %	0.4 %
0	+25	Bear Steepener <sup>(4)</sup>	(5.7)%	1.5 %	3.8 %	(0.4)%

## BOOK VALUE EXPOSURE TO CURRENT COUPON SPREAD<sup>(6)</sup>

		% Change in Common Book Value		
Parallel Shift in Spreads (basis points)		Agency P&I RMBS/TBA	MSR/Agency IO RMBS <sup>(1)</sup>	Combined
-25		6.9 %	(1.4)%	5.5 %
0		— %	— %	— %
+25		(7.4)%	1.2 %	(6.2)%

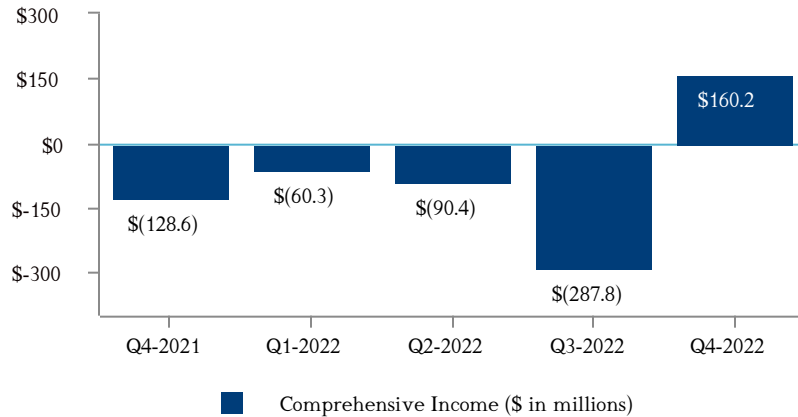
Note: Sensitivity data as of December 31, 2022. The above scenarios are provided for illustration purposes only and is not necessarily indicative of Two Harbors' financial condition and operating results, nor are they necessarily indicative of the financial condition or results of operations that may be expected for any future period or date.



