



# An MSR-Focused REIT

Third Quarter 2024 Earnings Call Presentation

October 29, 2024



## FORWARD-LOOKING STATEMENTS

This presentation of Two Harbors Investment Corp., or TWO, 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, 2023, 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 acquisition of RoundPoint Mortgage Servicing LLC and to manage the risks associated with operating a mortgage loan servicer and originator; our decision to terminate our management agreement with PRCM Advisers LLC and the ongoing litigation related to such termination; 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 to maintain our MSR portfolio; our exposure to legal and regulatory claims; legislative and regulatory actions affecting our business; 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 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’s most recent filings with the Securities and Exchange Commission (SEC). All subsequent written and oral forward-looking statements concerning TWO or matters attributable to TWO or any person acting on its behalf are expressly qualified in their entirety by the cautionary statements above.

This presentation may include industry and market data obtained through research, surveys, and studies conducted by third parties and industry publications. We have not independently verified any such market and industry data from third-party sources. This presentation is provided for discussion purposes only and may not be relied upon as legal or investment advice, nor is it intended to be inclusive of all the risks and uncertainties that should be considered. This presentation does not constitute an offer to purchase or sell any securities, nor shall it be construed to be indicative of the terms of an offer that the parties or their respective affiliates would accept.

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.

# Quarterly Financials Overview



Book Value per Share \$14.93	Common Stock Dividend \$0.45	Economic Return on Book Value <sup>(1)</sup> 1.3%
Comprehensive Income per Share \$0.18	Investment Portfolio <sup>(2)</sup> \$16.4b	Quarter-End Economic Debt-to-Equity <sup>(3)</sup> 7.0x

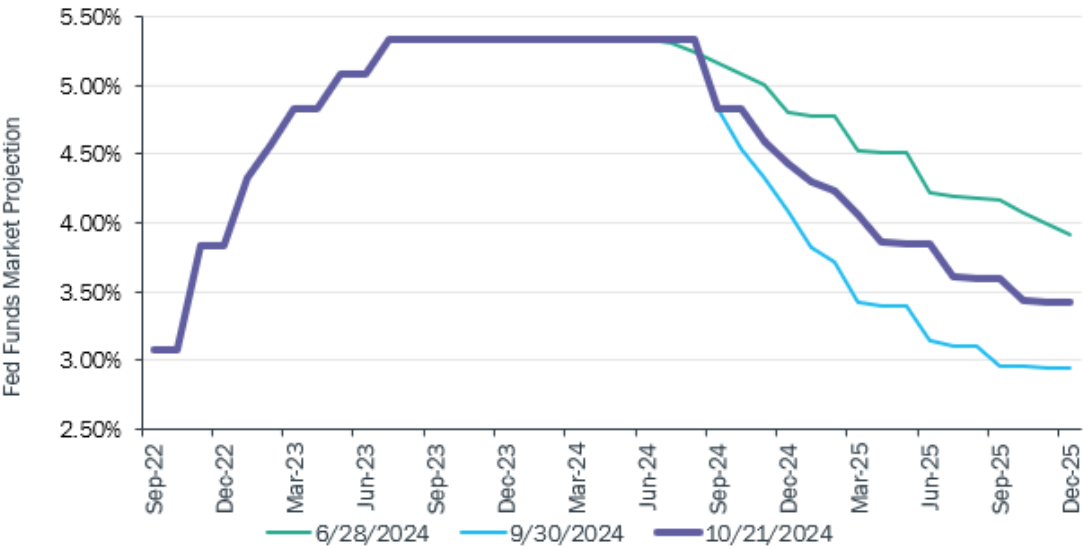
Note: Financial data throughout this presentation is as of or for the quarter ended September 30, 2024, unless otherwise noted. Per share metrics utilize basic common shares as the denominator. The End Notes are an integral part of this presentation. See slides [28](#) through [32](#) at the back of this presentation for information related to certain financial metrics and defined terms used herein.



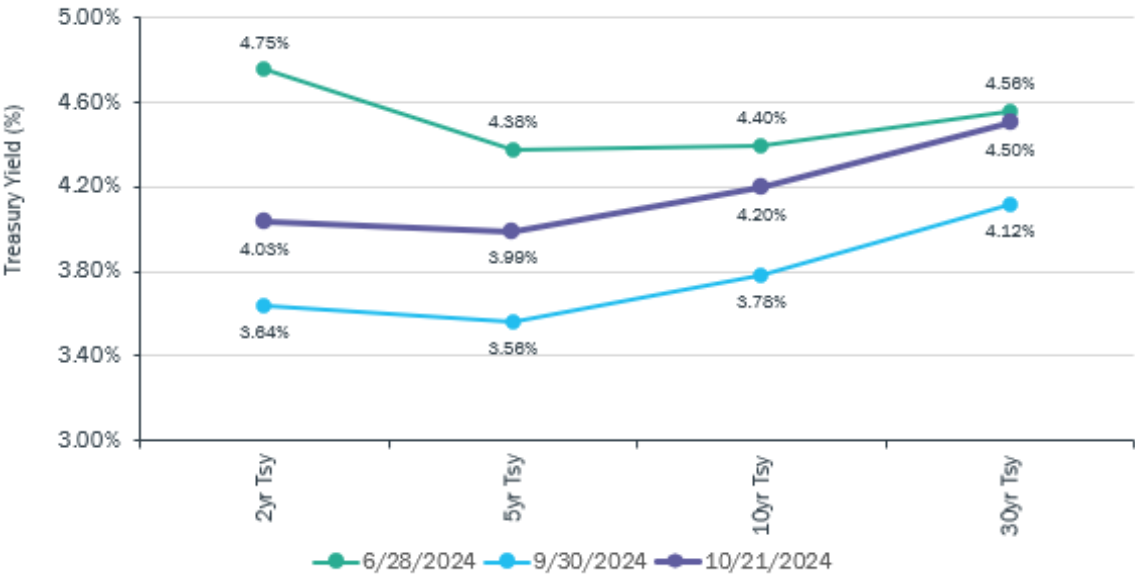
## MARKET SENTIMENT CONTINUES TO RAPIDLY EVOLVE

- The Federal Reserve (Fed) cut the federal funds target rate by 50 basis points at its September meeting and updated their projections to another 50 basis points in cuts for 2024, followed by another 100 basis points of cuts in 2025
- In response, interest rates fell and the yield curve steepened, resulting in the first positively sloped yield curve since 2022
- Post quarter-end, hotter-than-expected data on jobs, inflation and retail sales led the market to take out two cuts, projecting a terminal rate around 3.4%
  - From 9/30/2024 to 10/21/2024, 10-year rates gave back approximately two-thirds of the third quarter's decline, rising 42 basis points to 4.20%, while 2-year rates rose 39 basis points to 4.03% during the same time period

### I. FED FUND RATE EXPECTATIONS<sup>(1)</sup>



### II. QUARTERLY YIELD CURVE CHANGE<sup>(2)</sup>





**TWO + RoundPoint  
Benefits**

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**Cost Efficiencies**

Focused on additional operational efficiencies to deliver lower cost-to-service per loan

**Additional Income**

Subservicing, direct-to-consumer originations, and ancillary products offer new sources of income

**Hedges Portfolio**

Protects value of TWO's MSR portfolio when interest rates decline and refinances increase

**Servicing Platform  
Highlights**

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**\$212b**  
Serviced UPB

**861,000**  
Loans Serviced

**Direct-to-Consumer Originations  
Highlights**

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**Over \$34.7m UPB**  
in Originations Pipeline<sup>(1)</sup>

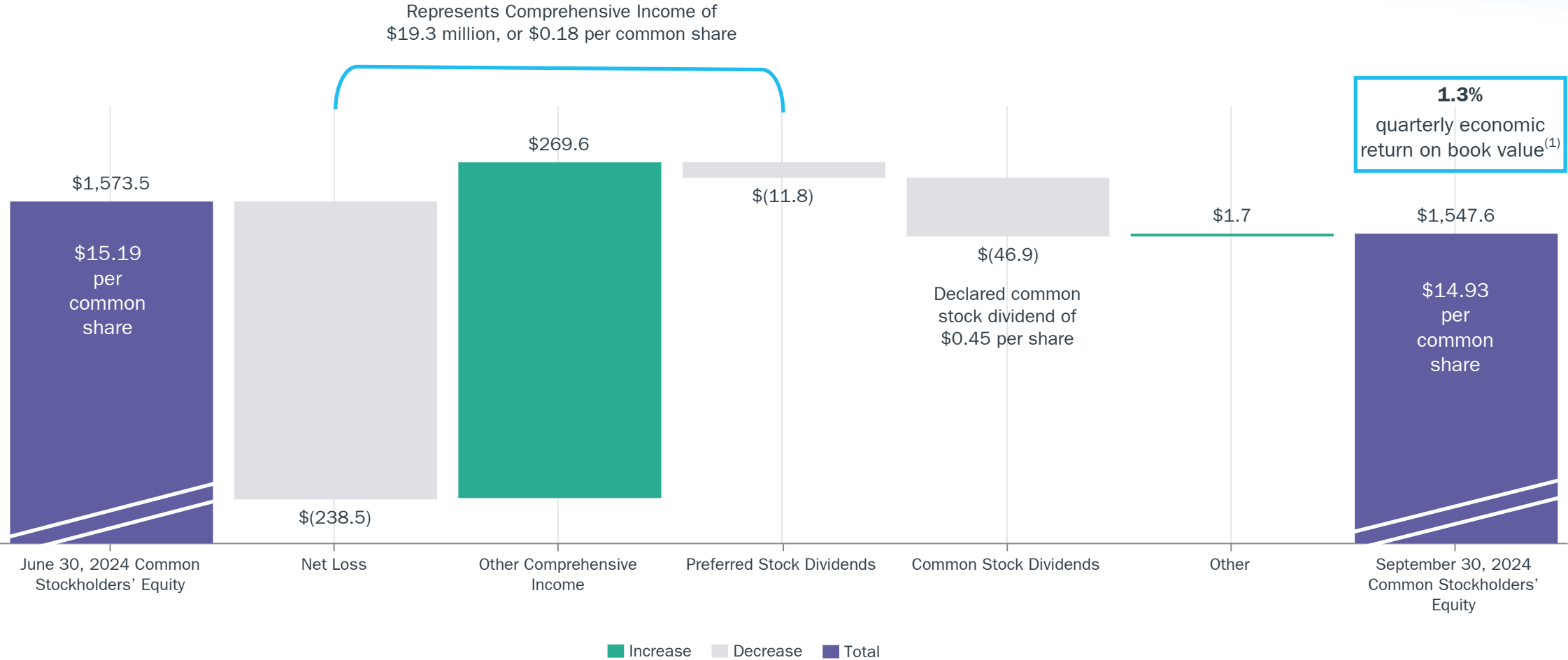
**\$22.4m UPB**  
Funded First Lien Loans

