



# The MBS Market Post-Fed

## The After-Shocks Reverberate

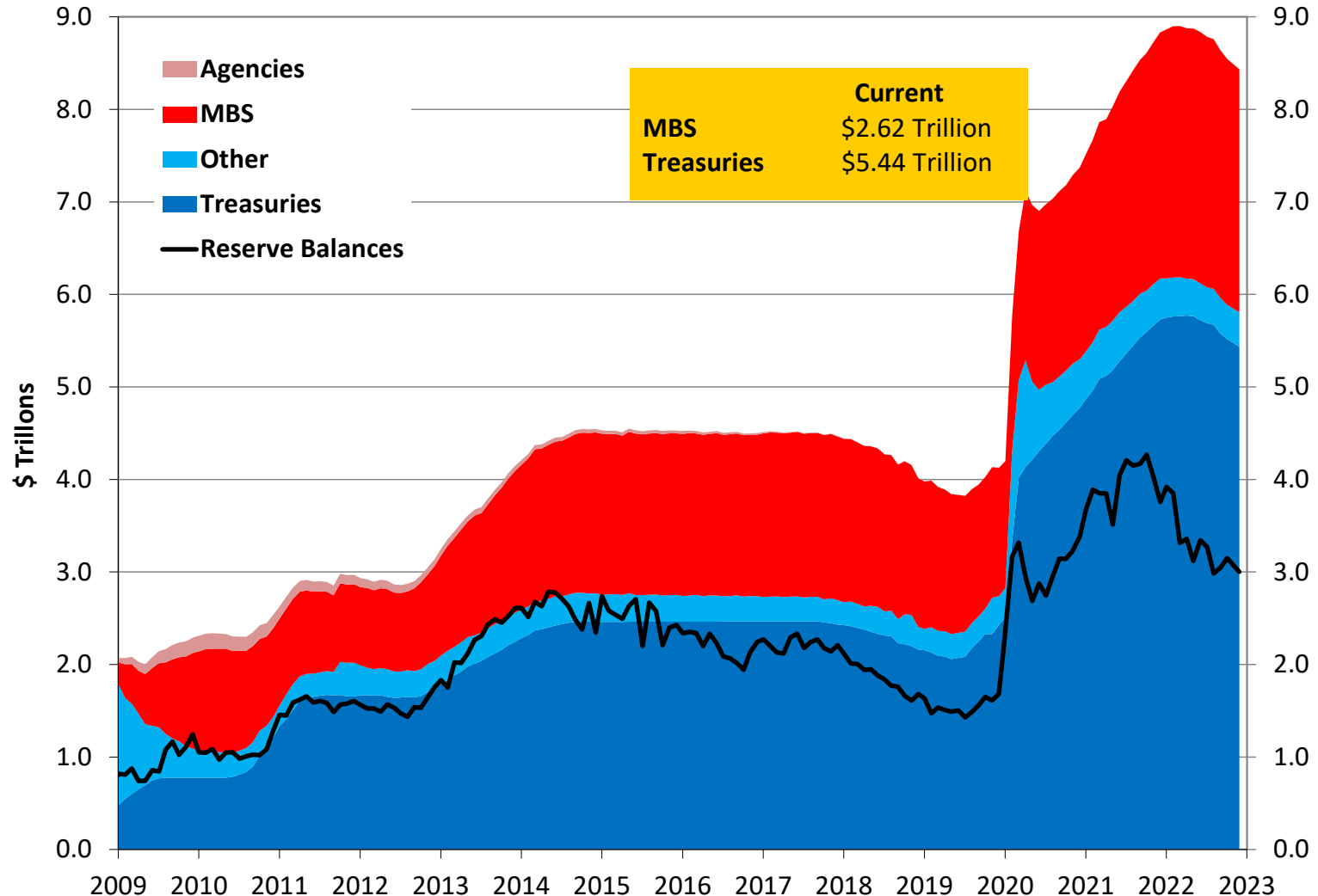
Prepared For:  
The SFBTA Annual Conference

Walt Schmidt, CFA

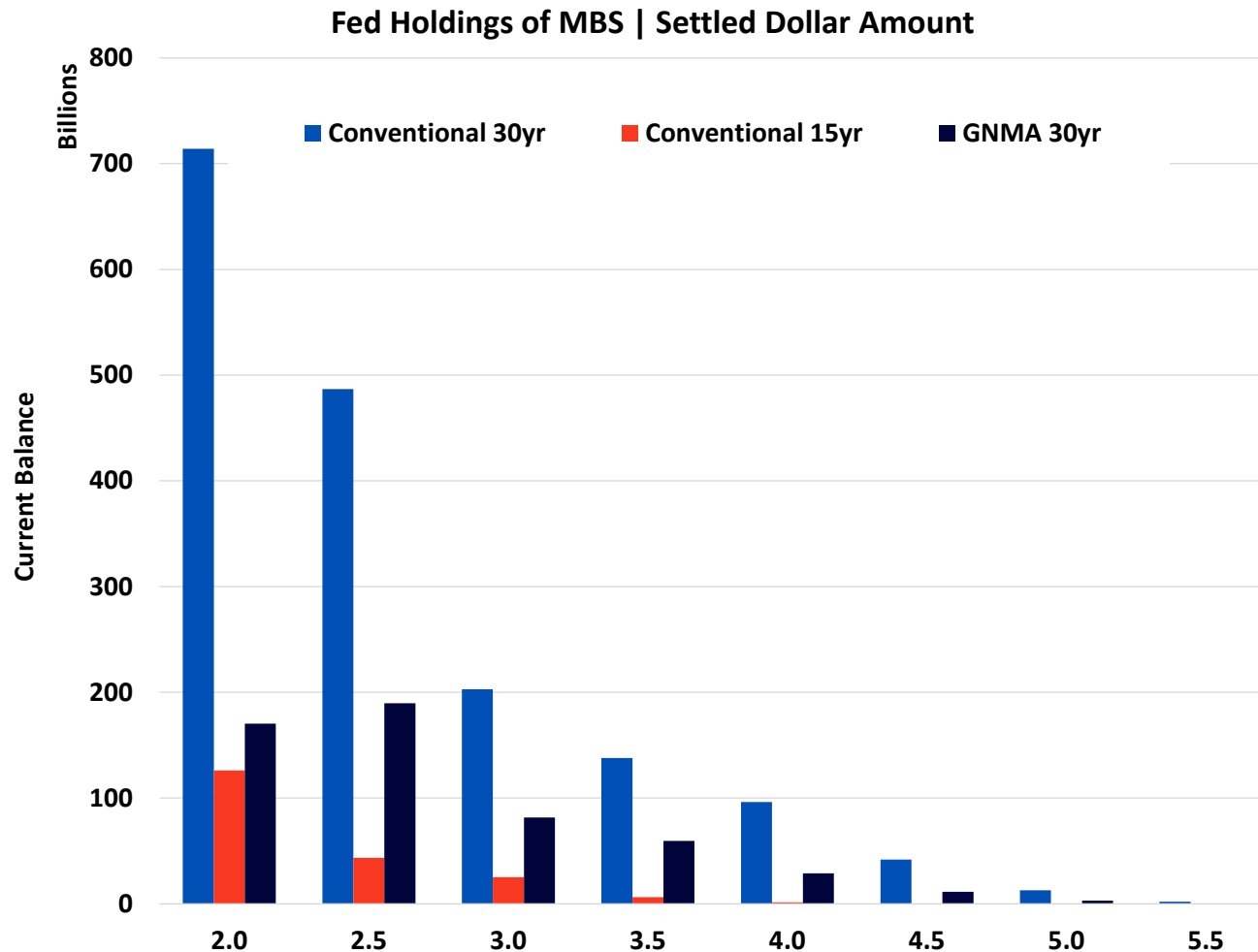
- 1. Market Structure**
2. Prepayments
3. Relative Value

# Historically Intrusive QE4 Now in Full Run-off Mode

U.S. Federal Reserve Balance Sheet (SOMA)