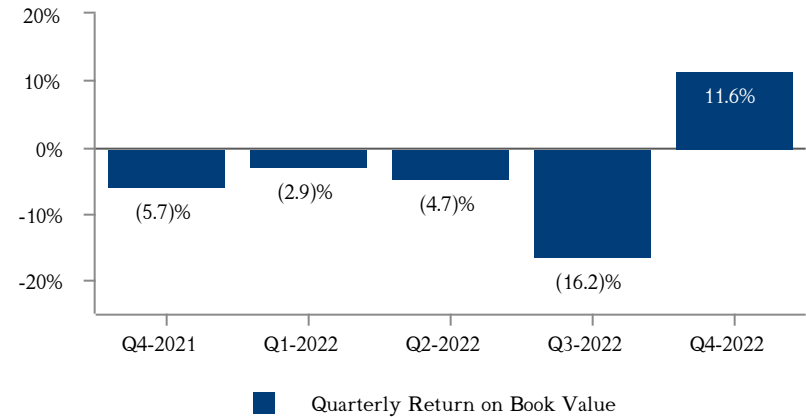
# Financial Performance



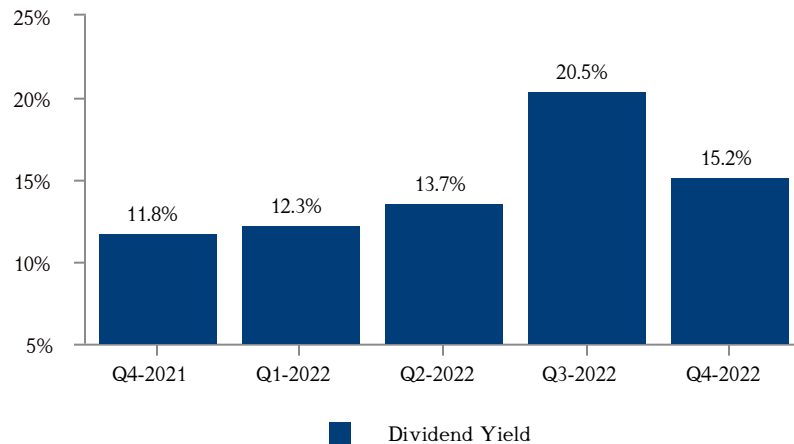
## COMPREHENSIVE (LOSS) INCOME



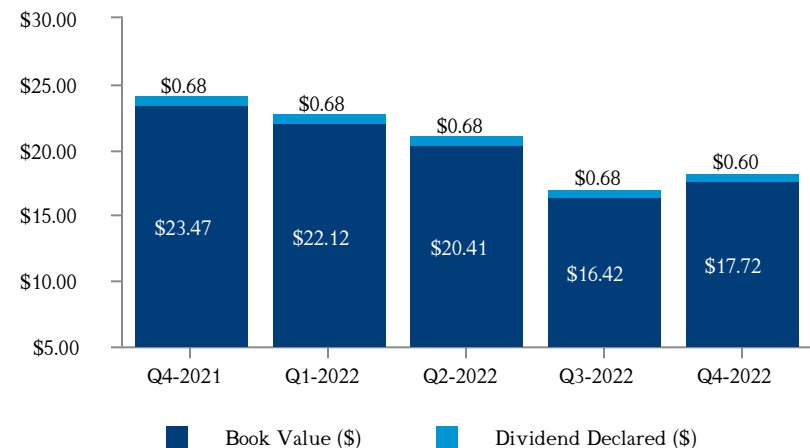
## QUARTERLY ECONOMIC RETURN ON BOOK VALUE<sup>(1)</sup>



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



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



# Q4-2022 Operating Performance



(\$ millions, except for per common share data)	Q4-2022			
	Earnings Available for Distribution <sup>(1)</sup>	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
<b>Net income (loss)</b>	<b>34.6</b>	<b>(228.6)</b>	<b>(76.2)</b>	<b>(270.2)</b>
Dividends on preferred stock	(12.4)	—	—	(12.4)
Gain on repurchase and retirement of preferred stock	—	20.1	—	20.1
<b>Net income (loss) attributable to common stockholders</b>	<b>\$ 22.2</b>	<b>\$ (208.5)</b>	<b>\$ (76.2)</b>	<b>\$ (262.5)</b>
Earnings (loss) per weighted average basic common share	\$ 0.26	\$ (2.42)	\$ (0.88)	\$ (3.04)

# Q3-2022 Operating Performance



(\$ millions, except for per common share data)	Q3-2022			
	Earnings Available for Distribution <sup>(1)</sup>	Realized Gains (Losses)	Unrealized MTM	Total
Interest income	\$ 94.4	\$ —	\$ —	\$ 94.4
Interest expense	83.4	—	—	83.4
Net interest income	11.0	—	—	11.0
Gain (loss) on investment securities	—	16.9	(23.3)	(6.4)
Servicing income	148.8	—	—	148.8
(Loss) gain on servicing asset	(75.6)	76.8	(8.0)	(6.8)
Gain (loss) on interest rate swap and swaption agreements	0.2	(146.8)	181.4	34.8
Gain (loss) on other derivative instruments	21.4	194.4	(56.7)	159.1
Other income	—	—	—	—
Total other income	94.8	141.3	93.4	329.5
Servicing expenses	22.2	(1.1)	—	21.1
Operating expenses	13.4	7.4	—	20.8
Total expenses	35.6	6.3	—	41.9
Income before income taxes	70.2	135.0	93.4	298.6
Provision for income taxes	1.3	4.0	15.7	21.0
<b>Net income</b>	<b>68.9</b>	<b>131.0</b>	<b>77.7</b>	<b>277.6</b>
Dividends on preferred stock	(13.7)	—	—	(13.7)
<b>Net income attributable to common stockholders</b>	<b>\$ 55.2</b>	<b>\$ 131.0</b>	<b>\$ 77.7</b>	<b>\$ 263.9</b>
Earnings per weighted average basic common share	\$ 0.64	\$ 1.50	\$ 0.90	\$ 3.04