**\$7.5m UPB**  
Brokered Second Lien Loans

# Book Value Summary

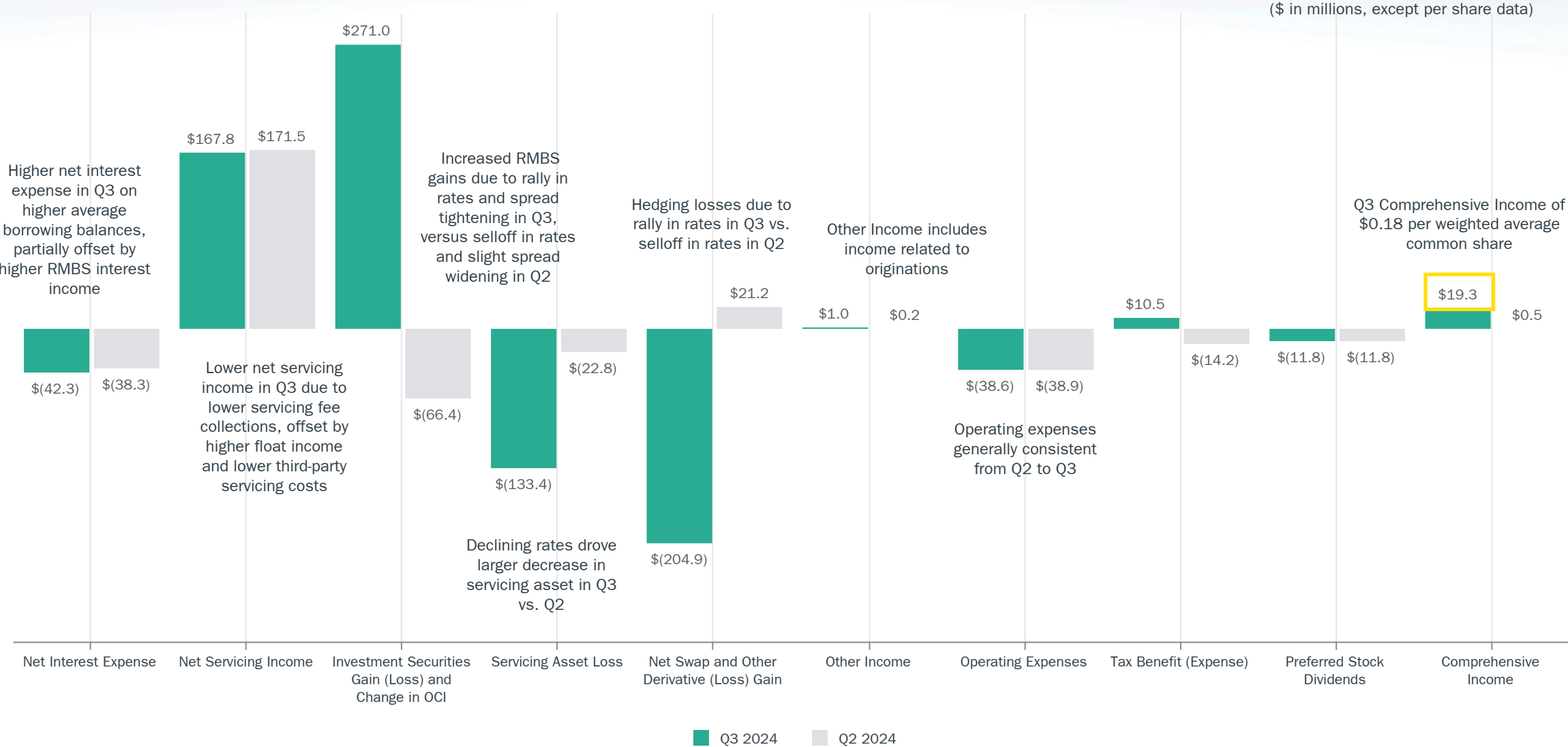


(\$ in millions, except per share data)





# Comprehensive Income Summary



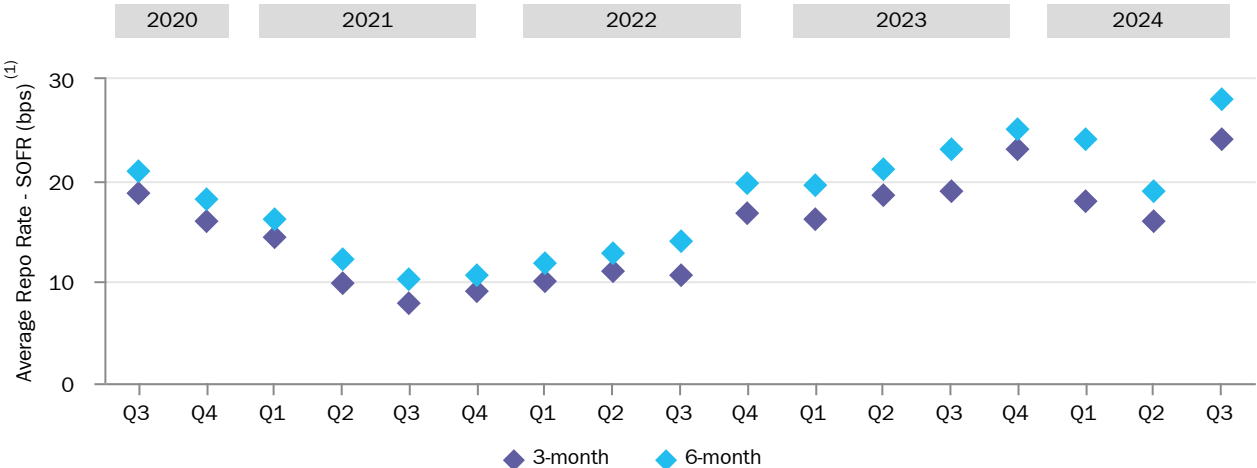


## BALANCE SHEET AS OF SEPTEMBER 30, 2024

Agency RMBS \$8.5 billion	Agency RMBS repurchase agreements \$8.1 billion
MSR \$2.9 billion	MSR financing \$1.6 billion
	Convertible debt \$0.3 billion
	All other liabilities \$0.7 billion
	Preferred equity \$0.6 billion
Cash & cash equivalents \$0.5 billion	Common equity \$1.5 billion
All other assets \$0.9 billion	

## AGENCY RMBS

- \$8.1 billion of outstanding repurchase agreements with 18 counterparties
- Weighted average days to maturity of 78 days



## MORTGAGE SERVICING RIGHTS

- \$1.6 billion of outstanding borrowings under bilateral MSR asset financing facilities
- \$610 million of unused MSR asset financing capacity; \$60 million committed and \$550 million uncommitted
- \$59 million outstanding borrowings and \$91 million of unused, committed capacity for servicing advance receivables