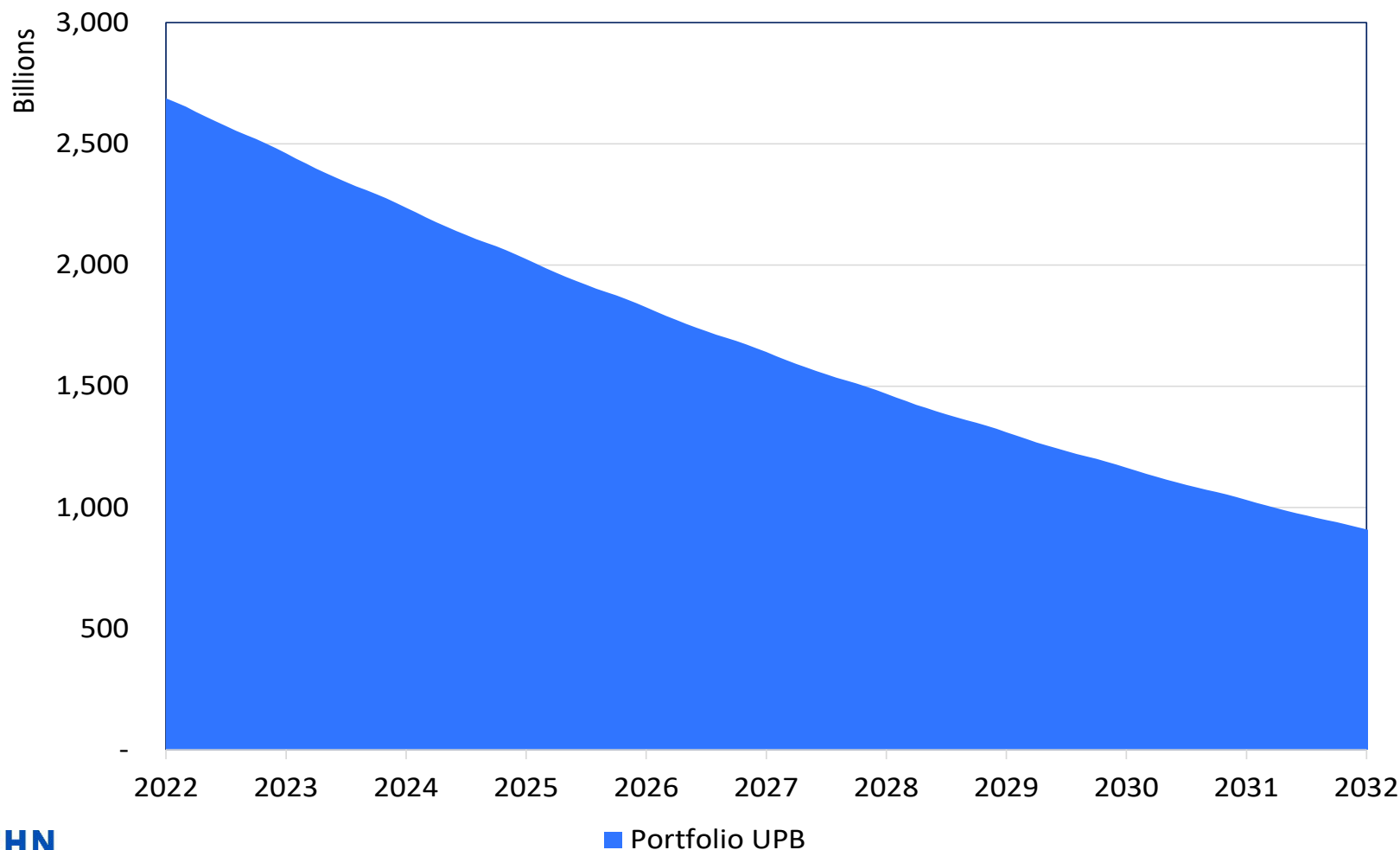


# Fed Holdings and Market Now Dominated by Discount Coupons

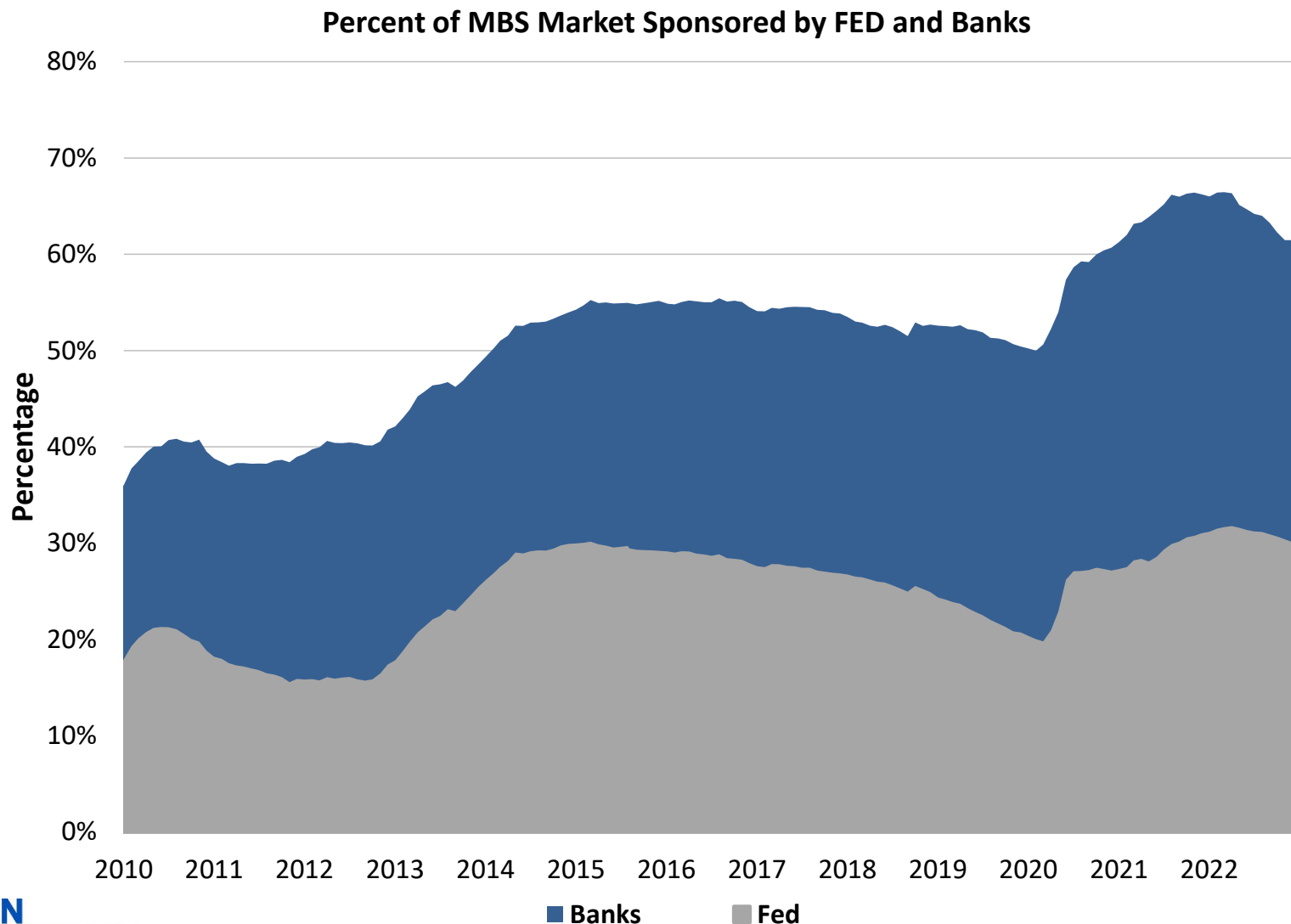


# Will Take ~10 Years to Amortize SOMA Down to \$1 Trillion at Current Prepays

Projected Outstanding SOMA MBS Portfolio  
10-Year Horizon

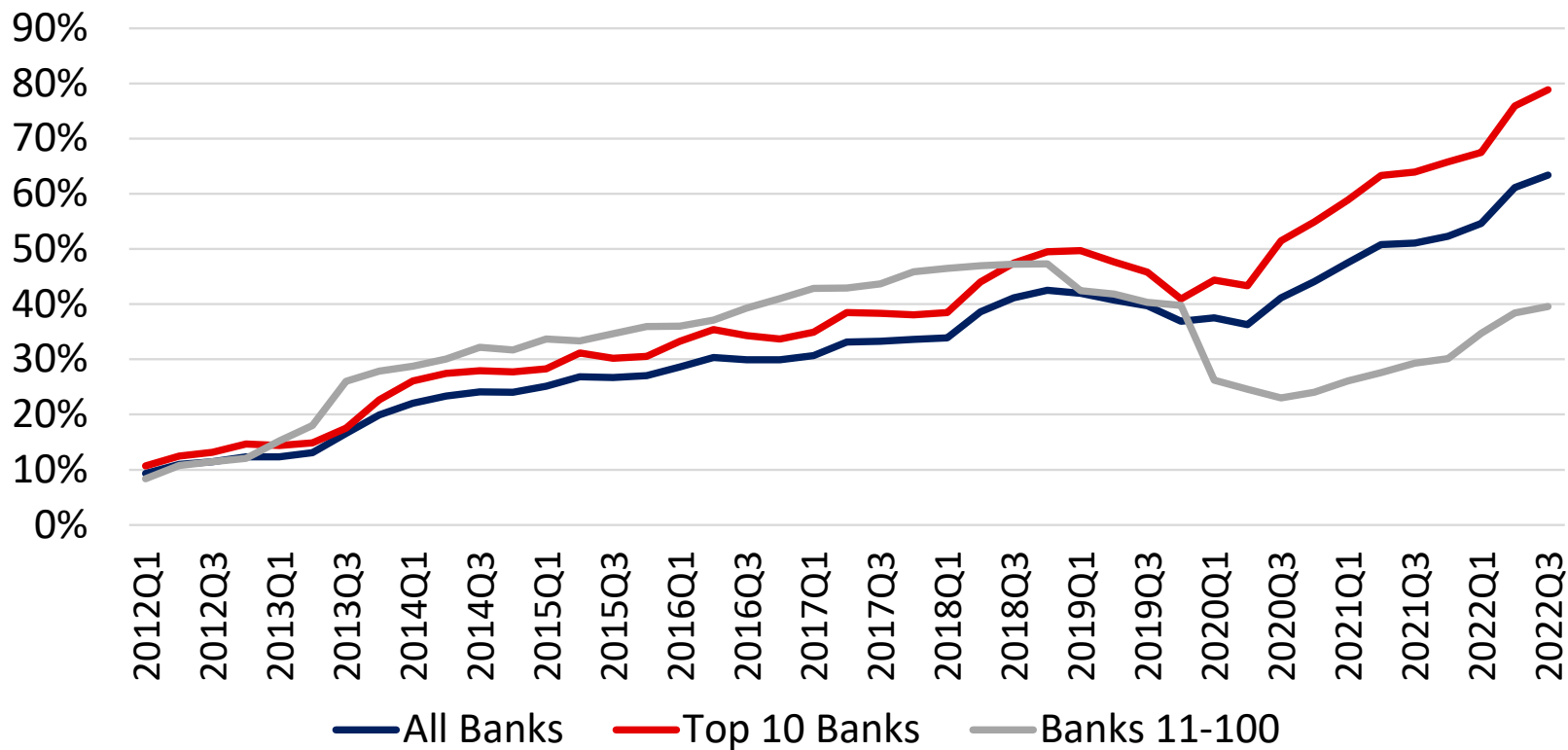


# Banks Now Largest Holder of MBS, Also in Run-Off Mode



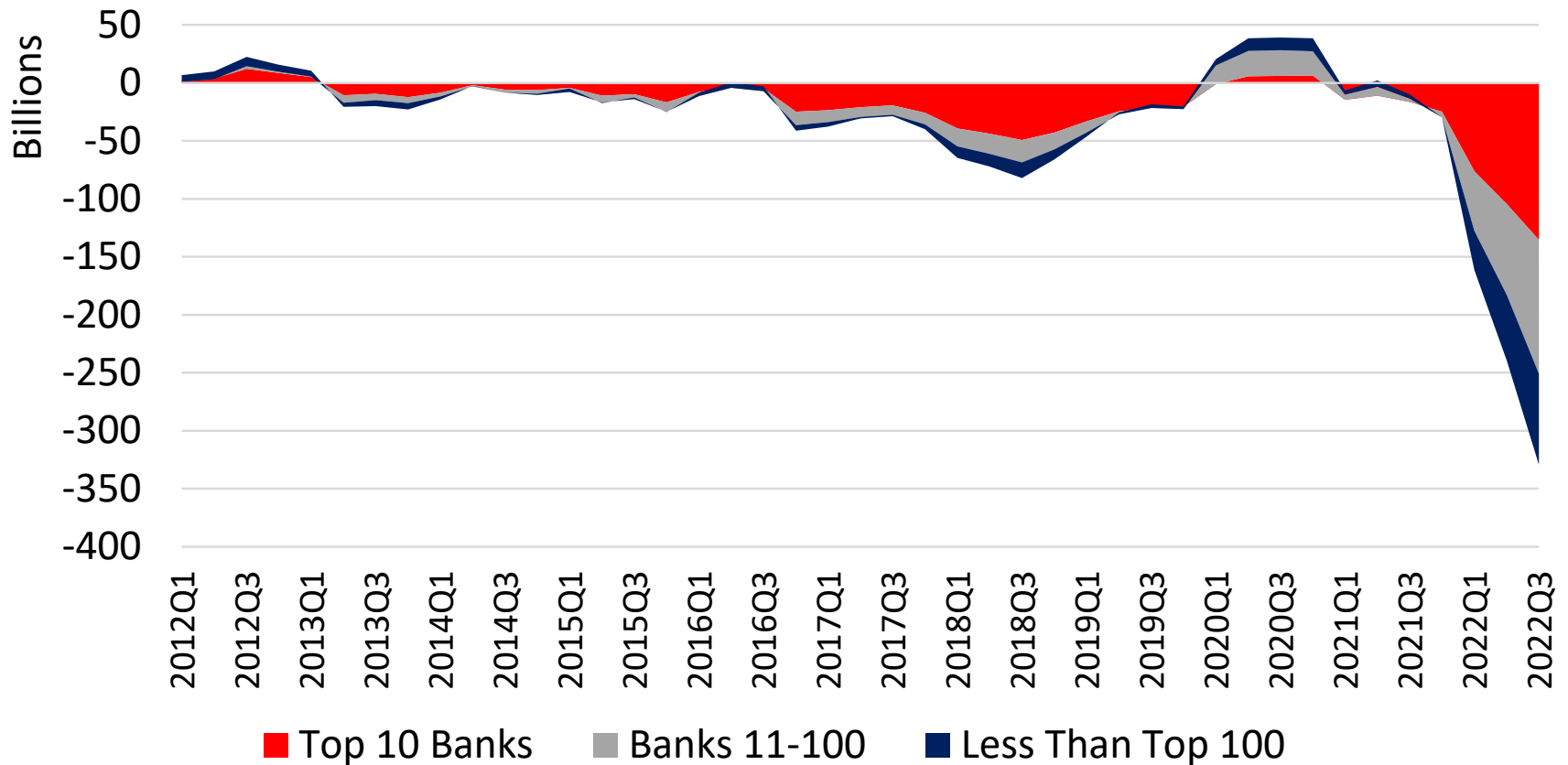
# Bank Portfolio Holdings of MBS; Assets are “Stuck” for Time Being