# GAAP to EAD Reconciliation



Reconciliation of GAAP to non-GAAP Information (\$ thousands, except for per common share data)	Three Months Ended December 31, 2022	Three Months Ended September 30, 2022
<b>Comprehensive income (loss) attributable to common stockholders</b>	<b>\$ 160,233</b>	<b>\$ (287,808)</b>
Adjustment for other comprehensive (income) loss attributable to common stockholders:		
Unrealized (gain) loss on available-for-sale securities	(422,672)	551,673
<b>Net (loss) income attributable to common stockholders</b>	<b>\$ (262,439)</b>	<b>\$ 263,865</b>
Adjustments to exclude reported realized and unrealized (gains) losses:		
Realized loss (gain) on securities	341,316	(18,265)
Unrealized loss on securities	6,453	23,294
(Reversal of) provision for credit losses	(318)	1,397
Realized and unrealized loss on mortgage servicing rights	64,084	6,720
Realized loss on termination or expiration of interest rate swaps and swaptions	—	146,750
Unrealized gain on interest rate swaps and swaptions	—	(181,378)
Realized and unrealized gain on other derivative instruments	(53,226)	(158,891)
Gain on repurchase and retirement of preferred stock	(20,149)	—
Other realized and unrealized gains	(112)	—
Other adjustments:		
MSR amortization <sup>(1)</sup>	(83,190)	(75,585)
TBA dollar roll income <sup>(2)</sup>	16,193	37,832
U.S. Treasury futures income <sup>(3)</sup>	(6,408)	(16,643)
Change in servicing reserves	713	(1,005)
Non-cash equity compensation expense	1,653	2,355
Other nonrecurring expenses	10,836	5,029
Net provision for income taxes on non-Core Earnings	6,803	19,698
<b>Earnings available for distribution to common stockholders</b>	<b>\$ 22,209</b>	<b>\$ 55,173</b>
Weighted average basic common shares	86,391,405	86,252,104
Earnings available for distribution to common stockholders per weighted average basic common share	\$ 0.26	\$ 0.64

Note: Earnings Available for Distribution, or EAD, is a non-GAAP measure that we define as comprehensive income (loss) 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 Income Excluding Market-Driven Value Changes Reconciliation



Reconciliation of GAAP to non-GAAP Information		Three Months Ended
(\$ thousands, except for per common share data)		December 31, 2022
<b>Comprehensive income (loss) attributable to common stockholders</b>	<b>\$</b>	<b>160,233</b>
Adjustments to exclude market-driven value changes and nonrecurring operating expenses:		
RMBS market-driven value changes <sup>(1)</sup>		(62,660)
MSR market-driven value changes <sup>(2)</sup>		12,989
Realized and unrealized gains on TBAs, excluding TBA dollar roll income <sup>(3)</sup>		(32,040)
Realized and unrealized gains on futures, excluding futures income <sup>(4)</sup>		(11,001)
Other nonrecurring expenses		10,836
Gain on repurchase and retirement of preferred stock		(20,149)
Net provision for income taxes associated with market-driven value changes		4,498
<b>Income Excluding Market-Driven Value Changes</b>	<b>\$</b>	<b>62,706</b>
Weighted average basic common shares		86,391,405
Income Excluding Market-Driven Value Changes per weighted average basic common share	<b>\$</b>	<b>0.73</b>

Note: Income Excluding Market-Driven Value Changes 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, Income Excluding Market-Driven Value Changes includes the realization of portfolio cash flows which incorporates actual prepayments, changes in portfolio accrued interest, servicing income and servicing expenses, and price changes. Price changes are measured daily based on the assumption that spreads, interest rates and volatility factored into the previous day ending fair value are unchanged. This applies to RMBS, MSR and derivatives, as applicable, and is net of all recurring operating expenses and provision for income taxes associated with Income Excluding Market-Driven Value Changes. Income Excluding Market-Driven Value Changes provides supplemental information to assist investors in analyzing the company's results of operations and helps facilitate comparisons to industry peers. Income Excluding Market-Driven Value Changes 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.