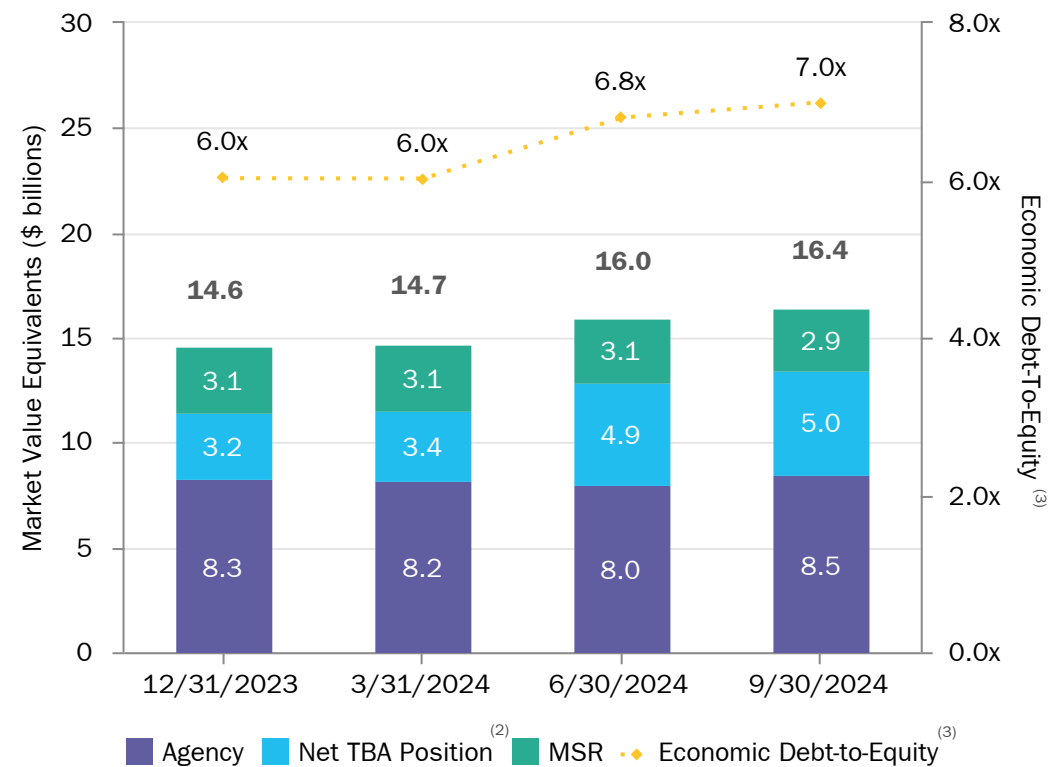


# Portfolio Composition and Risk Positioning

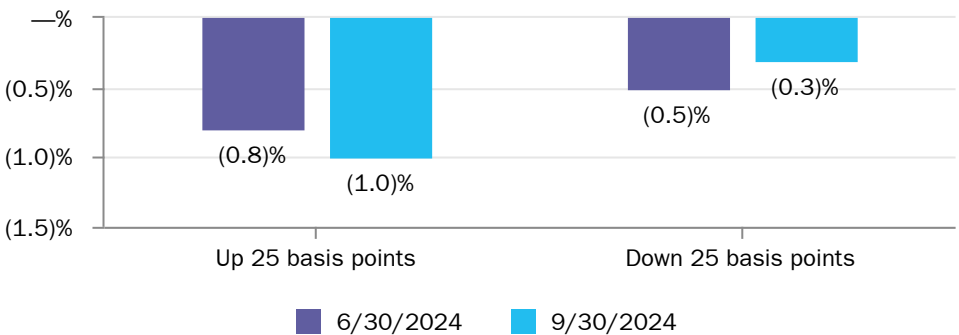


## I. PORTFOLIO COMPOSITION<sup>(1)</sup>

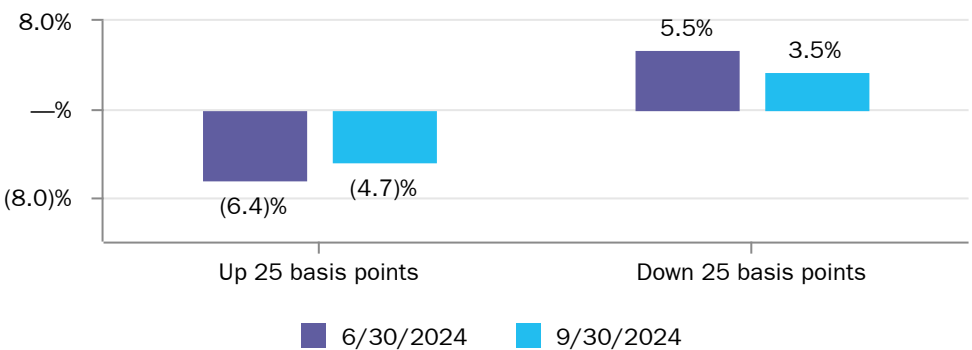
At September 30, 2024, \$16.4 billion portfolio  
Includes \$11.4 billion settled positions



## II. INTEREST RATE EXPOSURE<sup>(4)</sup>



## III. MORTGAGE SPREAD EXPOSURE<sup>(5)</sup>

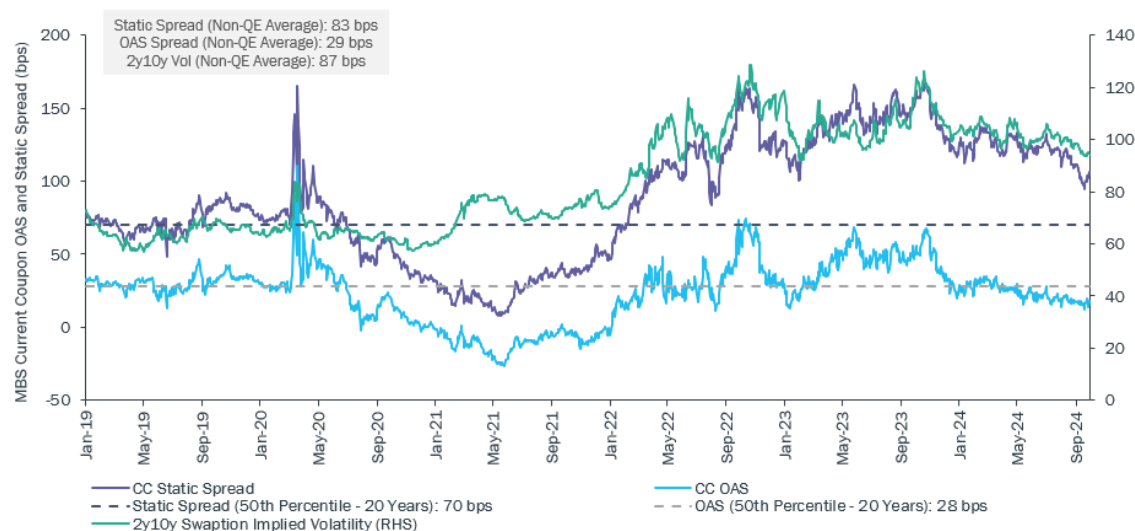


Note: Sensitivity data as of September 30, 2024. The above scenarios are provided for illustration purposes only and are not necessarily indicative of TWO's financial condition and operating results, nor are they necessarily indicative of the financial condition or results of operations that may be expected for any future period or date. See Slide 17 in the Appendix for more information on our risk positioning.

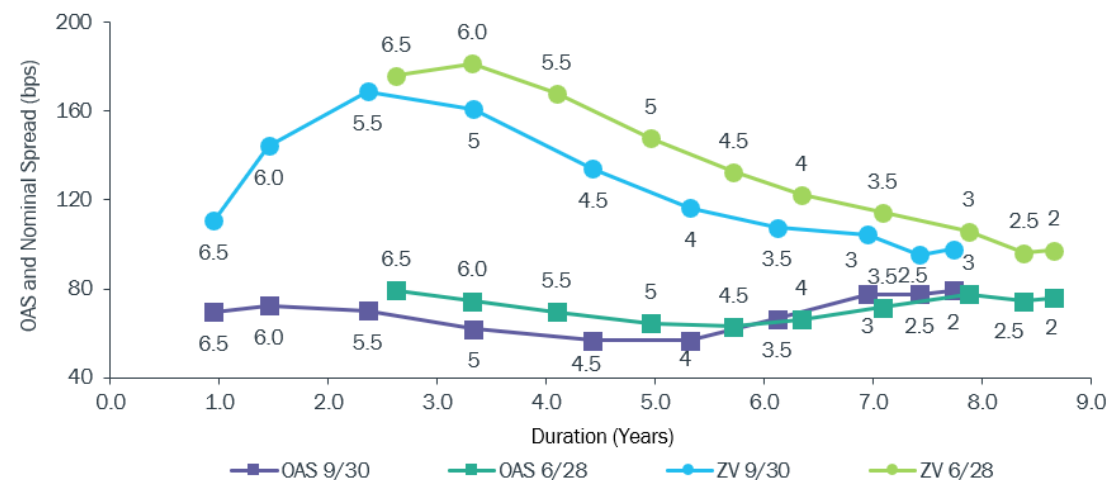
## AGENCY SPREADS TIGHTEN AS THE FED CUTS AND VOLATILITY DECLINES

- Nominal current coupon spreads tightened by 20 basis points, tracking the decline in implied volatility, to the low end of the range for 2024
- Nominal spreads and implied volatility remain above the average of their long-term, non-QE levels
- The option-adjusted spread (OAS) for current coupon tightened to 18 basis points, below its long-term average of 29 basis points and tight for this level of volatility
- With OAS at these levels, future spread tightening will need to be driven by increased demand and/or further declines in volatility
- The nominal spread curve remains steep, while the OAS curve remains flat; belly coupons, like 4.5s and 5.0s, are the richest part of the stack

### I. NOMINAL RMBS SPREADS REMAIN ATTRACTIVE<sup>(1)</sup>



### II. NOMINAL SPREAD CURVE IS STEEP, OAS CURVE FLAT<sup>(2)</sup>



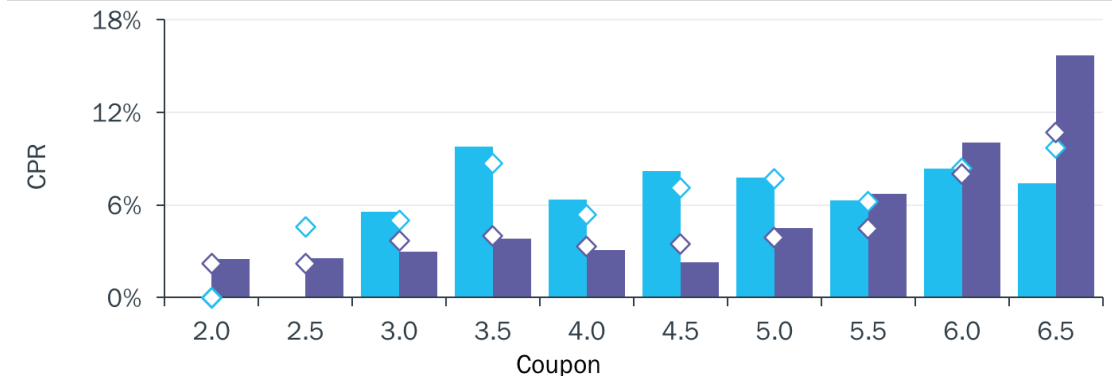
## QUARTERLY HIGHLIGHTS

- Hedged performance varied across coupons with lower, longer-duration coupons outperforming and higher, shorter-duration coupons underperforming
- Overall specified pools outperformed TBAs, with better performance from higher coupons as prepayment risk increased<sup>(1)</sup>
- Shifted about \$3.8 billion in TBA exposure from 5.5s to 6.5s into 4.5s and 5s as MSR current coupon exposure migrated to those coupons
- 30-Year mortgage rates fell by about 75 basis points over the quarter into the low 6% area, leading to material increases in speeds for 6.5s and above
- Weighted average specified pool portfolio prepayment speed of 7.6%, compared to 7.2% in the second quarter<sup>(1)</sup>