% MBS Portfolio in HTM



# AOCI Adjustment Would be 2X Larger If Not For Aggressive HTM Transfers

Total Portfolio AOCI



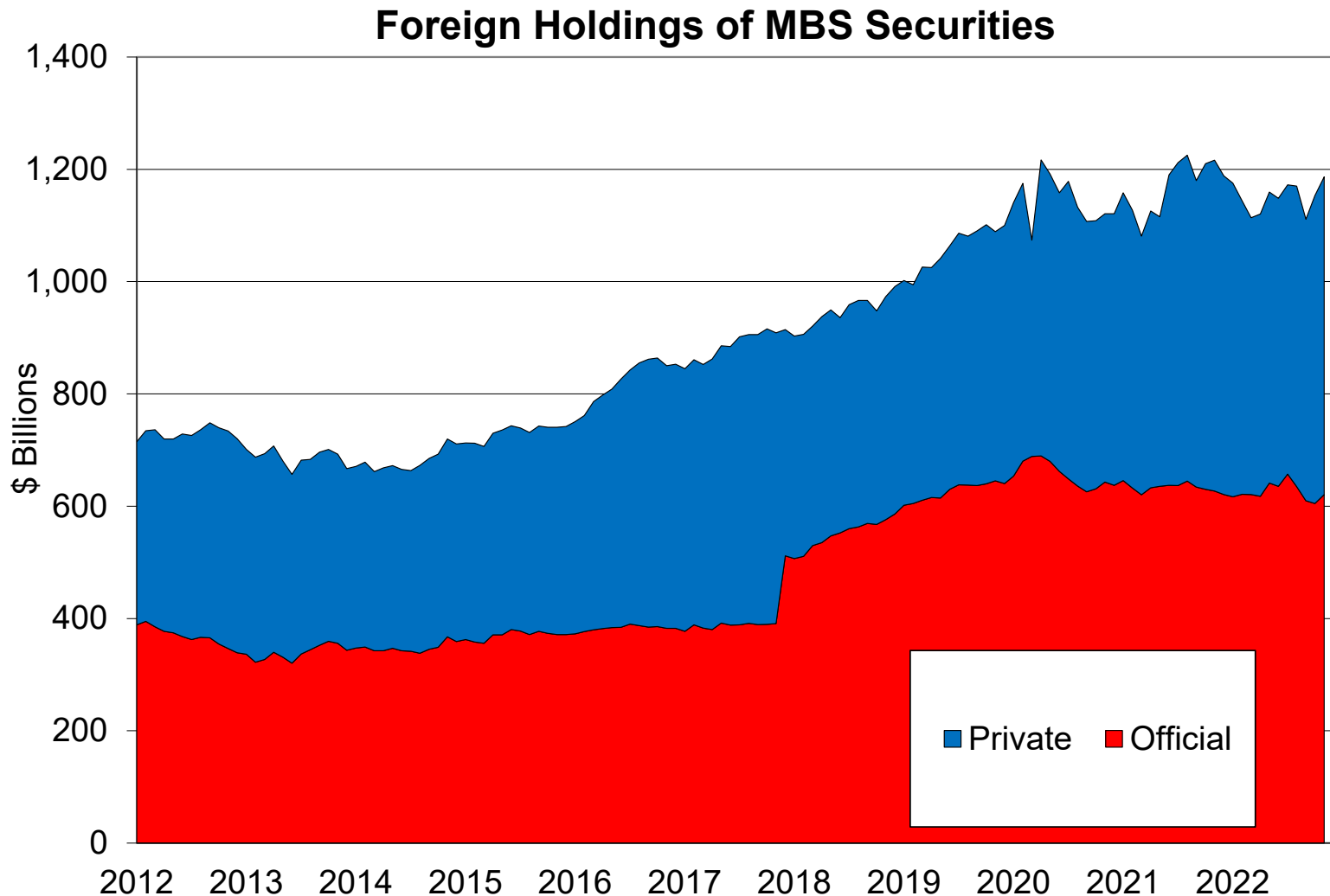
Top 10 Banks

Banks 11-100

Less Than Top 100

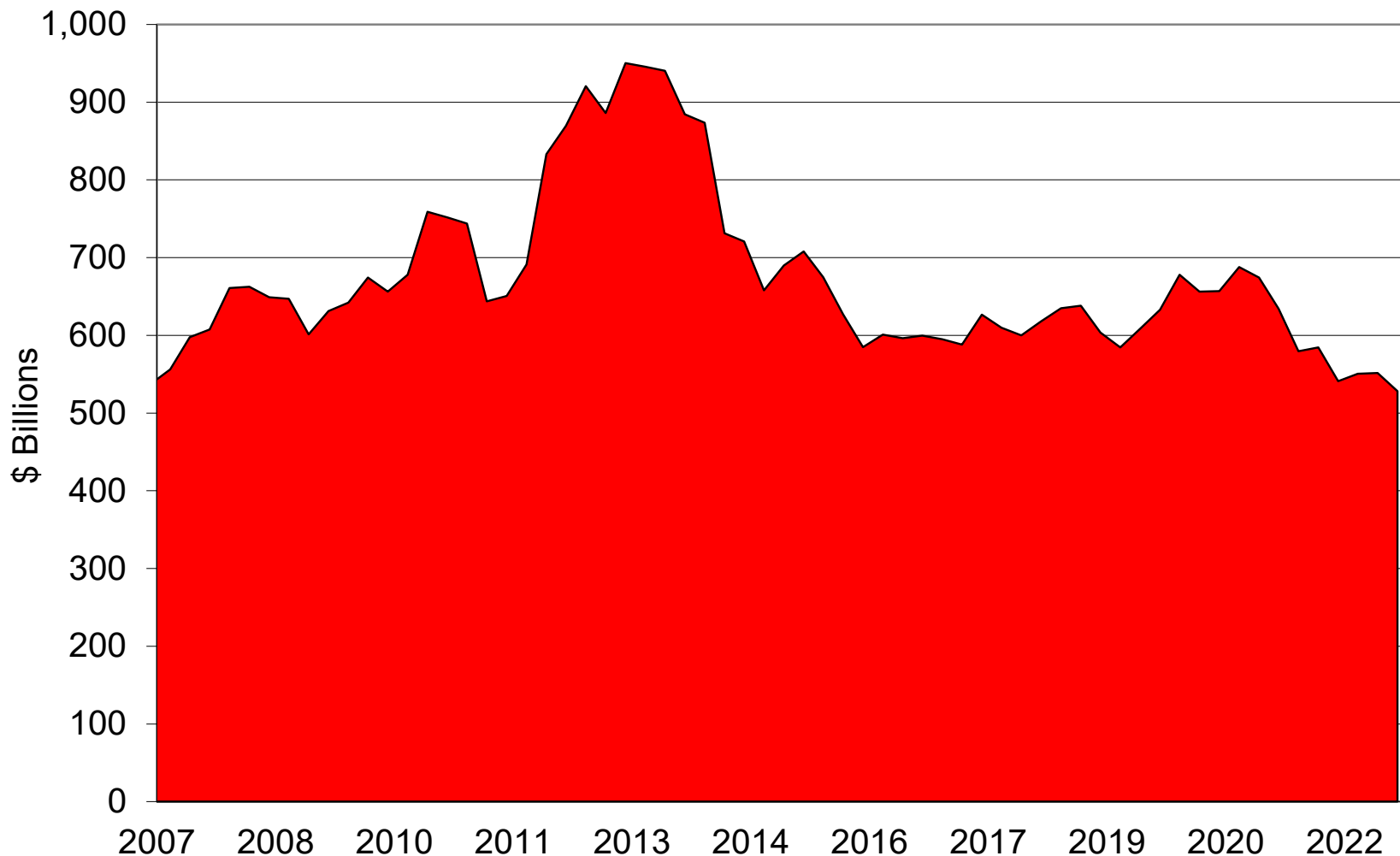


# Foreign Investors Are Awaiting Next Phase for Central Banks



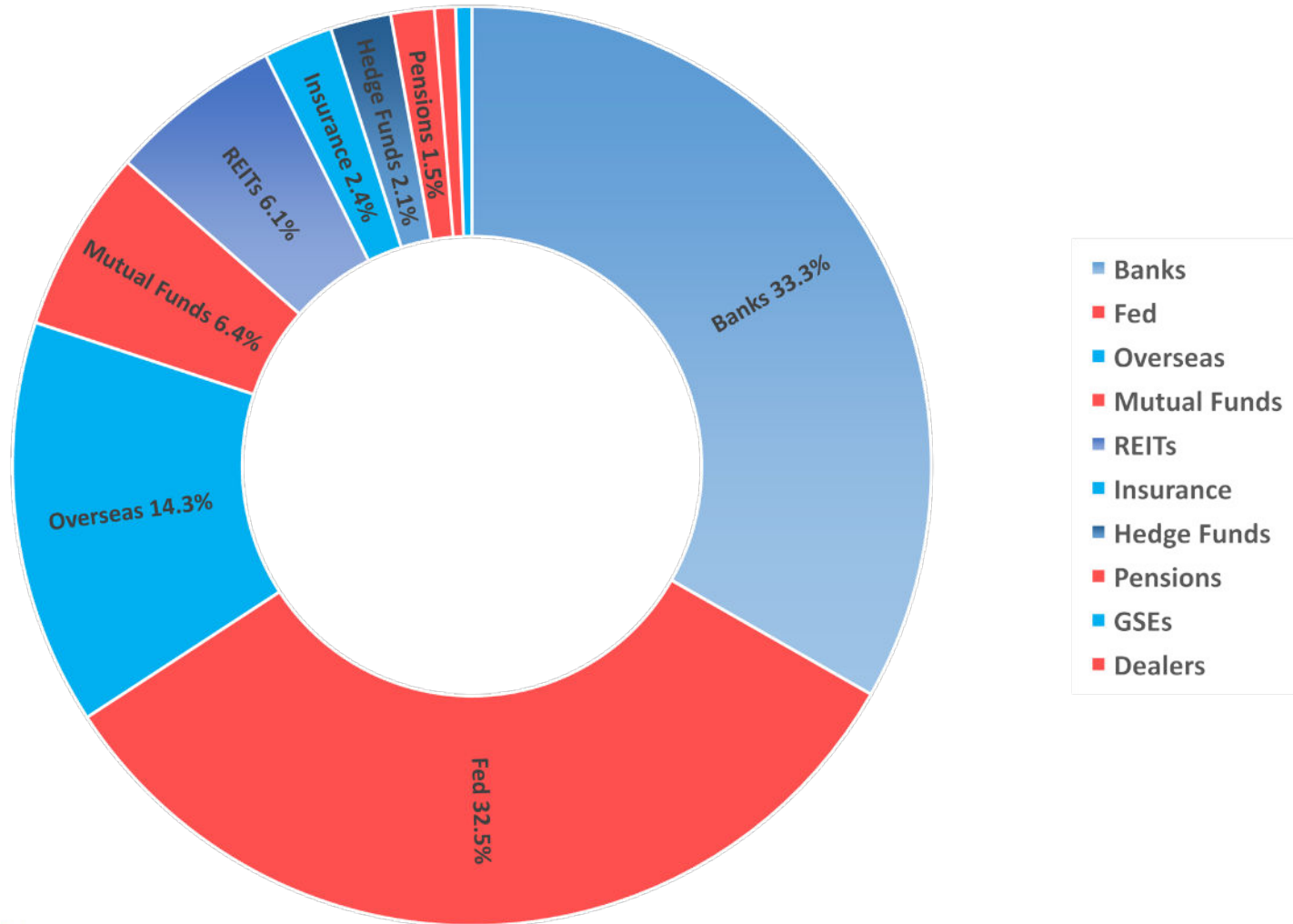
# Money Managers Off 2013 Peak, Can Add Quickly, Are “Swing Vote”

Mutual Fund Holdings of MBS and Agencies



# Current State of Funding for the Agency MBS Market

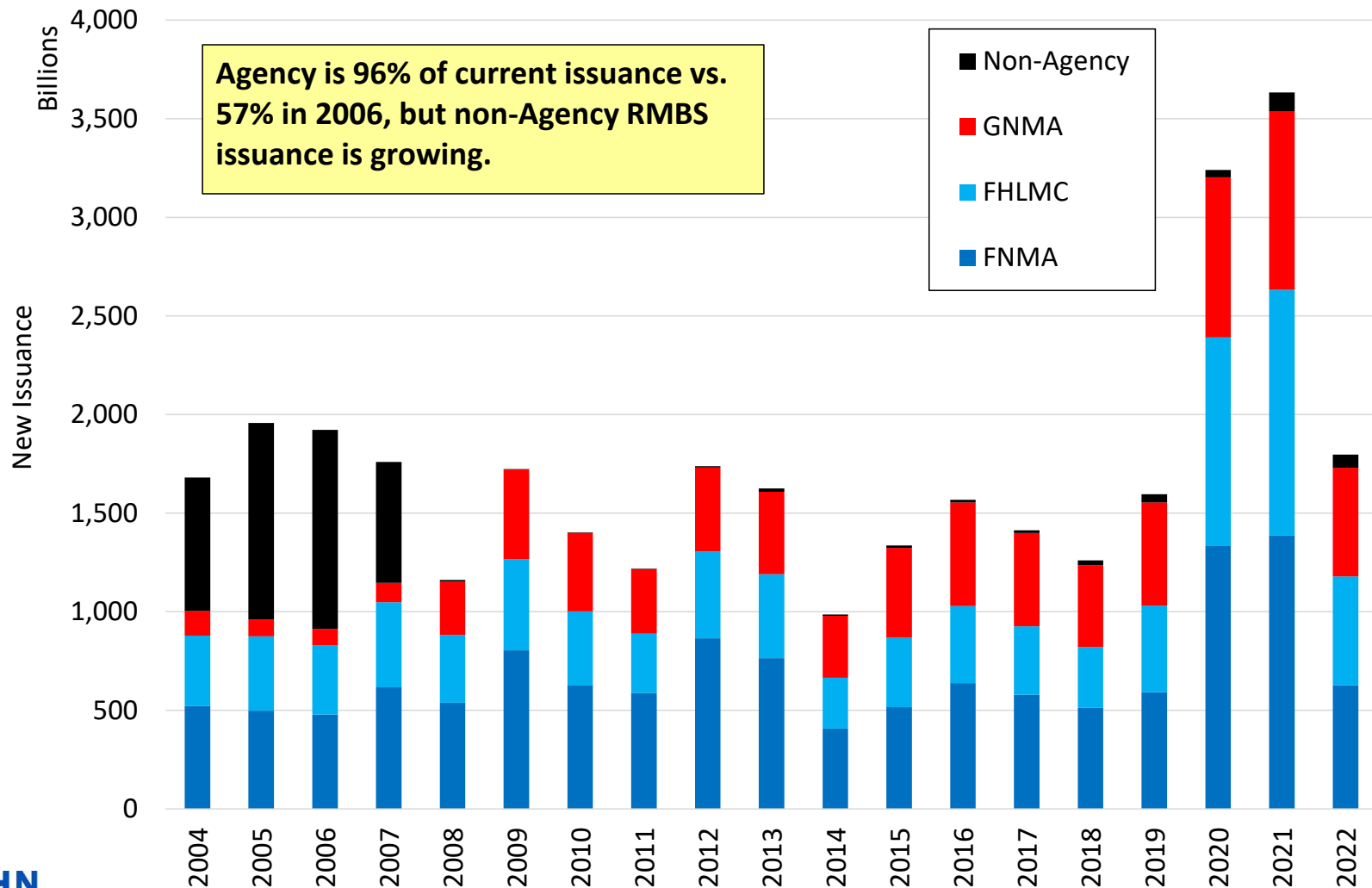
Current Holders of Agency MBS  
Approximately \$8.2 Trillion