# 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>							
4.0%	1,460	1,382	3.9 %	100.0 %	1,474	4.6 %	20
4.5%	3,087	3,006	5.9 %	100.0 %	3,153	5.2 %	25
5.0%	2,440	2,431	6.5 %	100.0 %	2,506	5.7 %	10
≥ 5.5%	412	420	3.9 %	98.8 %	424	6.5 %	36
	7,399	7,239	5.6 %	99.9 %	7,557	5.3 %	19
<b>Other P&amp;I<sup>(3)</sup></b>	383	379	1.3 %	88.5 %	380	5.4 %	30
<b>IOs and IIOs<sup>(4)</sup></b>	1,160	51	8.2 %	— %	67	5.5 %	165
<b>Total Agency RMBS</b>	<b>\$ 8,942</b>	<b>\$ 7,669</b>		<b>98.7 %</b>	<b>\$ 8,004</b>		

	Notional Amount (\$ millions)	Bond Equivalent Value (\$ millions) <sup>(5)</sup>	Through-the-Box Speeds <sup>(6)</sup>
<b>TBA Positions</b>			
2.5% & below	\$ (600)	\$ (492)	2.7 %
3.0%	—	—	2.2 %
3.5%	—	—	2.4 %
4.0%	(400)	(376)	1.9 %
4.5%	1,188	1,149	3.2 %
5.0%	2,425	2,394	3.8 %
≥ 5.5%	1,213	1,225	9.0 %
<b>Net TBA Position</b>	<b>\$ 3,826</b>	<b>\$ 3,900</b>	

# 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%	299,221	\$ 96,929	2.8%	\$ 382	23	768	71%	0.4%	3.3%	25.8
3.25% - 3.75%	140,499	36,531	3.4%	327	38	754	74%	0.8%	5.0%	26.3
3.75% - 4.25%	108,214	22,603	3.9%	272	61	751	76%	1.3%	6.3%	27.3
4.25% - 4.75%	60,343	10,753	4.4%	249	63	736	77%	2.4%	7.8%	26.4
4.75% - 5.25%	31,694	5,736	4.9%	285	44	732	79%	2.9%	7.0%	28.2
> 5.25%	31,046	7,270	5.9%	343	15	736	81%	1.4%	6.4%	33.5
	671,017	179,822	3.4%	344	34	758	73%	0.8%	4.5%	26.5
<b>15-Year Fixed</b>										
≤ 2.25%	23,157	6,522	2.0%	330	20	777	59%	0.1%	3.0%	25.2
2.25% - 2.75%	38,830	8,782	2.4%	277	24	772	59%	0.2%	4.2%	25.9
2.75% - 3.25%	36,300	5,297	2.9%	202	53	766	61%	0.3%	6.6%	26.2
3.25% - 3.75%	21,402	2,307	3.4%	159	65	757	64%	0.6%	8.3%	26.9
3.75% - 4.25%	10,044	910	3.9%	146	61	742	65%	0.8%	9.0%	28.6
> 4.25%	5,648	575	4.7%	193	34	734	66%	1.3%	10.0%	33.5
	135,381	24,393	2.6%	257	35	769	60%	0.3%	5.1%	26.2
<b>Total ARMs</b>	2,627	662	3.6%	330	56	761	68%	1.0%	13.6%	25.5
<b>Total Portfolio</b>	809,025	\$ 204,877	3.3%	\$ 334	34	760	72%	0.8%	4.6%	26.5