### I. RMBS QUARTERLY PERFORMANCE



### II. SPECIFIED POOL PREPAYMENT SPEEDS



Market Value <sup>(4)</sup> (\$ billions)	\$—	\$—	\$0.20	\$0.06	\$0.58	\$2.16	\$1.81	\$1.19	\$1.12	\$0.78
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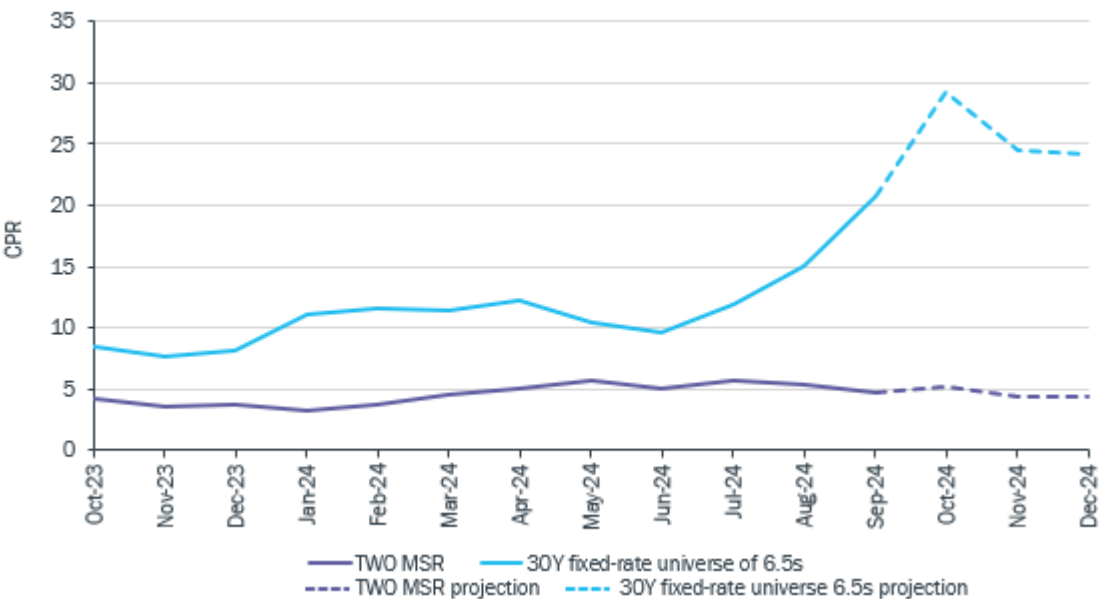
- TBAs (Q3-2024)<sup>(5)</sup>
- TWO Specified Pools (Q3-2024)
- ◇ TBAs (Q2-2024)<sup>(5)</sup>
- ◇ TWO Specified Pools (Q2-2024)



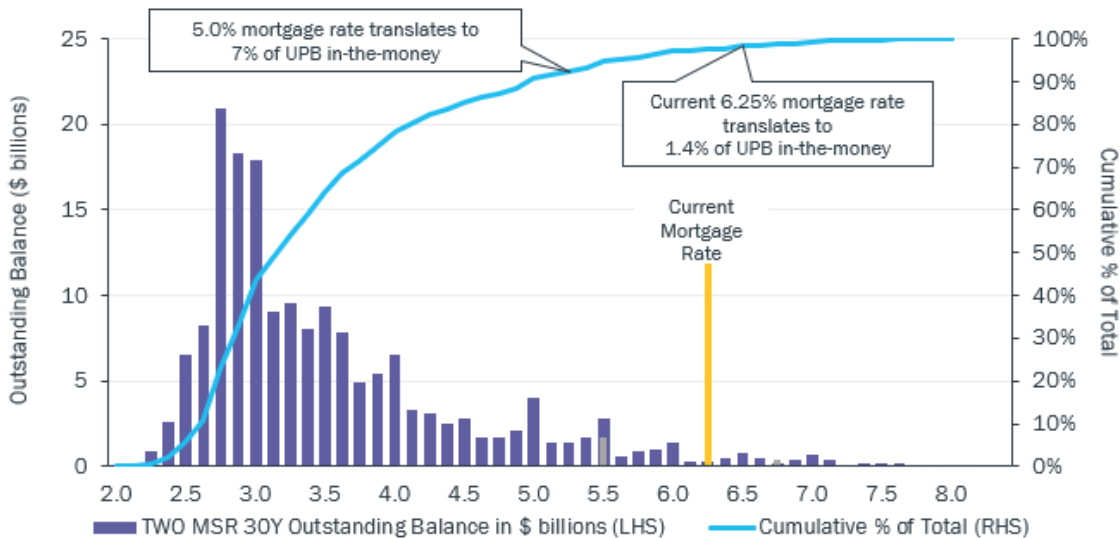
## MSR SPREADS STABLE AS BULK SUPPLY FOR 2024 EASES

- MSR performed well with continued strong demand for bulk packages, as supply normalizes to longer-term levels; 2024 volume of approximately \$305 billion UPB is about 70% of the pace of 2023
- Demand for MSR continues to come from bank and non-bank portfolios
- With mortgage rates lower, prepayment rates for higher coupons are reactive, while speeds for lower coupons slowed reflecting slower seasonal turnover rates
- About 1% of TWO's MSR population has 50 basis points or more of rate incentive to refinance with 30-year mortgage rates hovering around 6.25%
- Even with a drop to a 5% 30-year rates, only 7% of the population is fully exposed to a refi opportunity

### I. BIFURCATION OF SPEEDS<sup>(1)</sup>



### II. COMPOSITION OF MARKET VS. CURRENT RATES<sup>(2)</sup>



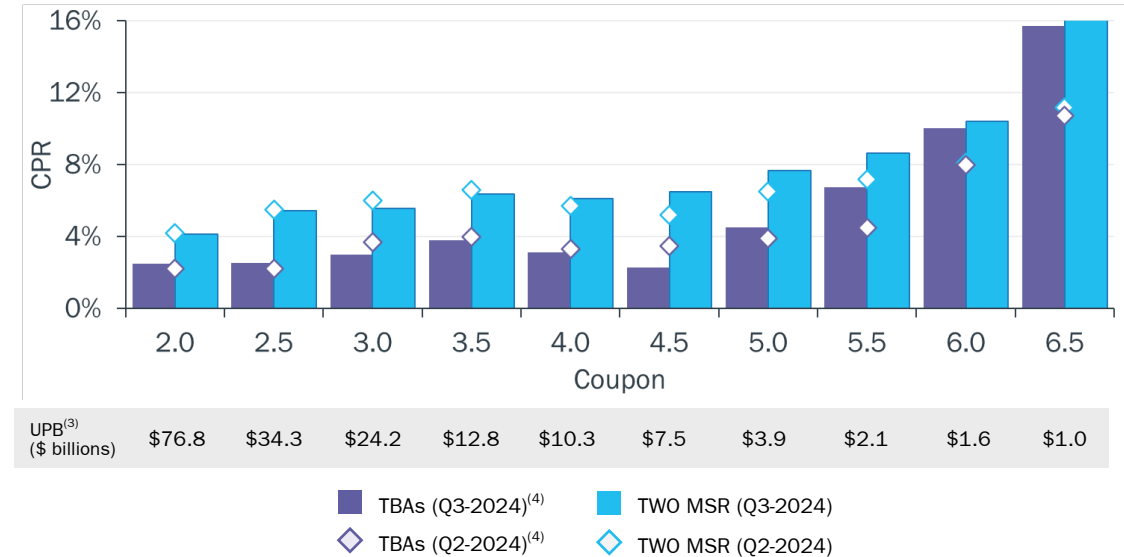
## QUARTERLY HIGHLIGHTS

- Price multiple decreased slightly to 5.6x from 5.8x, reflecting the decline in rates
- Completed the sale of \$6.2 billion UPB of higher coupon MSR in the third quarter, as previously disclosed
- Settled \$3.3 billion UPB through bulk and flow acquisitions and recapture
- Post quarter-end, committed to purchase an additional \$2.1 billion UPB of MSR through a bulk acquisition
- Quarterly prepayment speed unchanged at 5.3% CPR, with the bulk of our MSR portfolio slower; however, higher coupons showed a material increase in prepayment speeds

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

	9/30/2024	6/30/2024
Fair value (\$ millions)	\$ 2,884	\$ 3,065
Price multiple	5.6x	5.8x
UPB (\$ millions)	\$ 203,338	\$ 210,836
Gross coupon rate	3.43%	3.47%
Current loan size (\$ thousands)	\$ 334	\$ 334
Original FICO <sup>(2)</sup>	760	759
Original Loan-to-Value (LTV)	71%	71%
60+ day delinquencies	0.8%	0.6%
Net servicing fee (bps)	25.3	25.3
Loan age (months)	50	47
3-month CPR	5.3%	5.3%