Source: FHN Financial, Federal Reserve, Bloomberg, Various Company Disclosures

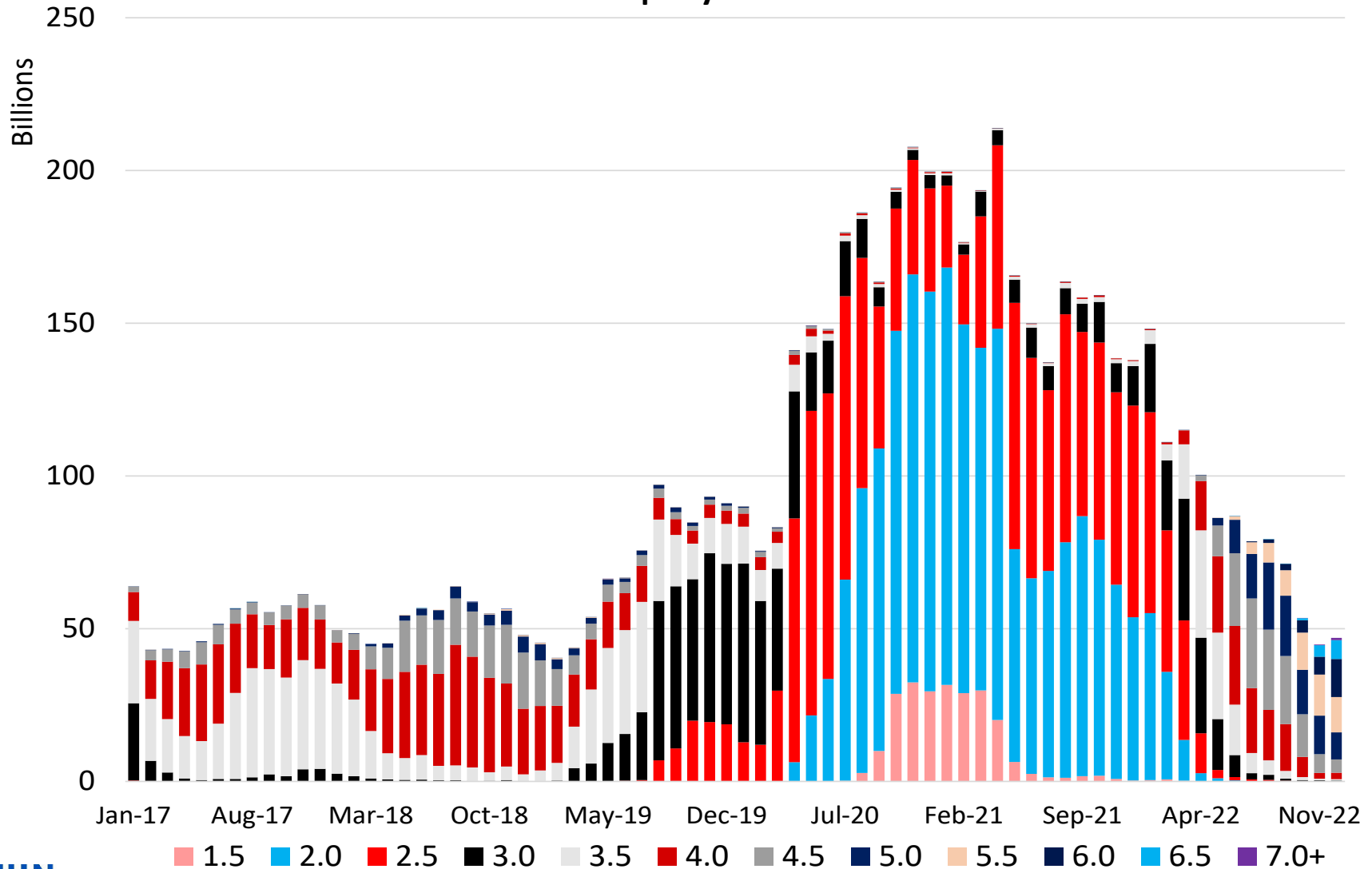
# Returning to Long-Term Trend from Record Issuance in '20 & '21

## Annual Issuance in Securitized Mortgage Market



# Coupon Profile of Monthly Issuance Has Been Volatile Through QE/QT

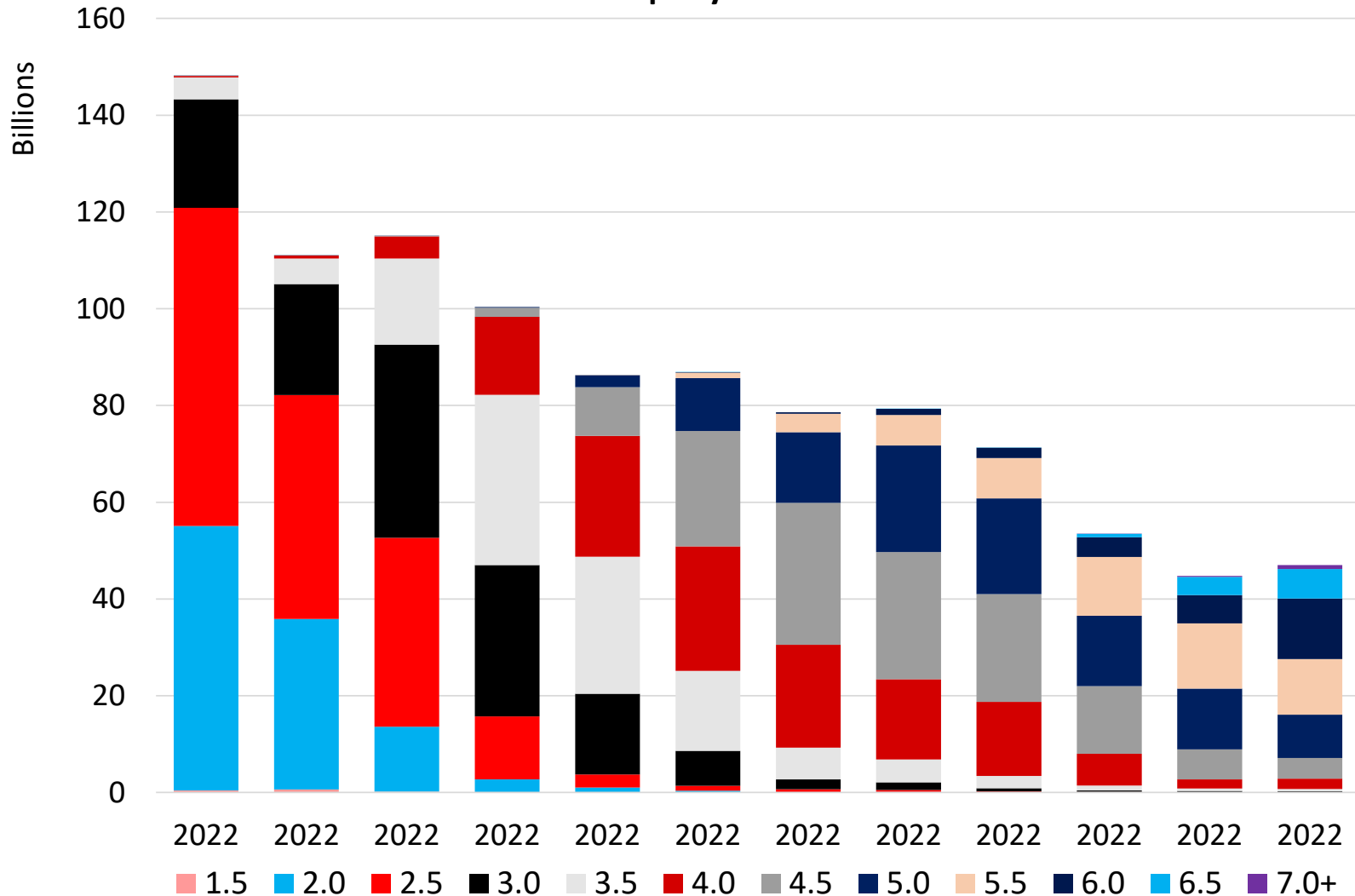
Gross Issuance | 30yr Conventional MBS



Source: FHN Financial, CPRCDR 13

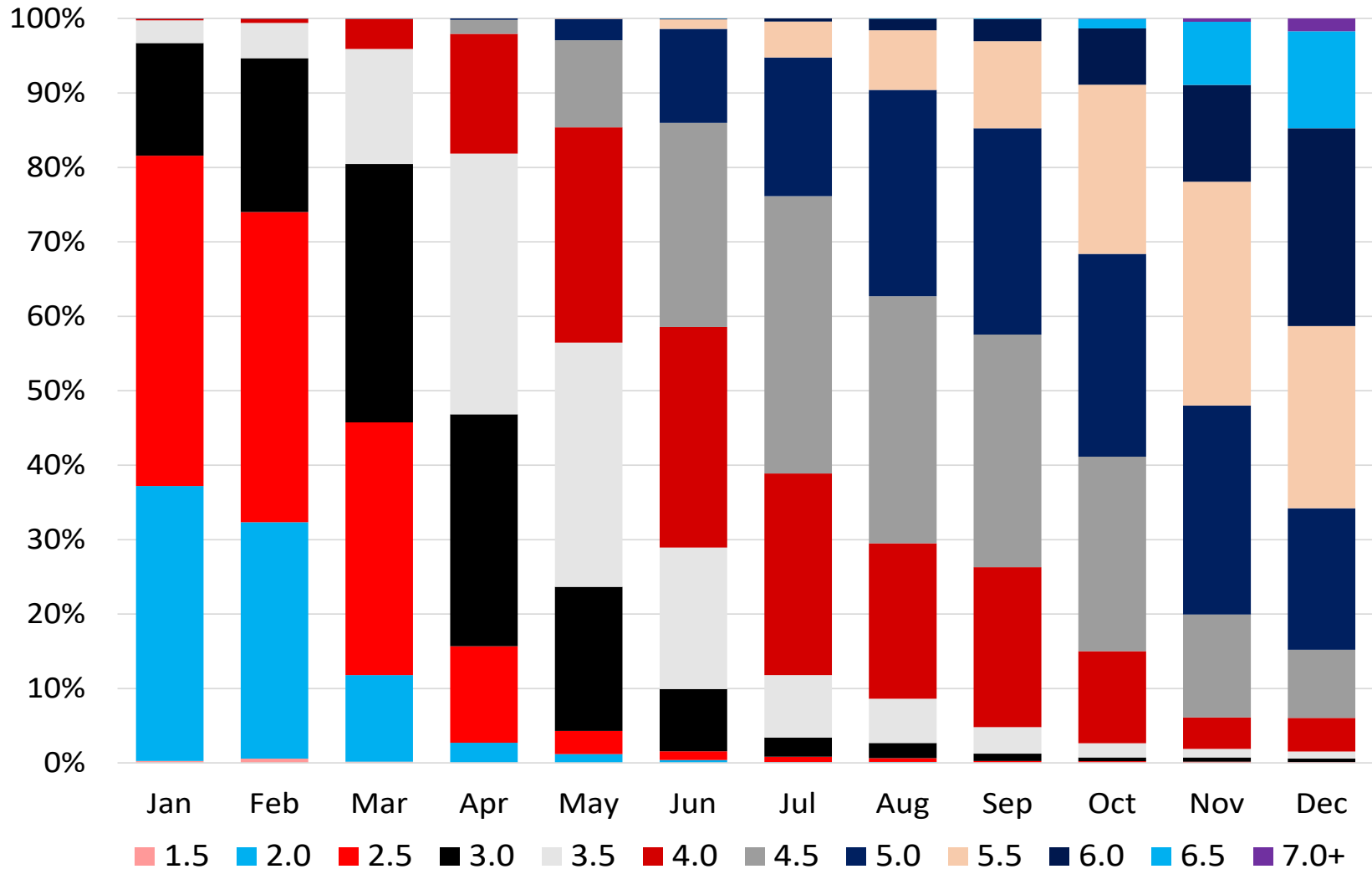
# At Least \$5 Billion Issued in a Single Month in *Ten Different Coupons*