# Mortgage Servicing Rights UPB Roll-Forward



<i>\$ millions</i>	Q4-2022	Q3-2022	Q2-2022	Q1-2022	Q4-2021
UPB at beginning of period	\$ 206,614	\$ 227,074	\$ 229,416	\$ 193,771	\$ 194,394
Bulk purchases of mortgage servicing rights	—	—	—	37,197	3,214
Flow purchases of mortgage servicing rights	2,678	4,449	5,720	7,940	10,349
Sales of mortgage servicing rights	—	(19,807)	—	—	9
Scheduled payments	(1,538)	(1,565)	(1,697)	(1,573)	(1,442)
Prepaid	(2,440)	(3,709)	(6,027)	(8,250)	(11,967)
Other changes	(437)	172	(338)	331	(786)
UPB at end of period	\$ 204,877	\$ 206,614	\$ 227,074	\$ 229,416	\$ 193,771



# 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	\$ 2,691.2	\$ —	\$ —	\$ —	\$ 2,691.2	25.9 %
30 to 59 days	2,160.7	—	—	—	2,160.7	20.8 %
60 to 89 days	2,536.6	—	—	—	2,536.6	24.4 %
90 to 119 days	905.5	—	—	—	905.5	8.7 %
120 to 364 days	309.0	200.0	—	—	509.0	4.9 %
One to three years	—	918.8	398.0	—	1,316.8	12.6 %
Three to five years	—	—	—	282.5	282.5	2.7 %
	\$ 8,603.0	\$ 1,118.8	\$ 398.0	\$ 282.5	\$ 10,402.3	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	\$ 7,427.0	\$ —	\$ —	n/a	\$ 7,427.0	63.5 %
Mortgage servicing rights, at fair value	667.2	1,790.8	500.0	n/a	2,958.0	25.3 %
Restricted cash	324.7	—	0.2	n/a	324.9	2.8 %
Due from counterparties	22.1	—	—	n/a	22.1	0.2 %
Derivative assets, at fair value	14.7	—	—	n/a	14.7	0.1 %
Other assets (includes servicing advances)	—	67.8	—	n/a	67.8	0.6 %
U.S. Treasuries <sup>(3)</sup>	877.6	—	—	n/a	877.6	7.5 %
	\$ 9,333.3	\$ 1,858.6	\$ 500.2	n/a	\$ 11,692.1	100.0 %

# Futures



Type & Maturity	Notional Amount (\$M)	Carrying Value (\$M) <sup>(1)</sup>	Weighted Average Days to Expiration
U.S. Treasury futures - 2 year	\$ (562)	\$ —	95
U.S. Treasury futures - 5 year	(3,856)	—	95
U.S. Treasury futures - 10 year	(2,397)	—	90
U.S. Treasury futures - 20 year	101	—	90
Federal Funds futures - 30 day	(7,949)	—	92
Eurodollar futures - 3 month			
< 1 year	(2,957)	—	184
> 1 and < 2 years	(666)	—	489
Total futures	\$ (18,286)	\$ —	122

# Tax Characterization of Dividends in 2022



## FULL YEAR 2022 DISTRIBUTIONS SUMMARY

- Generated REIT taxable income, before dividend distributions and net operating loss deductions, of \$625.7 million in 2022
- 2022 distributions for tax purposes totaled \$289.1 million
  - \$289.1 million consists of distributions to common shares of \$234.1 million and distributions to preferred shares of \$55.0 million
  - Q4 2021 common stock distribution payable to shareholders on January 28, 2022 with a record date of December 29, 2021 is treated as a 2022 distribution for tax purposes
  - Q4 2022 common stock distribution payable to shareholders on January 27, 2023 with a record date of January 5, 2023 is treated as a 2023 distribution for tax purposes
  - No convertible note deemed distributions occurred in 2022
- Utilized net operating loss carryover of \$336.6 million
- No carryover obligation for 2023
- 2022 common distributions are characterized for tax purposes as 100% ordinary dividends
- 2022 preferred distributions are characterized for tax purposes as 100% ordinary dividends

## PAGE 3 - Financials Overview

1. Includes \$10.8 billion in settled positions and \$3.9 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 10 and Appendix slides 22 and 23.
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 RMBS, MSR and Agency Derivatives, plus the implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity. Effective as of December 31, 2022, net payable (receivable) on unsettled RMBS is now included in the calculation for economic debt-to-equity. Prior period metrics have been updated to conform to the current period methodology.
4. Income Excluding Market-Driven Value Changes is a non-GAAP measure. Please Appendix slide 21 for a definition of Income Excluding Market-Driven Value Changes 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 20 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

## PAGE 4 - Key Market Highlights

1. Represents generic MBS Index performance during the quarter. Data as of December 30, 2022.
2. Represents universal mortgage-backed securities (UMBS) TBA spreads as of the dates noted.
3. Source: J.P. Morgan DataQuery. Data as of December 30, 2022.