## II. 30-YEAR MSR PREPAYMENT SPEEDS





## Why TWO?

- **Market Presence:** Our size allows us to be nimble and actively allocate capital to MSR and Agency RMBS
- **Investment Strategy:** Our portfolio is uniquely constructed with MSR and Agency RMBS as well as our own operational platform, RoundPoint Mortgage Servicing LLC
- **Market Environment:** MSR is stable, with very little duration and convexity risks. Agency RMBS spreads are historically wide in nominal terms and can be expected to tighten should implied interest rate volatility return to historical norms
- **Financing and Liquidity:** We have a strong balance sheet and diversified financing for both MSR and Agency RMBS

### ATTRACTIVE RETURN OPPORTUNITIES FOR UNIQUELY POSITIONED PORTFOLIO

	PORTFOLIO MARKET VALUE (\$ millions)	INVESTED CAPITAL ALLOCATED <sup>(1)</sup>	STATIC RETURN ESTIMATE <sup>(2)</sup>		
As of September 30, 2024					
SERVICING					
MSR	2,905				
RMBS <sup>(3)</sup>	6,654				
Total	9,559	65%	12%	-	16%
SECURITIES					
RMBS <sup>(3)</sup>	6,338				
Other Securities	609				
Total	6,947	35%	12%	-	14%
	INVESTED CAPITAL (\$ millions)		STATIC TWO HARBORS RETURN ESTIMATE <sup>(4)</sup>		
Total Portfolio Before Corporate and Tax Expenses					
			12.1%	-	15.4%
Corporate and Tax Expenses <sup>(5)</sup>			(2.7)%	-	(2.7)%
Total Return to Invested Capital					
			9.5%	-	12.7%
INVESTED CAPITAL					
Convertible Notes	262		6.2%		
Preferred Equity <sup>(6)</sup>	622		8.3%		
Common Equity	1,548		10.5%	-	15.6%
PROSPECTIVE QUARTERLY STATIC RETURN PER BASIC COMMON SHARE <sup>(7)</sup> :			\$0.39 - \$0.58		

Note: This slide presents estimates for illustrative purposes only, using TWO's base case assumptions (e.g., spreads, prepayment speeds, financing costs and expenses), and does not contemplate market-driven value changes, active portfolio management, and certain operating expenses. Actual results may differ materially.





# 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)	ZV to SOFR Spreads for Specified Pools <sup>(4)</sup>
3.0%	\$ 89.66	\$ —	\$ 225	\$ —	225	108
3.5%	\$ 93.07	66	62	—	128	117
4.0%	\$ 95.97	230	598	—	828	113
4.5%	\$ 98.26	1,092	2,177	(976)	2,293	121
5.0%	\$ 99.89	2,401	1,801	(5,688)	(1,486)	147
5.5%	\$ 101.14	1,275	1,170	—	2,445	169
6.0%	\$ 102.17	—	1,092	—	1,092	162
6.5%	\$ 103.08	—	751	—	751	138
<b>Total</b>		<b>\$ 5,064</b>	<b>\$ 7,876</b>	<b>\$ (6,664)</b>	<b>\$ 6,276</b>	<b>140</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>	2.8 %	0.5 %	(3.1)%	0.2 %
0	-25	Bull Flatteners <sup>(4)</sup>	5.9 %	(5.2)%	(1.3)%	(0.6)%
-50	-50	Parallel Shift <sup>(5)</sup>	16.6 %	(9.0)%	(8.9)%	(1.3)%
-25	-25	Parallel Shift <sup>(5)</sup>	8.8 %	(4.7)%	(4.4)%	(0.3)%
0	0	Base	— %	— %	— %	— %
+25	+25	Parallel Shift <sup>(5)</sup>	(9.6)%	4.2 %	4.4 %	(1.0)%
+50	+50	Parallel Shift <sup>(5)</sup>	(19.8)%	7.5 %	8.8 %	(3.5)%
+25	0	Bear Flatteners <sup>(3)</sup>	(2.7)%	(0.6)%	3.1 %	(0.2)%
0	+25	Bear Steepener <sup>(4)</sup>	(6.8)%	4.8 %	1.3 %	(0.7)%

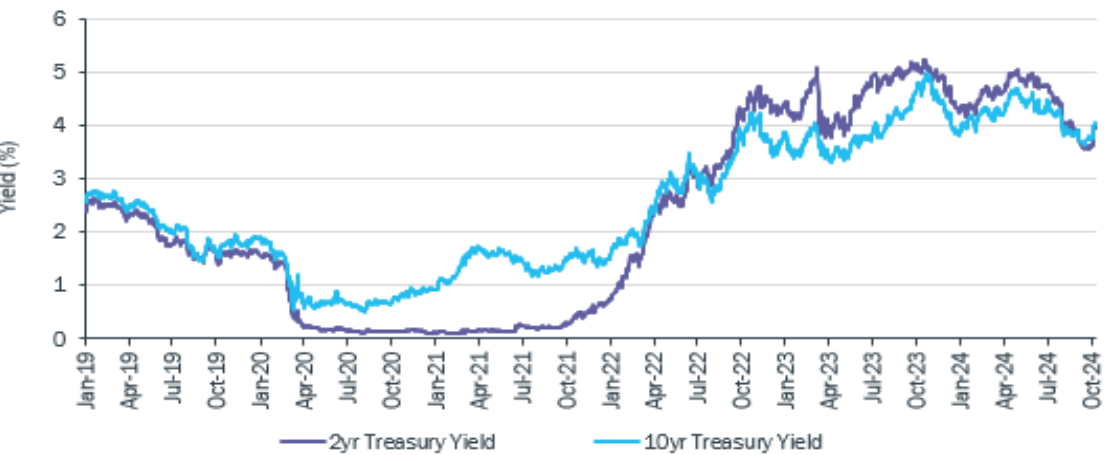
Book Value Exposure to Current Coupon Spread <sup>(6)</sup>			
		% Change in Common Book Value	
Parallel Shift in Spreads (basis points)		Agency P&I RMBS/TBA	MSR/Agency IO RMBS <sup>(1)</sup>
-25		7.4 %	(3.9)%
0		— %	— %
+25		(8.1)%	3.4 %

Note: Sensitivity data as of September 30, 2024. The above scenarios are provided for illustration purposes only and are not necessarily indicative of TWO's 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.

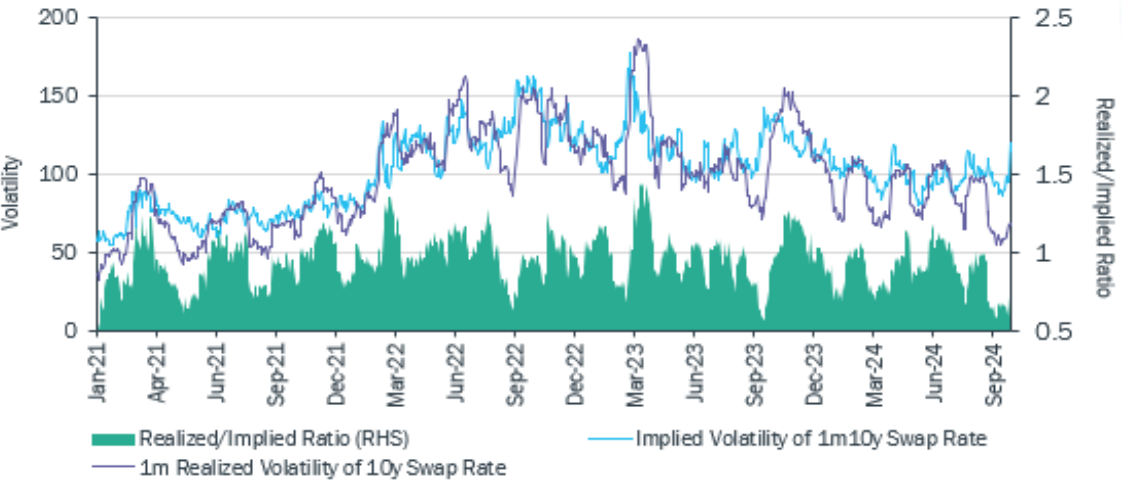
# Markets Overview



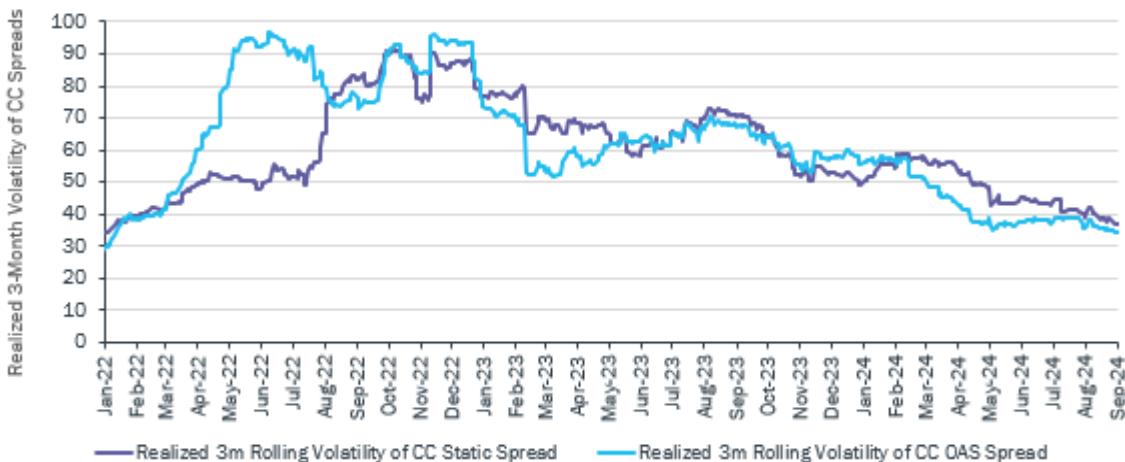
## I. 2-YEAR AND 10-YEAR INTEREST RATE YIELDS<sup>(1)</sup>