Gross Issuance | 30yr Conventional MBS



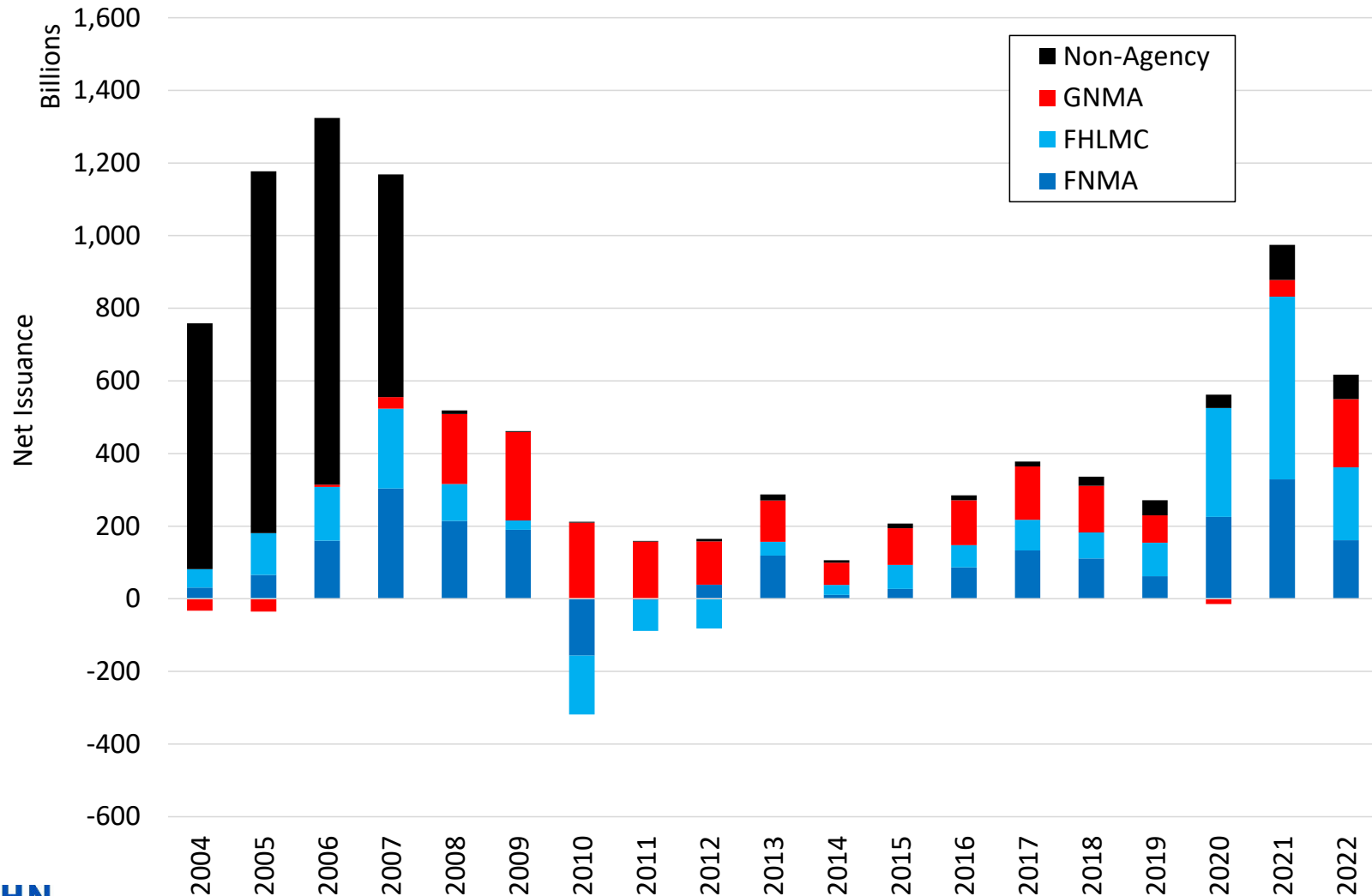
# Single-Month Issuance Distribution Across Coupons is Improving

Percent of Gross Issuance | 30yr Conventional MBS



# Net Agency MBS Issuance Still Above Trend, but...

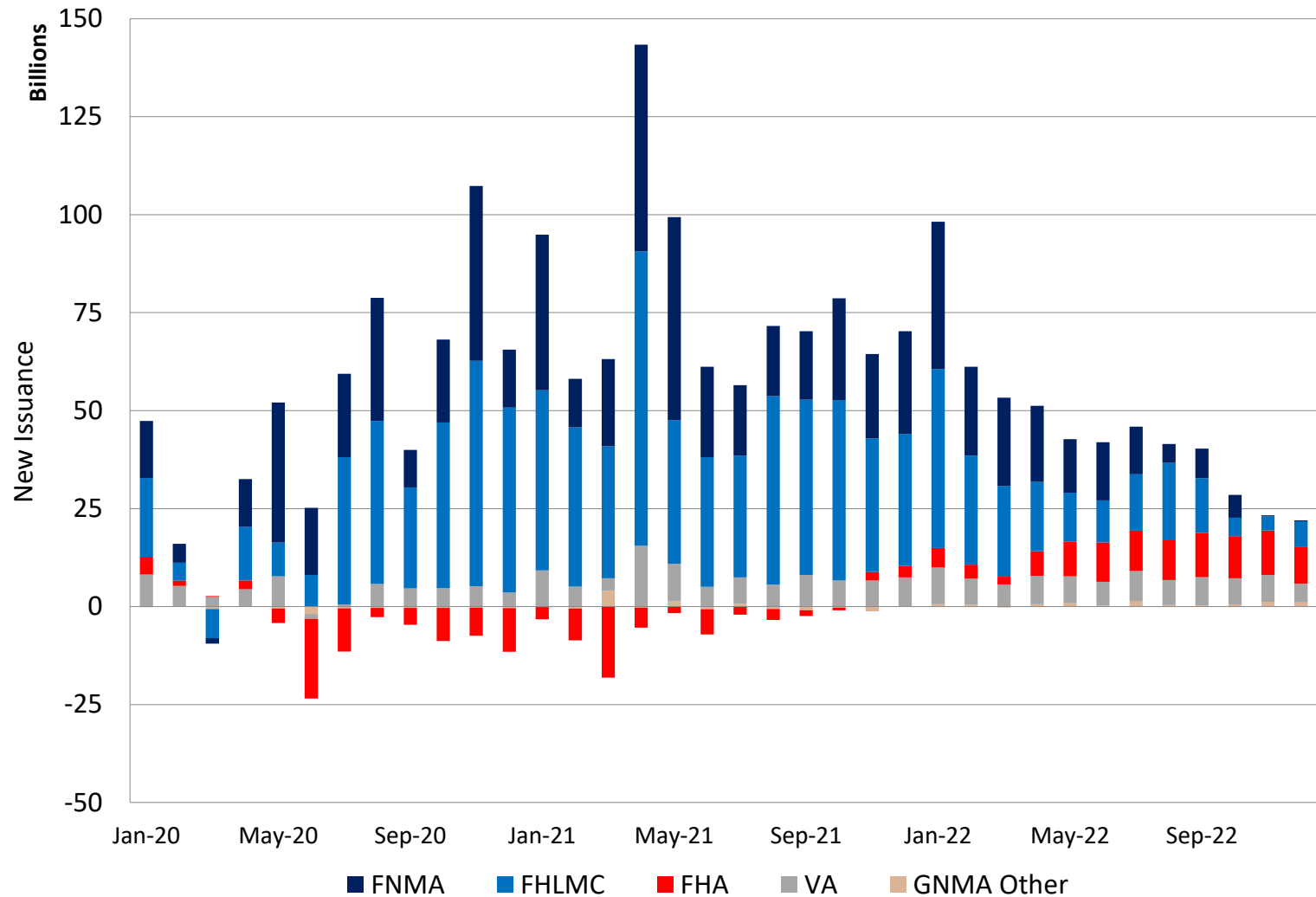
Annual Net Issuance in Securitized Mortgage Market





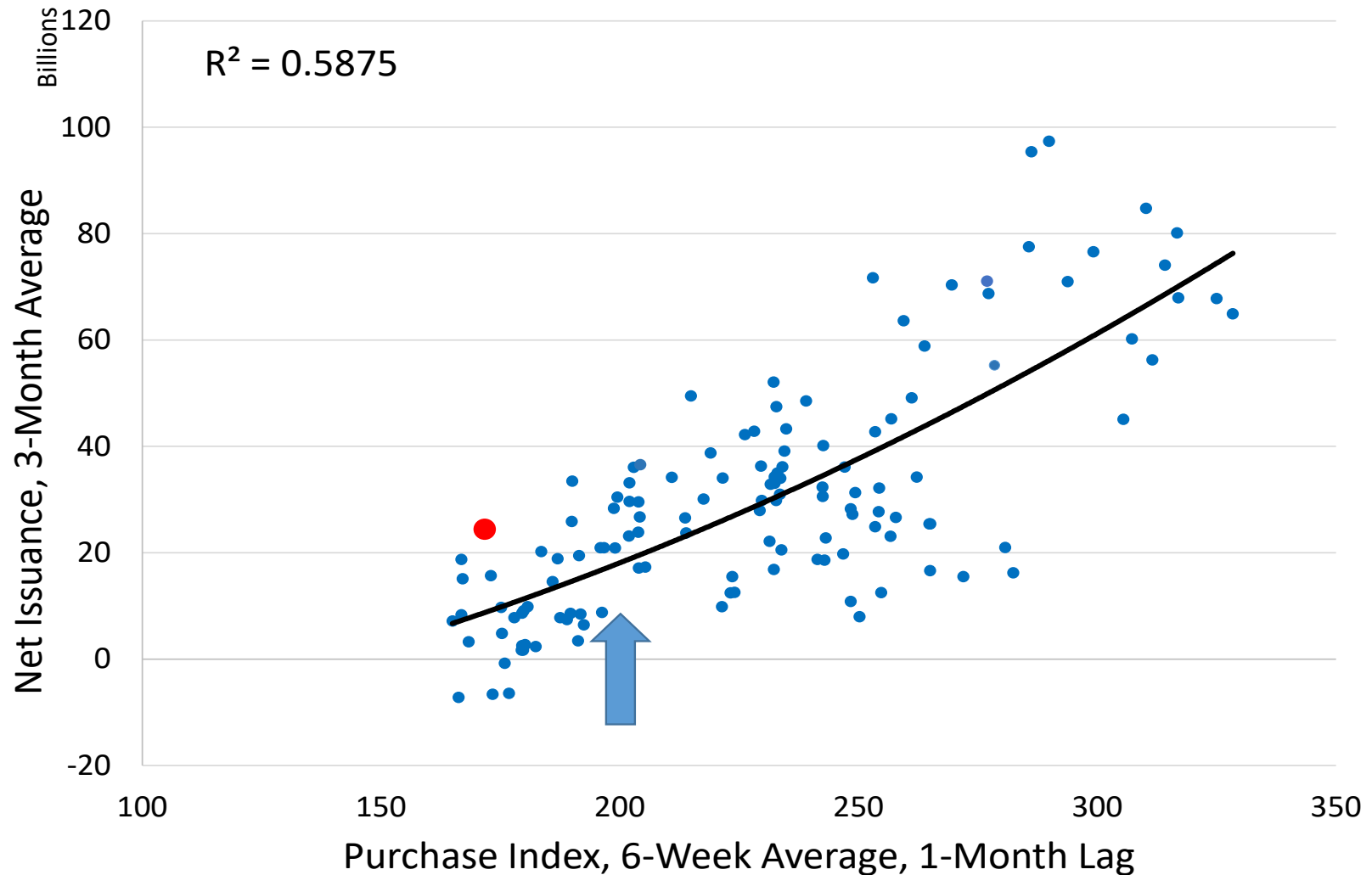
# ...Detail of Monthly Trend Shows Quick Deceleration