## PAGE 5 - Book Value Summary

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 20 for a definition of Earnings Available for Distribution 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.
3. Includes 428,549 Series A, 786,846 Series B and 1,742,555 Series C preferred shares.

## PAGE 6 - Results and Return Contributions

1. Income Excluding Market-Driven Value Changes is a non-GAAP measure. Please Appendix slide 21 for a definition of Income Excluding Market-Driven Value Changes and a reconciliation of GAAP to non-GAAP financial information.
2. RMBS includes inverse interest-only Agency RMBS which are accounted for as derivative instruments in accordance with GAAP.

# End Notes (continued)



## PAGE 7 - 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 20 for a definition of Earnings Available for Distribution 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.

## PAGE 8 - Portfolio Yields and Financing Costs

1. 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.
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.

## PAGE 9 - 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 Q4 2022 (as of December 31, 2022).
2. Balance of 5-year MSR term notes excludes deferred debt issuance costs.

# End Notes (continued)



## PAGE 10 - Quarterly Activity and Portfolio Composition

1. For additional detail on the portfolio, see Appendix slides 22 and 23.
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 and net payable (receivable) for unsettled RMBS, divided by total equity. Effective as of December 31, 2022, net payable (receivable) on unsettled RMBS is now included in the calculation for economic debt-to-equity. Prior period metrics have been updated to conform to the current period methodology.
3. Specified pools include securities with implicit or explicit prepayment 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.
4. 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.
5. Includes 428,549 Series A, 786,846 Series B and 1,742,555 Series C preferred shares.

## PAGE 11 - 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 \$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. 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 December 31, 2022.
5. Three month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Credit Suisse, and Citi data.

## PAGE 12 - Mortgage Servicing Rights

1. MSR portfolio based on the loans underlying the MSR reported by servicers 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 servicers 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 13 - 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 15 - Effective Coupon Positioning

1. Represents UMBS TBA market prices as of December 30, 2022.
2. Specified pools include securities with implicit or explicit prepayment 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.
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 16 - 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 17 - 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)



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## PAGE 18 - Q4-2022 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 20 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

## PAGE 19 - Q3-2022 Operating Performance

1. Earnings Available for Distribution, or EAD, is a non-GAAP measure. Please see Appendix slide 20 for a definition of Earnings Available for Distribution and a reconciliation of GAAP to non-GAAP financial information.

## PAGE 20 - 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 21 - GAAP to Income Excluding Market-Driven Value Changes Reconciliation

1. RMBS market-driven value changes refers to the sum of interest income, realized and unrealized gains and losses on RMBS, less the sum of the realization of RMBS cash flows which incorporates actual prepayments, changes in RMBS accrued interest, and price changes. Price changes are measured daily based on the assumption that spreads, interest rates and volatility factored into the previous day ending fair value are unchanged. RMBS 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, servicing income and servicing expenses, and price changes. Price changes are measured daily based on the assumption that spreads, interest rates and volatility factored into the previous day ending fair value are unchanged.
3. TBA dollar roll income is the economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
4. Futures income is the economic equivalent to holding and financing a relevant cheapest-to-deliver note or bond using short-term repurchase agreements.



# End Notes (continued)



## PAGE 22 - 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 \$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 \$15.2 million of Agency Derivatives and \$36.1 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 23 - 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 25 - Financing

1. Outstanding borrowings have a weighted average of 20.9 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 26 - 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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