## II. ACTUAL VS. IMPLIED VOLATILITY<sup>(2)</sup>



## III. MORTGAGE SPREAD VOLATILITY<sup>(3)</sup>



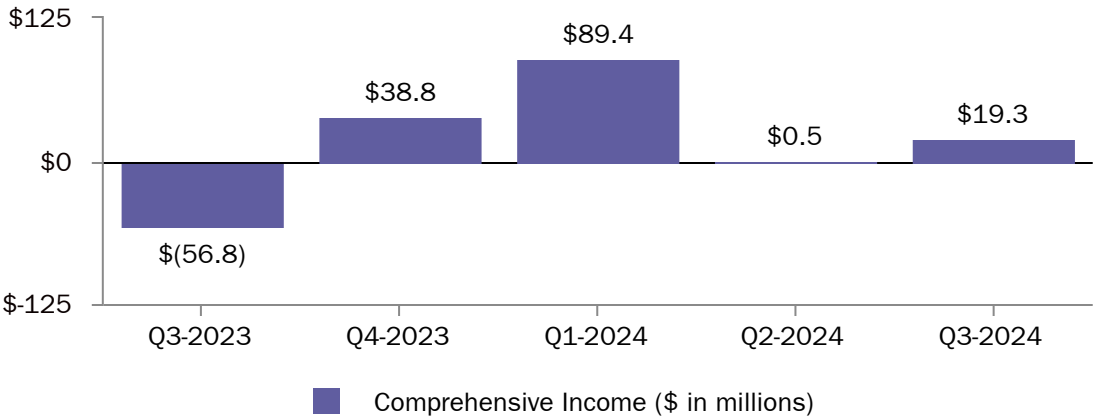
## IV. TWO MSR SPEEDS AND EXISTING HOME SALES<sup>(4)</sup>



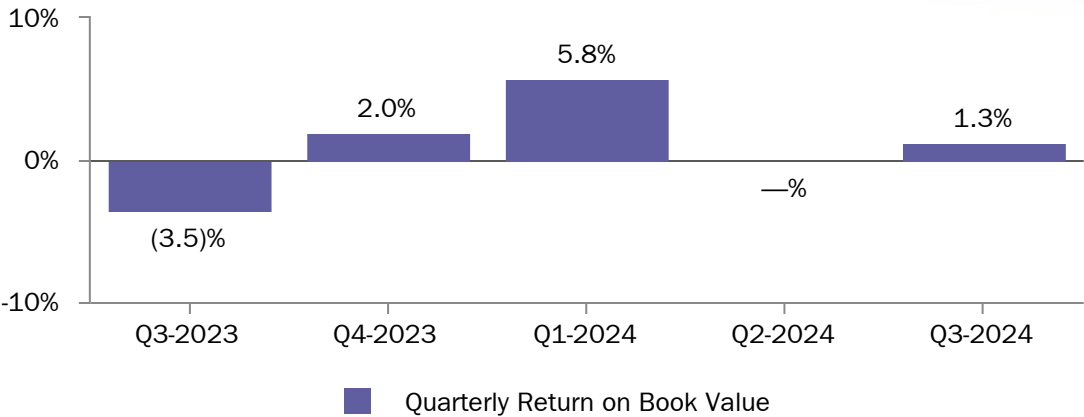
# Financial Performance



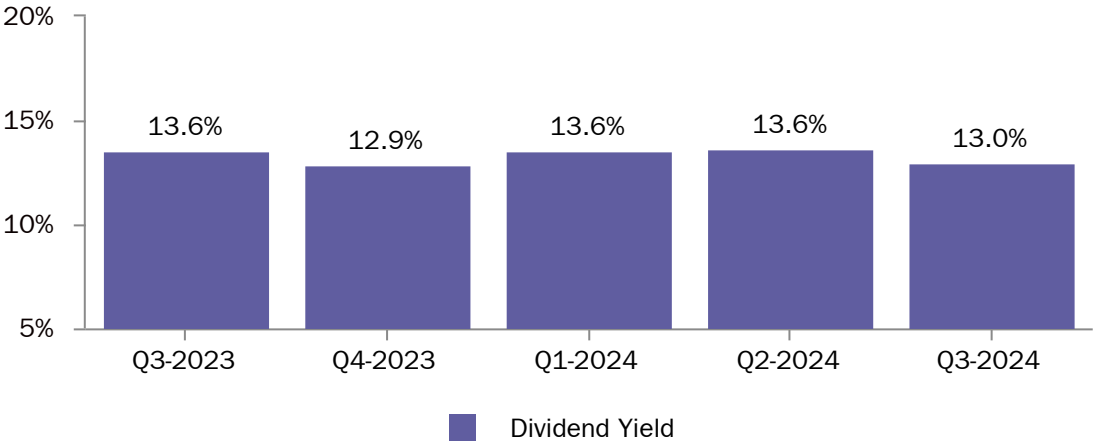
## I. COMPREHENSIVE (LOSS) INCOME



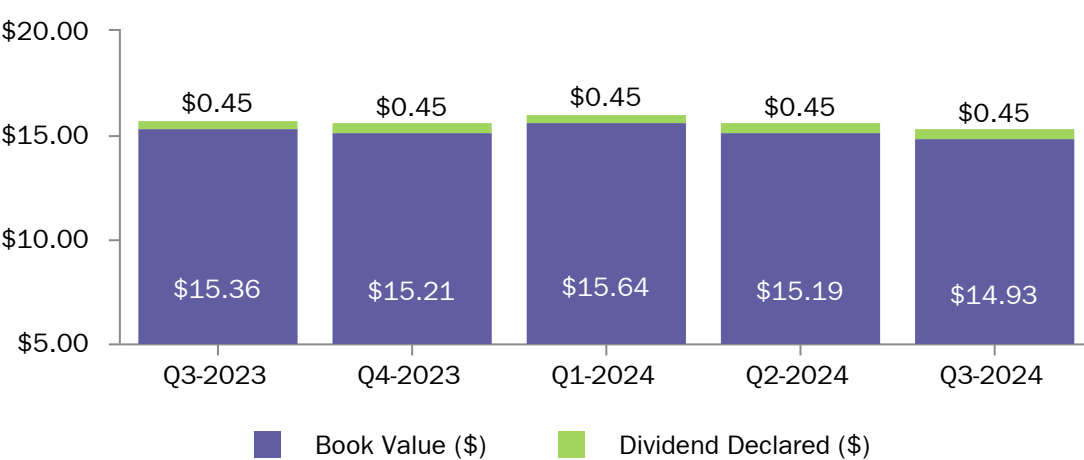
## II. QUARTERLY ECONOMIC RETURN ON BOOK VALUE<sup>(1)</sup>



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



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



# Q3-2024 Portfolio Yields and Financing Costs



(\$ thousands)				
Portfolio Asset Type	Measure	Average Amortized Cost	Income <sup>(1)</sup>	Average Yield
Available-for-sale securities	GAAP	\$ 8,394,436	\$ 101,067	4.82%
<i>Adjustments to include other portfolio items:</i>				
Mortgage servicing rights <sup>(2)(3)</sup>	Non-GAAP	1,832,388	53,810	11.75%
Agency derivatives <sup>(2)(4)</sup>	Non-GAAP	15,128	99	2.62%
TBAs <sup>(2)(5)</sup>	Non-GAAP	4,807,583	41,622	3.46%
Total portfolio	Non-GAAP	\$ 15,049,535	\$ 196,598	5.23%

Financing Collateral Type	Measure	Average Outstanding Balance	Expense <sup>(6)</sup>	Average Cost
Borrowings collateralized by available-for-sale securities	GAAP	\$ 7,954,332	\$ 109,966	5.53%
<i>Adjustments to include other financing items:</i>				
Borrowings collateralized by mortgage servicing rights and advances	GAAP	1,808,411	40,370	8.93%
Borrowings collateralized by Agency derivatives <sup>(4)</sup>	GAAP	5,408	82	6.07%
Convertible senior notes <sup>(7)</sup>	GAAP	259,677	4,495	6.92%
Interest rate swaps <sup>(2)(8)</sup>	Non-GAAP		(17,059)	(0.46)%
U.S. Treasury futures <sup>(2)(9)</sup>	Non-GAAP		(5,247)	(0.14)%
TBAs <sup>(2)(5)</sup>	Non-GAAP	4,807,583	42,777	3.56%
Total financing	Non-GAAP	\$ 14,835,411	\$ 175,384	4.73%

Net Spread	Measure			Average Yield, less Cost
Net spread on AFS securities	GAAP			(0.71%)
Net spread on total portfolio	Non-GAAP			0.50%