Monthly Agency MBS Net Supply Since January, 2020

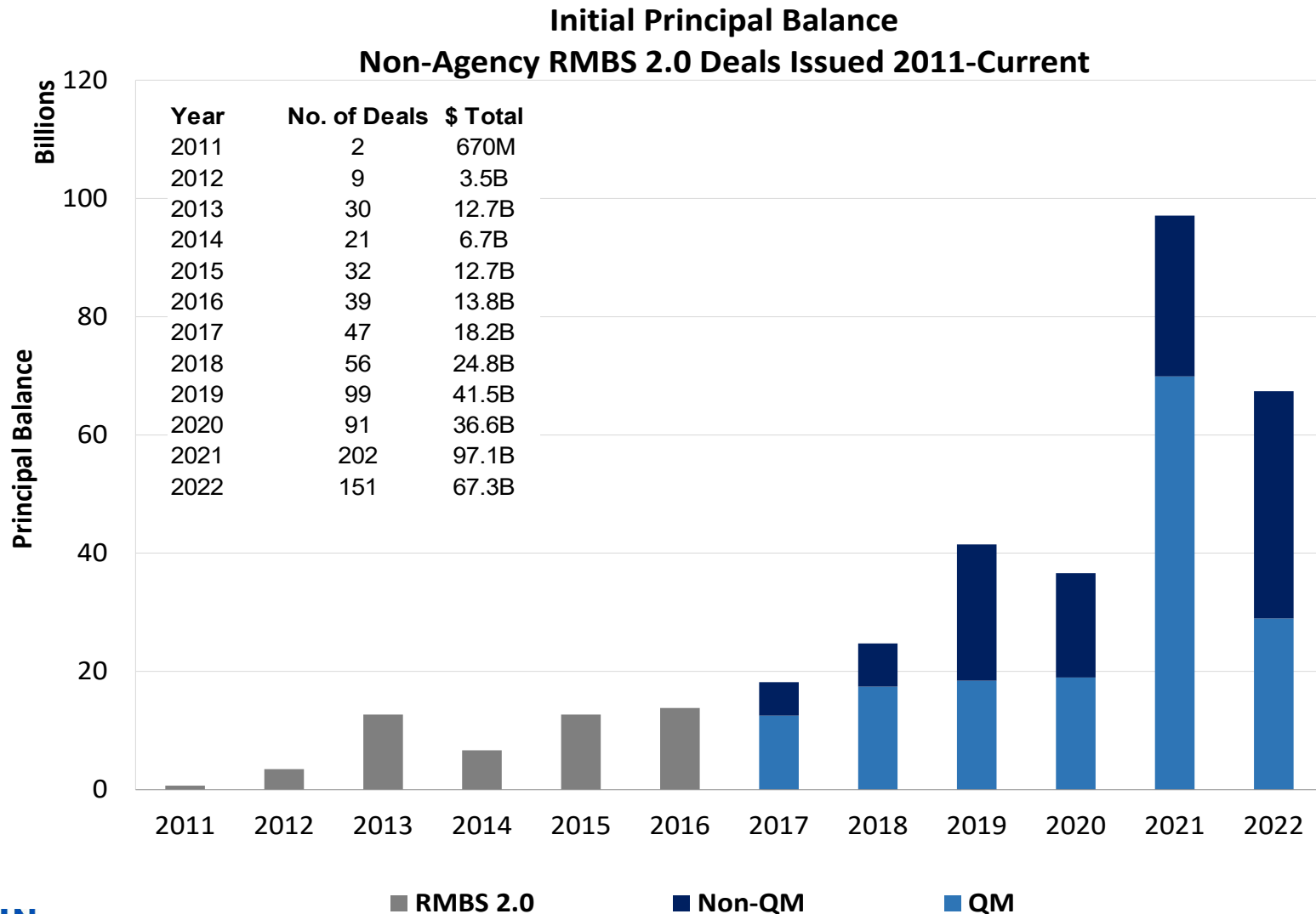


# Net Issuance Estimate of \$20-\$25 Bln/Mo at Current Purchase Index Level

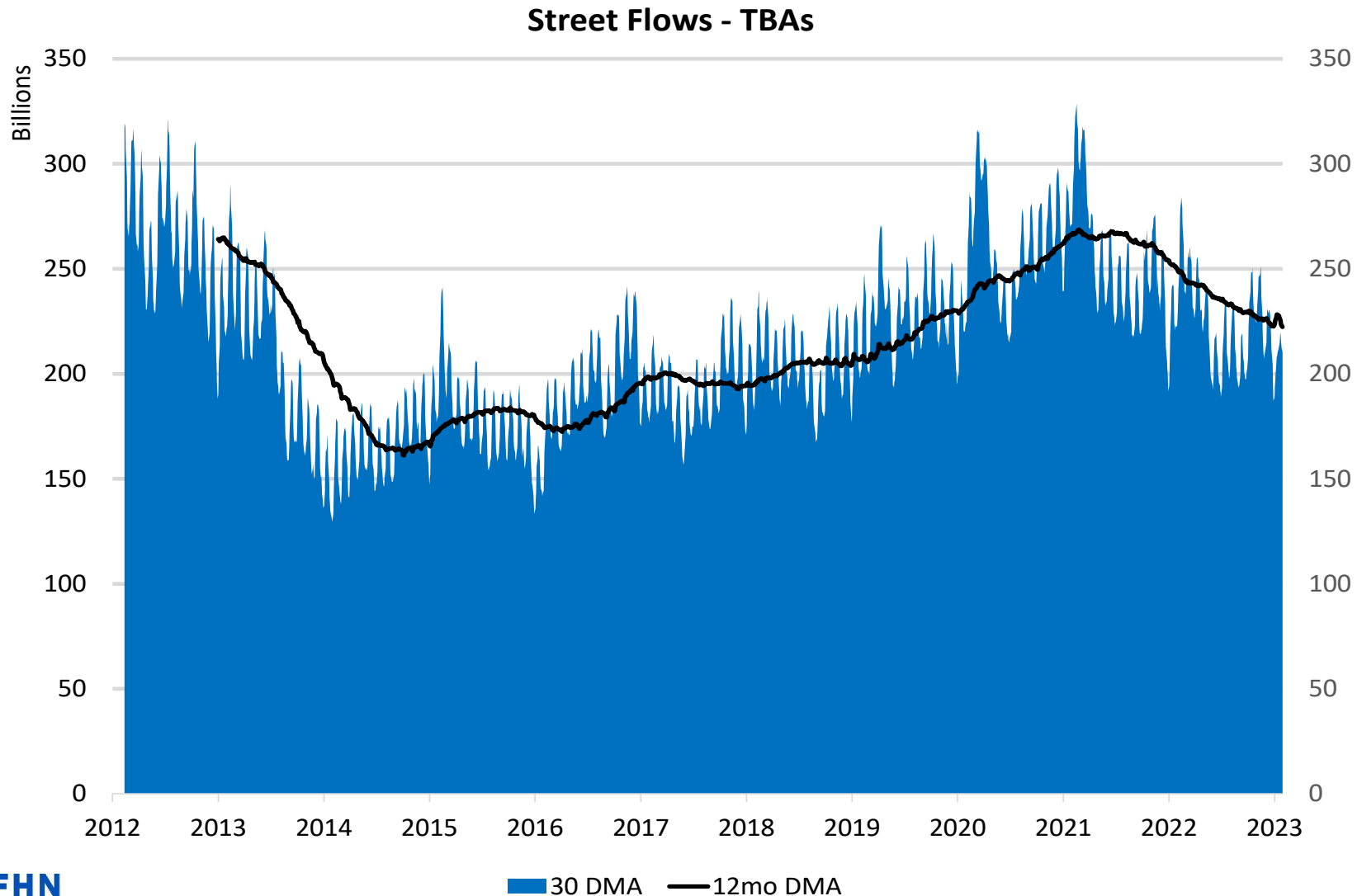
Fixed Rate Net MBS Issuance vs MBA Purchase Index



# Non-Agency RMBS Deal Volume Still Higher Than 2020

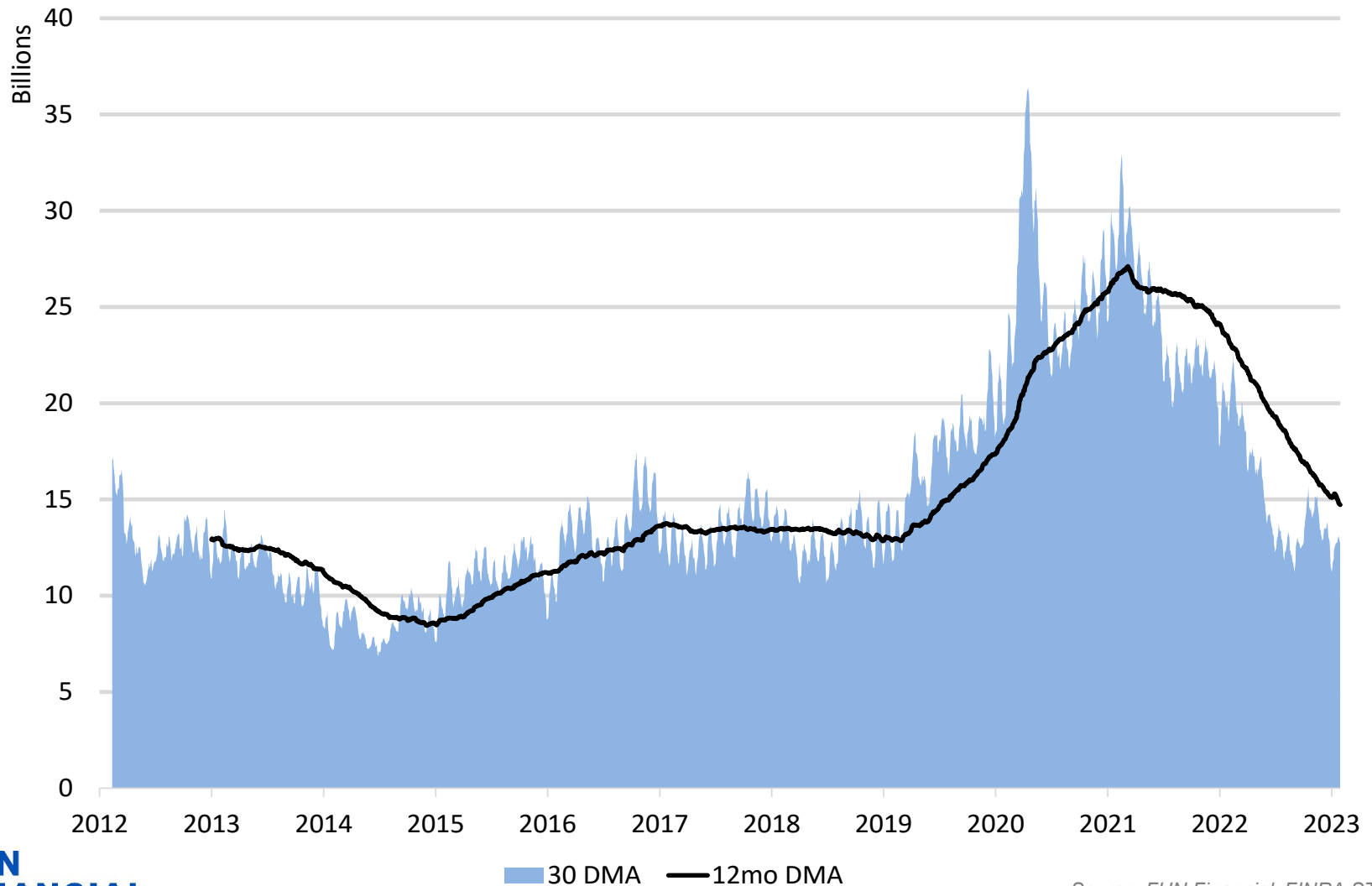


# TBA Trading Flows Still Higher Pre-Covid Levels



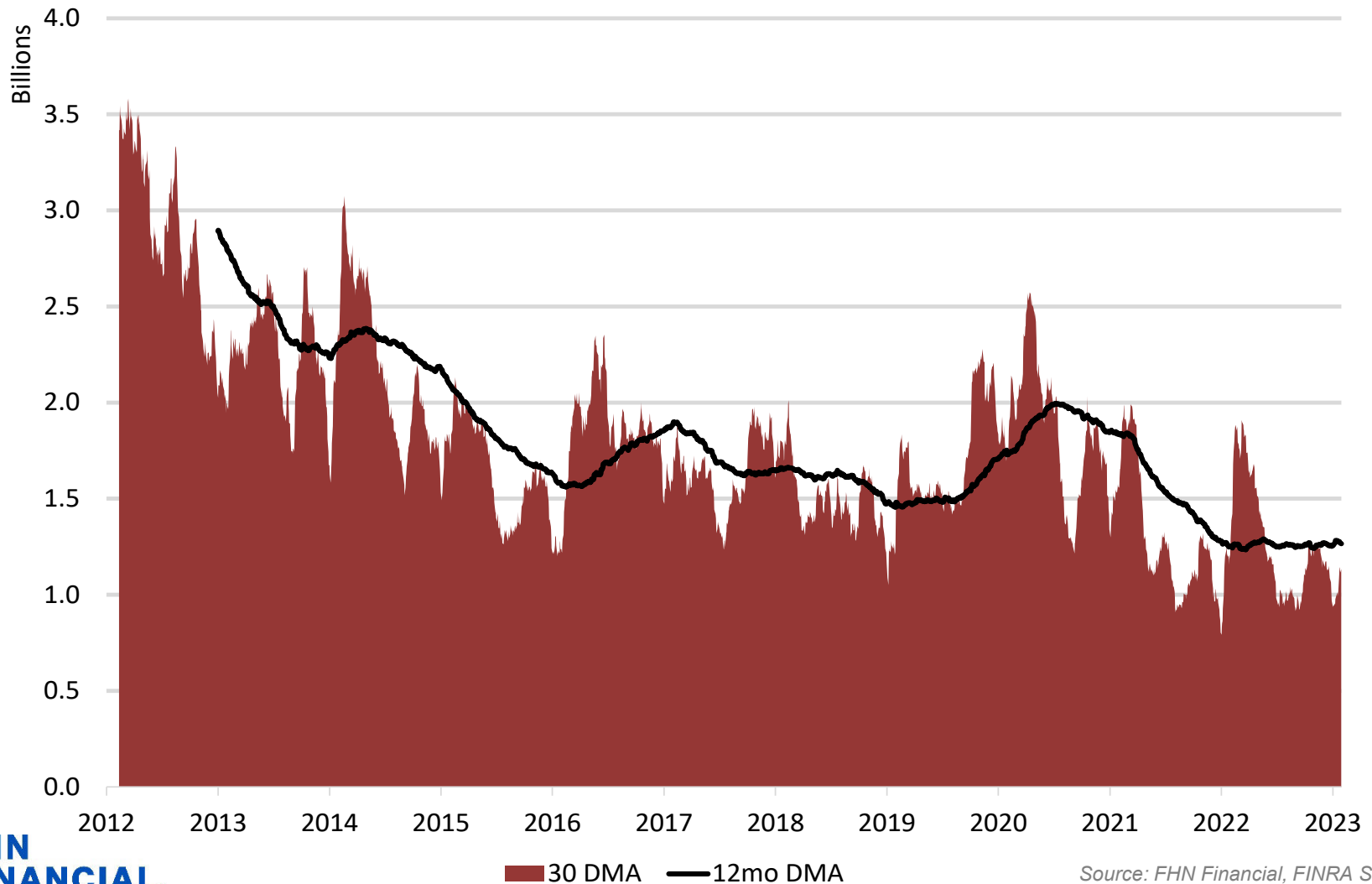
# Spec Pool Flows Saw the Largest Boom/Bust Cycle with Covid

Street Flows - Specified Pools



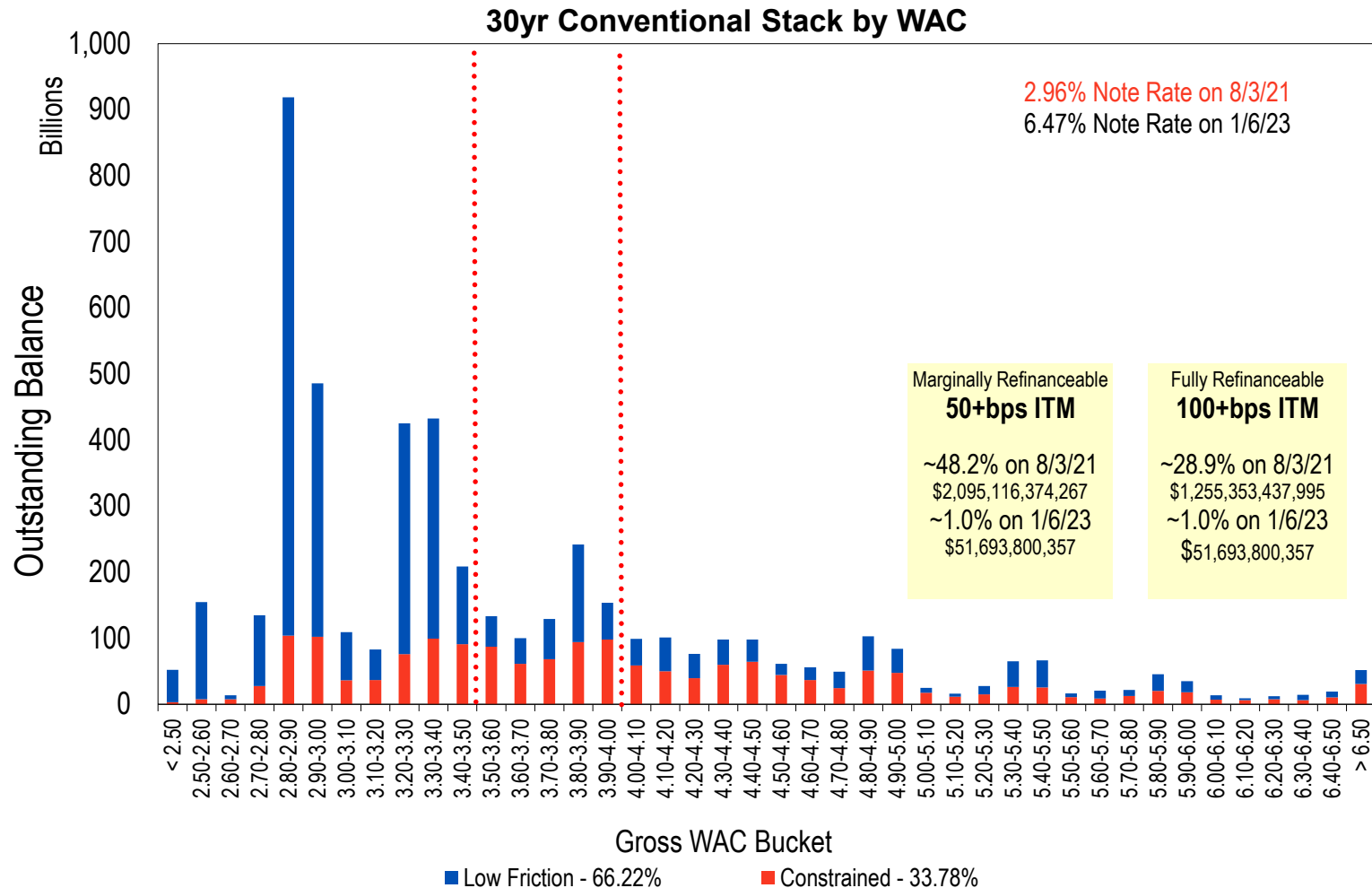
# Trading in CMOs Has Flat-Lined at Lows of the Decade

Street Flows - Agency CMOs



1. Market Structure
- 2. Prepayments**
3. Relative Value

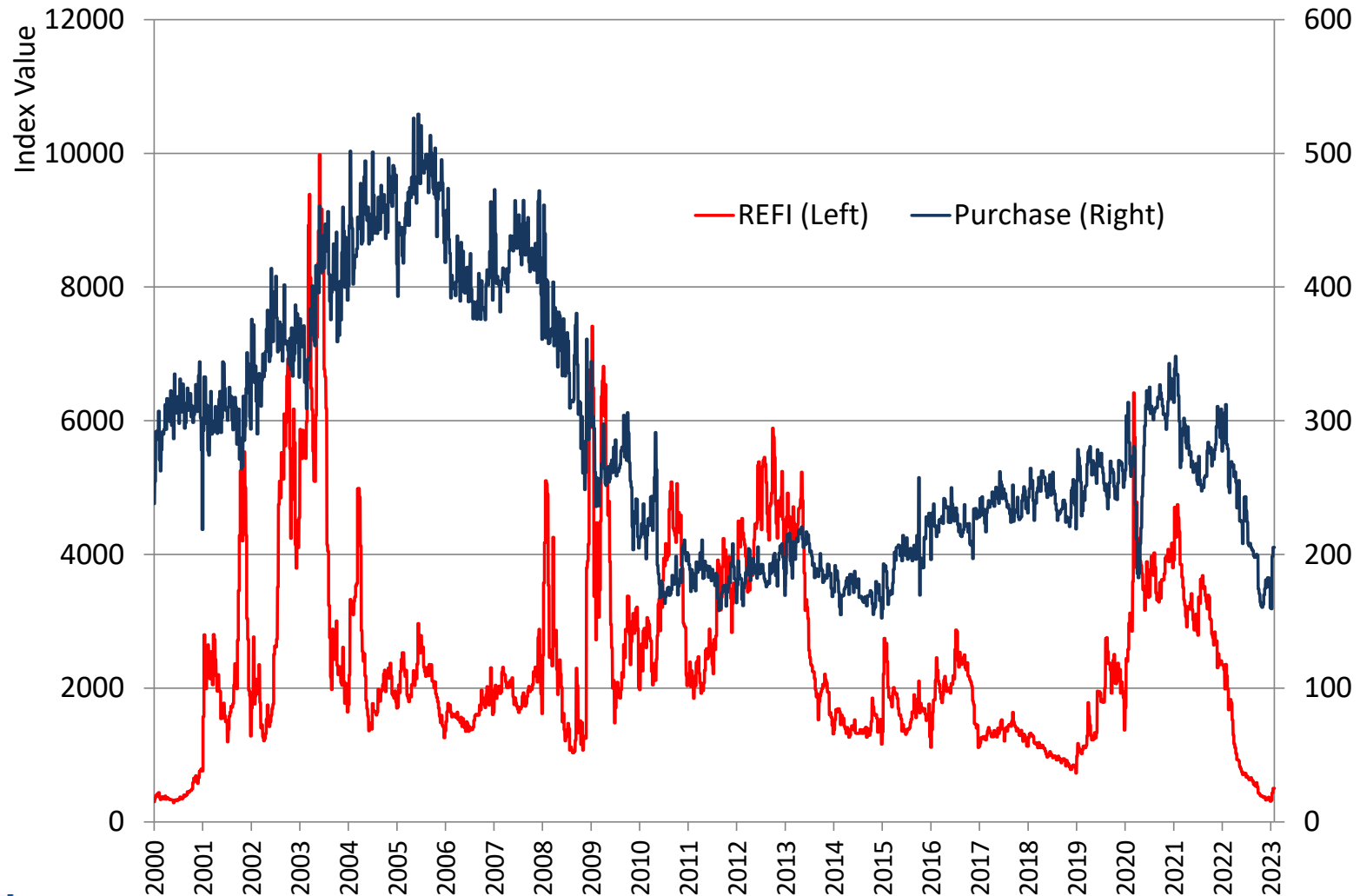
# Virtually 0% of the MBS Market ITM After Recent Moves



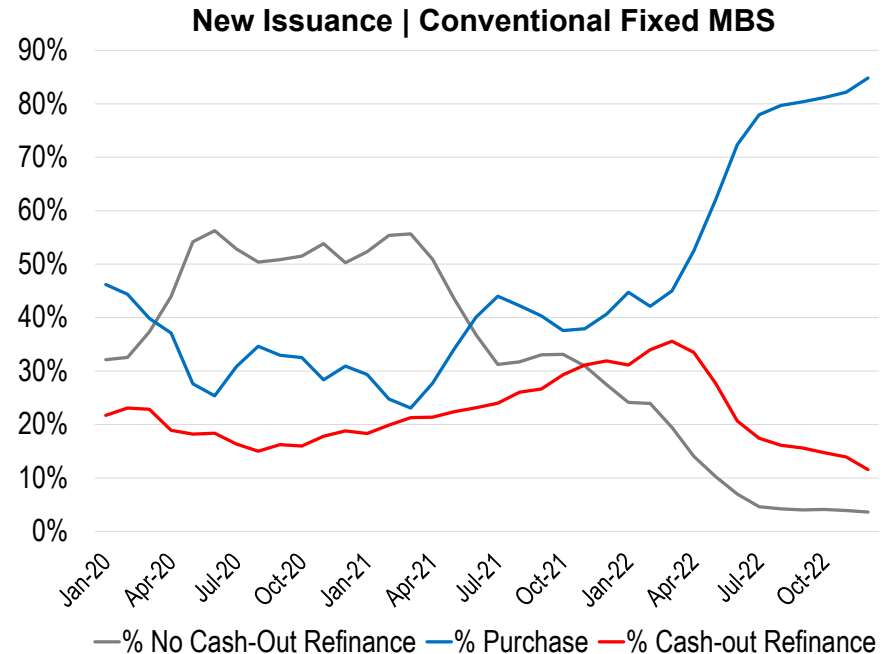
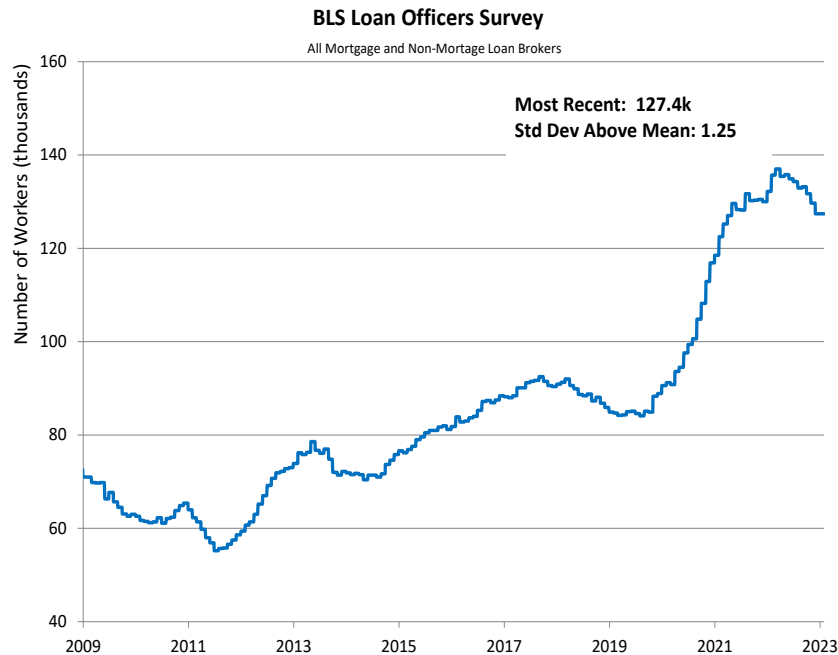