# GAAP to EAD Reconciliation



Reconciliation of GAAP to non-GAAP Information (\$ thousands, except for per common share data)	Three Months Ended September 30, 2024	Three Months Ended June 30, 2024
<b>Comprehensive income attributable to common stockholders</b>	<b>\$ 19,352</b>	<b>\$ 479</b>
Adjustment for other comprehensive (income) loss attributable to common stockholders:		
Unrealized (gain) loss on available-for-sale securities	(269,621)	44,073
<b>Net (loss) income attributable to common stockholders</b>	<b>\$ (250,269)</b>	<b>\$ 44,552</b>
Adjustments to exclude reported realized and unrealized (gains) losses:		
Realized (gain) loss on securities	(312)	22,149
Unrealized (gain) loss on securities	(795)	117
(Reversal of) provision for credit losses	(276)	171
Realized and unrealized loss on mortgage servicing rights	133,349	22,857
Realized loss (gain) on termination or expiration of interest rate swaps and swaptions	86,310	(2,388)
Unrealized loss (gain) on interest rate swaps and swaptions	103,012	(4,609)
Realized and unrealized loss on other derivative instruments	32,821	852
Other realized and unrealized gains	—	(226)
Other adjustments:		
MSR amortization <sup>(1)</sup>	(83,619)	(89,058)
TBA dollar roll income (losses) <sup>(2)</sup>	(1,156)	4,019
U.S. Treasury futures income <sup>(3)</sup>	5,247	7,211
Change in servicing reserves	(501)	(739)
Non-cash equity compensation expense	1,610	1,643
Certain operating expenses <sup>(4)</sup>	101	(624)
Net (benefit from) provision for income taxes on non-EAD	(12,336)	11,589
<b>Earnings available for distribution to common stockholders</b>	<b>\$ 13,186</b>	<b>\$ 17,516</b>
Weighted average basic common shares	103,635,455	103,555,755
Earnings available for distribution to common stockholders per weighted average basic common share	\$ 0.13	\$ 0.17

Note: Earnings Available for Distribution, or EAD, is a non-GAAP measure that we define as comprehensive income attributable to common stockholders, excluding realized and unrealized gains and losses on the aggregate investment 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 certain operating 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 certain 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>							
3.0%	\$ 225	\$ 203	6.3 %	85.6 %	\$ 200	3.7 %	35
3.5%	62	58	3.4 %	71.8 %	55	4.2 %	33
4.0%	598	577	6.3 %	100.0 %	590	4.6 %	52
4.5%	2,177	2,161	7.0 %	100.0 %	2,225	5.1 %	49
5.0%	1,801	1,814	6.3 %	100.0 %	1,834	5.8 %	30
5.5%	1,170	1,190	5.2 %	99.8 %	1,180	6.4 %	27
6.0%	1,092	1,123	14.0 %	96.0 %	1,116	6.9 %	23
≥ 6.5%	751	782	7.5 %	100.0 %	773	7.5 %	8
	7,876	7,908	7.6 %	98.8 %	7,973	5.9 %	33
<b>Other P&amp;I<sup>(3)</sup></b>							
	561	570	0.1 %	— %	558	5.4 %	12
<b>IOs and IIOs<sup>(4)</sup></b>							
	644	36	7.5 %	— %	44	5.8 %	190
<b>Total Agency RMBS</b>	<b>\$ 9,081</b>	<b>\$ 8,514</b>		<b>91.8 %</b>	<b>\$ 8,575</b>		

(\$ millions)	Notional Amount	Bond Equivalent Value <sup>(5)</sup>	Through-the-Box Speeds <sup>(6)</sup>
<b>TBA Positions</b>			
3.0%	\$ —	\$ —	3.7 %
3.5%	66	62	4.0 %
4.0%	230	221	3.3 %
4.5%	1,092	1,073	3.5 %
5.0%	2,401	2,398	3.9 %
5.5%	1,275	1,290	4.5 %
6.0%	—	—	8.0 %
≥ 6.5%	—	—	10.7 %
<b>Net TBA Position</b>	<b>\$ 5,064</b>	<b>\$ 5,044</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)
30-Year Fixed										
≤ 3.25%	293,608	\$ 90,892	2.8%	\$ 366	44	768	70%	0.4%	4.2%	25.1
3.25% - 3.75%	141,377	35,970	3.4%	323	57	753	73%	0.9%	5.4%	25.2
3.75% - 4.25%	101,689	20,744	3.9%	269	79	752	75%	1.1%	6.0%	25.5
4.25% - 4.75%	56,951	10,323	4.4%	260	77	739	76%	1.8%	6.4%	25.3
4.75% - 5.25%	39,889	9,340	4.9%	354	46	746	78%	1.5%	6.0%	25.2
> 5.25%	47,196	14,626	6.0%	416	24	750	77%	2.1%	8.9%	26.9
	680,710	181,895	3.5%	344	51	759	72%	0.8%	5.2%	25.3
15-Year Fixed										
≤ 2.25%	22,190	5,429	2.0%	290	41	777	57%	0.2%	4.3%	25.0
2.25% - 2.75%	37,253	7,312	2.4%	243	44	772	58%	0.2%	5.0%	25.0
2.75% - 3.25%	32,178	3,991	2.9%	179	69	765	60%	0.3%	7.1%	25.3
3.25% - 3.75%	17,941	1,621	3.4%	140	82	756	63%	0.4%	8.5%	25.4
3.75% - 4.25%	8,393	654	3.9%	133	77	741	63%	0.7%	9.0%	25.3
> 4.25%	5,929	702	4.9%	229	39	741	62%	1.3%	10.7%	27.0
	123,884	19,709	2.6%	230	53	769	59%	0.3%	5.9%	25.2
Total ARMs	1,568	448	4.4%	375	53	762	71%	1.1%	13.2%	25.4
Total Portfolio	806,162	\$ 202,052	3.4%	\$ 333	51	760	71%	0.8%	5.3%	25.3

# Mortgage Servicing Rights UPB Roll-forward



<i>\$ millions</i>	Q3-2024	Q2-2024	Q1-2024	Q4-2023	Q3-2023
UPB at beginning of period	\$ 209,390	\$ 213,597	\$ 215,647	\$ 218,662	\$ 222,622
Bulk purchases of mortgage servicing rights	2,573	—	2,906	—	—
Flow purchases of mortgage servicing rights	715	328	211	829	472
Originations/recapture of mortgage servicing rights	17	—	—	—	—
Sales of mortgage servicing rights	(6,248)	—	(1,430)	(62)	—
Scheduled payments	(1,641)	(1,639)	(1,646)	(1,640)	(1,640)
Prepaid	(2,779)	(2,873)	(2,111)	(2,127)	(2,787)
Other changes	25	(23)	20	(15)	(5)
UPB at end of period	<u>\$ 202,052</u>	<u>\$ 209,390</u>	<u>\$ 213,597</u>	<u>\$ 215,647</u>	<u>\$ 218,662</u>

# Financing



\$ millions						
Outstanding Borrowings and Maturities <sup>(1)</sup>	Repurchase Agreements	Revolving Credit Facilities	Warehouse Facilities	Convertible Notes	Total Borrowings	Percent (%)
Within 30 days	\$ 2,403.2	\$ —	\$ —	\$ —	\$ 2,403.2	24.0 %
30 to 59 days	2,180.5	—	—	—	2,180.5	21.8 %
60 to 89 days	—	—	3.0	—	—	— %
90 to 119 days	1,173.3	—	—	—	1,173.3	11.7 %
120 to 364 days	2,356.4	—	—	—	2,356.4	23.5 %
One to three years	650.0	999.2	—	259.8	1,909.0	19.0 %
	\$ 8,763.4	\$ 999.2	\$ 3.0	\$ 259.8	\$ 10,022.4	100.0 %
Collateral Pledged for Borrowings	Repurchase Agreements <sup>(2)</sup>	Revolving Credit Facilities <sup>(2)</sup>	Warehouse Facilities	Convertible Notes	Total Collateral Pledged	Percent (%)
Available-for-sale securities, at fair value	\$ 8,416.1	\$ —	\$ —	n/a	\$ 8,416.1	73.8 %
Mortgage servicing rights, at fair value	1,068.5	1,796.3	—	n/a	2,864.8	25.1 %
Mortgage loans held-for-sale, at fair value	—	—	3.1	n/a	3.1	— %
Restricted cash	12.5	1.5	0.1	n/a	14.1	0.1 %
Due from counterparties	15.1	—	—	n/a	15.1	0.1 %
Derivative assets, at fair value	8.1	—	—	n/a	8.1	0.1 %
Other assets (includes servicing advances)	—	86.6	—	n/a	86.6	0.8 %
	\$ 9,520.3	\$ 1,884.4	\$ 3.2	n/a	\$ 11,407.9	100.0 %

# Futures



Type & Maturity	Notional Amount (\$M)	Carrying Value (\$M) <sup>(1)</sup>	Weighted Average Months to Expiration
U.S. Treasury futures			
2 year	\$ (2,028.2)	\$ —	3.0
5 year	(749.4)	—	3.0
10 year	(561.9)	—	2.6
20 year	425.6	—	2.6
Eris SOFR swap futures - 10 year	(30.0)	—	122.7
SOFR futures			
< 1 year	(750.0)	—	7.1
> 1 and < 2 years	—	—	—
> 2 and < 3 years	—	—	—
Total futures	\$ (3,693.9)	\$ —	4.3

# Interest Rate Swaps<sup>(1)</sup>



Maturities	Notional Amount (\$M) <sup>(2)</sup>	Average Fixed Pay Rate <sup>(3)</sup>	Average Receive Rate <sup>(3)</sup>	Average Maturity (Years) <sup>(3)</sup>
<b>Payers</b>				
≤ 1 year	\$ 2,647.7	4.730 %	4.960 %	0.5
> 1 and ≤ 3 years	4,506.0	3.929 %	4.960 %	1.7
> 3 and ≤ 5 years	2,718.8	3.546 %	4.960 %	3.3
> 5 and ≤ 7 years	450.8	— %	— %	—
> 7 and ≤ 10 years	285.2	— %	— %	—
> 10 years	736.2	3.707 %	4.960 %	13.6
	<u>\$ 11,344.7</u>	4.107 %	4.960 %	2.5

Maturities	Notional Amount (\$M) <sup>(4)</sup>	Average Pay Rate <sup>(5)</sup>	Average Fixed Receive Rate <sup>(5)</sup>	Average Maturity (Years) <sup>(5)</sup>
<b>Receivers</b>				
≤ 1 year	\$ 786.6	4.960 %	4.025 %	0.5
> 1 and ≤ 3 years	925.7	4.960 %	3.326 %	3.0
> 3 and ≤ 5 years	352.4	4.960 %	3.099 %	5.0
> 5 and ≤ 7 years	99.6	4.960 %	3.097 %	7.0
> 7 and ≤ 10 years	194.9	4.960 %	3.633 %	9.8
> 10 years	493.3	4.960 %	3.384 %	20.4
	<u>\$ 2,852.5</u>	4.960 %	3.571 %	7.1

## PAGE 3 - Quarterly Financials Overview

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 book value as of the beginning of the period.
2. Includes \$11.4 billion in settled positions and \$5.0 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. TBA contracts accounted for as derivative instruments in accordance with GAAP. For additional detail on the portfolio, see slides 11 and 13, and Appendix slides 22 and 23.
3. Economic debt-to-equity is defined as total borrowings to fund Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, plus the implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity.

## PAGE 4 - Markets Overview

1. Source: Bloomberg, as of the dates noted.
2. Source: Bloomberg, as of the dates noted.

## PAGE 5 - RoundPoint Operations Update

1. Data for loans in originations pipeline as of October 22, 2024.

## PAGE 6 - Book Value Summary

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 book value as of the beginning of the period.

## PAGE 8 - Financing Profile

1. Source: Bloomberg. Represents the average spread between repurchase rates and the Secured Overnight Financing Rate (SOFR) over trailing three-month and six-month periods between Q3 2020 and Q3 2024 (as of September 30, 2024).

## PAGE 9 - Portfolio Composition and Risk Positioning

1. For additional detail on the portfolio, see Appendix slides 22 and 23.
2. 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. TBA contracts accounted for as derivative instruments in accordance with GAAP.
3. Economic debt-to-equity is defined as total borrowings to fund Agency and non-Agency investment securities, MSR and related servicing advances and mortgage loans held-for-sale, plus the implied debt on net TBA cost basis and net payable (receivable) for unsettled RMBS, divided by total equity.
4. Interest rate exposure represents estimated change in common book value for theoretical parallel shift in interest rates.
5. Spread exposure represents estimated change in common book value for theoretical parallel shifts in spreads.

## PAGE 10 - Agency RMBS Investment Landscape

1. Source: J.P. Morgan DataQuery. Data is model-based and represents universal mortgage-backed securities (UMBS) generic TBA spreads as of the dates noted. In 2023, J.P. Morgan updated their model affecting only 2023 data.
2. Spreads produced using prepayment speeds generated with The Yield Book® Software using internally calibrated prepayment dials. Data as of September 30, 2024.

# End Notes (continued)



## PAGE 11 - Agency RMBS Portfolio

1. Specified pools include securities with implicit or explicit prepayment protection, including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores, as well as securities without such protection, including large bank-serviced and others.
2. Represents UMBS generic TBA performance during the quarter.
3. Specified pool performance excludes (1) certain coupons in which we were not invested for the full duration of the quarter and (2) certain coupons with de minimis balances.
4. Specified pool market value by coupon as of September 30, 2024.
5. Three-month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Bank of America, and Citi data.

## PAGE 12 - MSR Investment Landscape

1. Sources: RiskSpan Edge aggregation of Fannie Mae and Freddie Mac disclosure data, and TWO's aggregation of internal data feeds, as well as internal projections. Portfolio metrics represent averages weighted by UPB. Prepayment speed projections generated using internal forecasts for prepayments. The projections are provided for illustration purposes only.
2. Source: RiskSpan. 30-year fixed-rate UMBS UPB as of September 30, 2024 Factor Date; Freddie Mac's Primary Mortgage Market Survey (PMMS) as of September 30, 2024.

## PAGE 13 - MSR Portfolio

1. MSR portfolio based on the prior month-end's principal balance of the loans underlying the Company's MSR, increased 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 prior month-end's principal balance of the loans underlying the Company's MSR, increased for current month purchases and excluding unsettled MSR on loans for which the company is the named servicer as well as MSR on loans recently settled for which transfer to the company is not yet complete.
4. Three-month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Bank of America, and Citi data.

## PAGE 14 - 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. Includes Agency pools and TBA positions. 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. TBA contracts 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 expenses within the company's taxable REIT subsidiaries.
6. Preferred equity coupon represents the 5-year yield along the forward curve to account for floating rate resets.
7. 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).



# End Notes (continued)



## PAGE 16 - Effective Coupon Positioning

1. Represents UMBS TBA market prices as of September 30, 2024.
2. Specified pools include securities with implicit or explicit prepayment protection, including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores, as well as securities without such protection, including large bank-serviced and others.
3. MSR/Agency IO represents an internally calculated exposure of a synthetic TBA position and the current coupon equivalents of our MSR, including the effect of unsettled MSR, and Agency IO RMBS.
4. Spreads generated with The Yield Book® Software using internally calibrated dials.

## PAGE 17 - 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 Flatteners 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 Flatteners/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 spread represents estimated change in common book value for theoretical parallel shifts in spreads.

## PAGE 18 - Markets Overview

1. Source: Bloomberg, as of dates noted.
2. Source: Bloomberg, as of dates noted.
3. Source: J.P. Morgan DataQuery.
4. Source: National Association of Realtors via Bloomberg and RiskSpan as of September 30, 2024.

## PAGE 19 - Financial Performance

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

# End Notes (continued)



## PAGE 20 - Q3-2024 Portfolio Yields and Financing Costs

1. Includes interest income, net of premium amortization/discount accretion, on Agency and non-Agency investment securities, servicing income, net of estimated amortization and servicing expenses, on MSR, and the implied asset yield portion of dollar roll income on TBAs. Amortization on MSR refers to the portion of change in fair value of MSR primarily attributed to the realization of expected cash flows (runoff) of the portfolio, which is deemed a non-GAAP measure due to the company's decision to account for MSR at fair value. TBA dollar roll income is the non-GAAP economic equivalent to holding and financing Agency RMBS using short-term repurchase agreements.
2. As reported elsewhere in the company's filings with the Securities and Exchange Commission, MSR, Agency derivatives, TBA, interest rate swap agreements and U.S. Treasury futures are reported at fair value in the company's consolidated financial statements in accordance with GAAP, and the GAAP presentation and disclosure requirements for these items do not define or include the concepts of yield or cost of financing, amortized cost, or outstanding borrowings.
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 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.
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.
9. The cost of financing on U.S. Treasury futures held to mitigate interest rate risk associated with the company's outstanding borrowings is calculated using average borrowings balance as the denominator. U.S. Treasury futures income is the economic equivalent to holding and financing a relevant cheapest-to-deliver U.S. Treasury note or bond using short-term repurchase agreements.

## PAGE 21 - 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.
4. Certain operating expenses predominantly consists of expenses incurred in connection with the company's ongoing litigation with PRCM Advisers LLC. It also includes certain transaction expenses incurred/reversed in connection with the company's acquisition of RoundPoint Mortgage Servicing LLC.

# End Notes (continued)



## PAGE 22 - Agency RMBS Portfolio

1. Weighted average actual one-month CPR released at the beginning of the following month based on RMBS held as of the preceding month-end.
2. Determination of the percentage of prepay protected 30-year fixed Agency RMBS includes securities with implicit or explicit prepayment protection, including lower loan balances (securities collateralized by loans less than or equal to \$300K of initial principal balance), higher LTVs (securities collateralized by loans with greater than or equal to 80% LTV), certain geographic concentrations, loans secured by investor-owned properties, and lower FICO scores.
3. Other P&I includes 15-year fixed, Hybrid ARMs, CMO and DUS pools.
4. IOs and IIOs represent market value of \$11.8 million of Agency derivatives and \$23.9 million of interest-only Agency RMBS. Agency derivatives are inverse interest-only Agency RMBS, which are accounted for as derivative instruments in accordance with GAAP.
5. Bond equivalent value is defined as the notional amount multiplied by market price. TBA contracts accounted for as derivative instruments in accordance with GAAP.
6. Three-month prepayment speeds of delivered TBA contracts; average of J.P. Morgan, Bank of America, 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. As of September 30, 2024, outstanding borrowings had a weighted average of 5.9 months to maturity.
2. Repurchase agreements and revolving credit facilities secured by MSR and/or other assets may be over-collateralized due to operational considerations.

## 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.

## PAGE 27 - Interest Rate Swaps

1. The Company did not hold any interest rate swaptions at September 30, 2024.
2. Includes \$2.5 billion notional amount of forward starting interest rate swaps.
3. Weighted averages exclude forward starting interest rate swaps. As of September 30, 2024, forward starting interest rate swap payers had a weighted average fixed pay rate of 3.3% and weighted average maturities of 5.4 years.
4. Includes \$665.7 million notional amount of forward starting interest rate swaps.
5. Weighted averages exclude forward starting interest rate swaps. As of September 30, 2024, forward starting interest rate swap receivers had a weighted average fixed receive rate of 3.4% and weighted average maturities of 2.0 years.