# Refi's Have Plummeted Purchases at Multi-Year Lows

MBA REFI and Purchase Indices



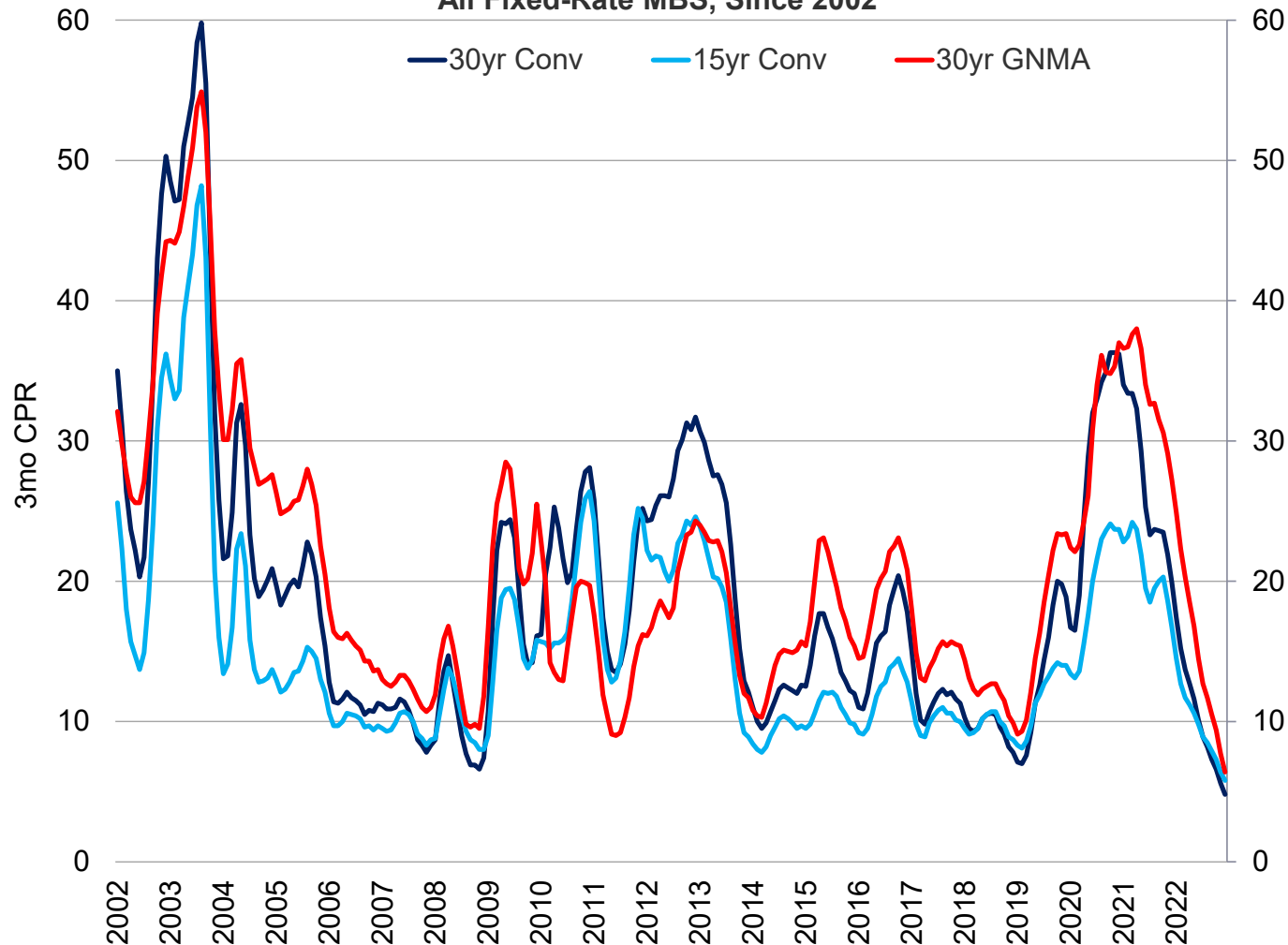
# Employment in Mortgage Industry Still High But Trending Down



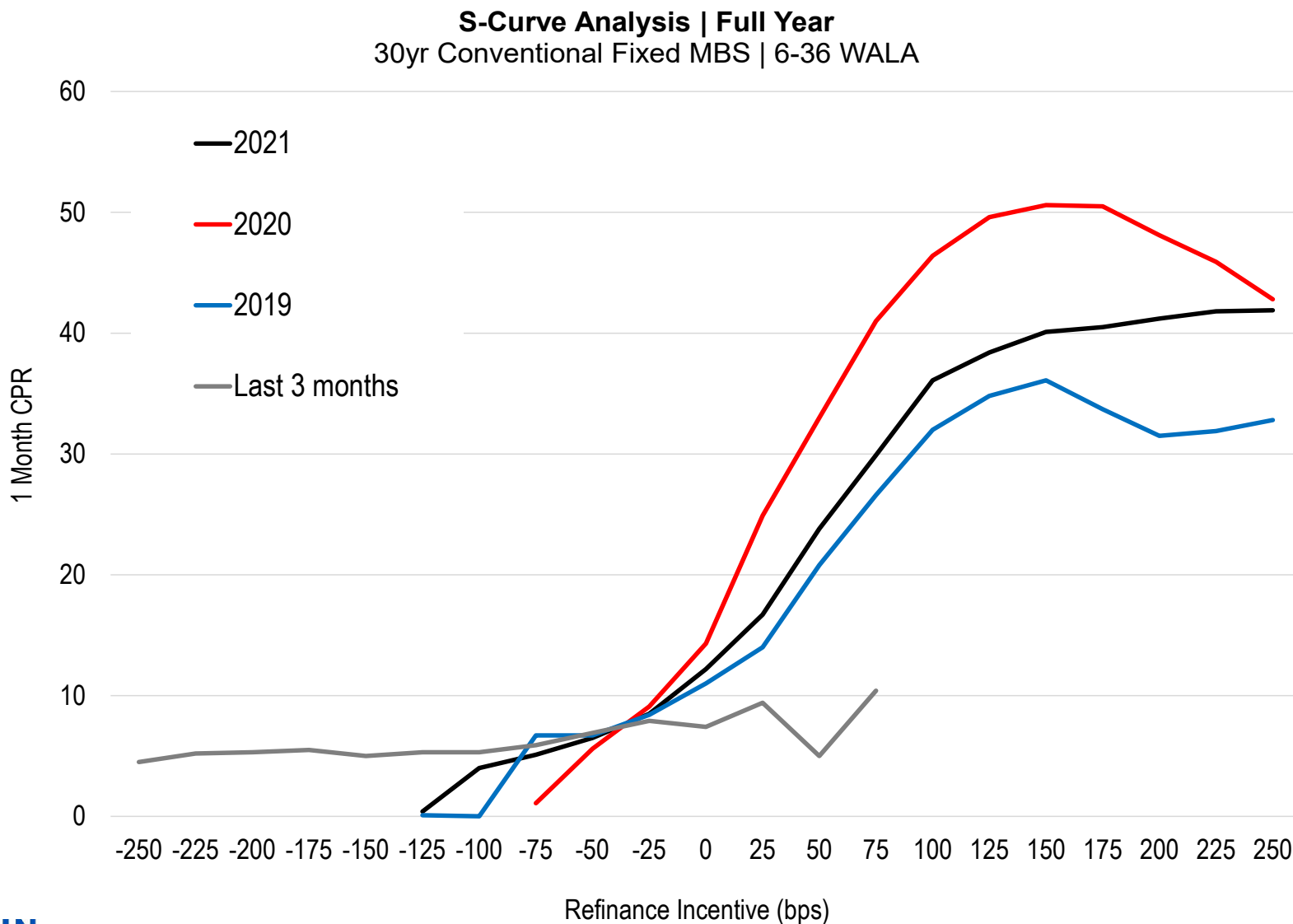
- Employment in the mortgage industry remains near all-time highs despite the recent pause in hiring.
- Lenders redirecting capacity to cash-out refinancing.
- Purchase is dominating an otherwise fragile lending landscape.

# Aggregate Prepay Speeds Now at “Modern MBS” All-Time Lows

Time Series Analysis: 3mo CPR of Main Cohorts  
All Fixed-Rate MBS, Since 2002

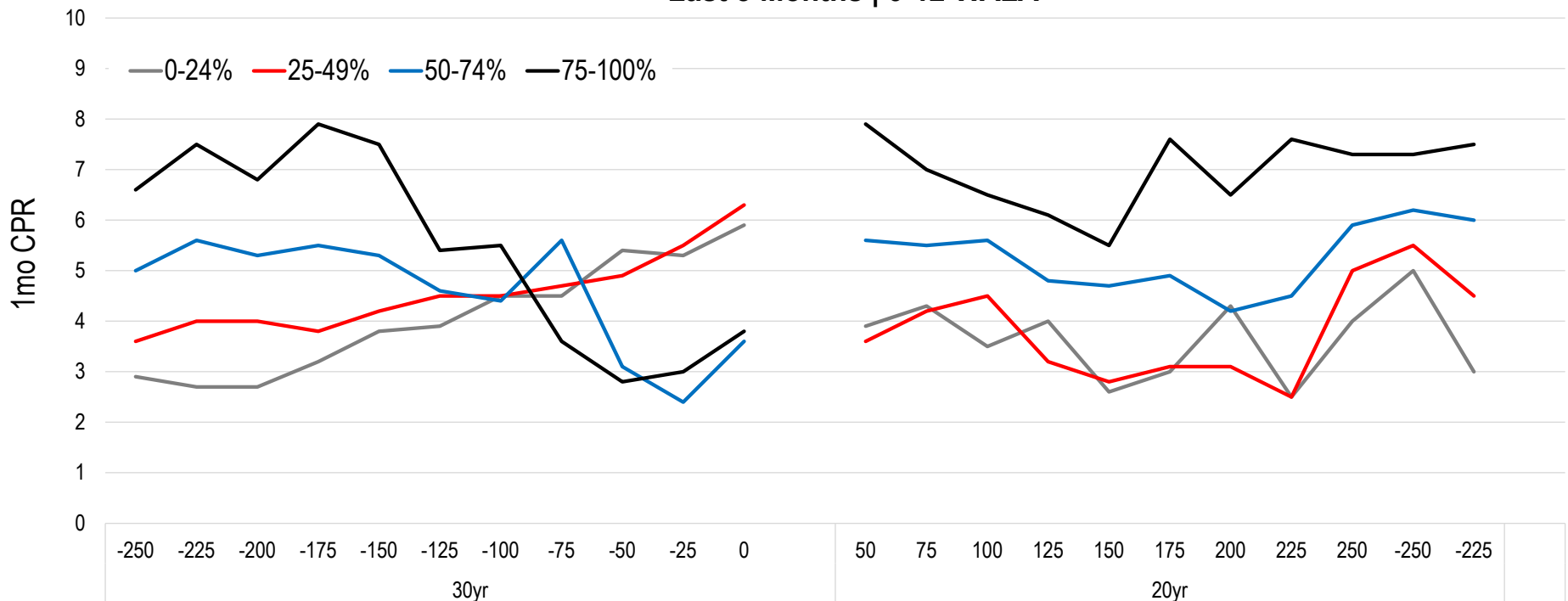


# Current S-Curve Very Flat: Benign Environment for MBS

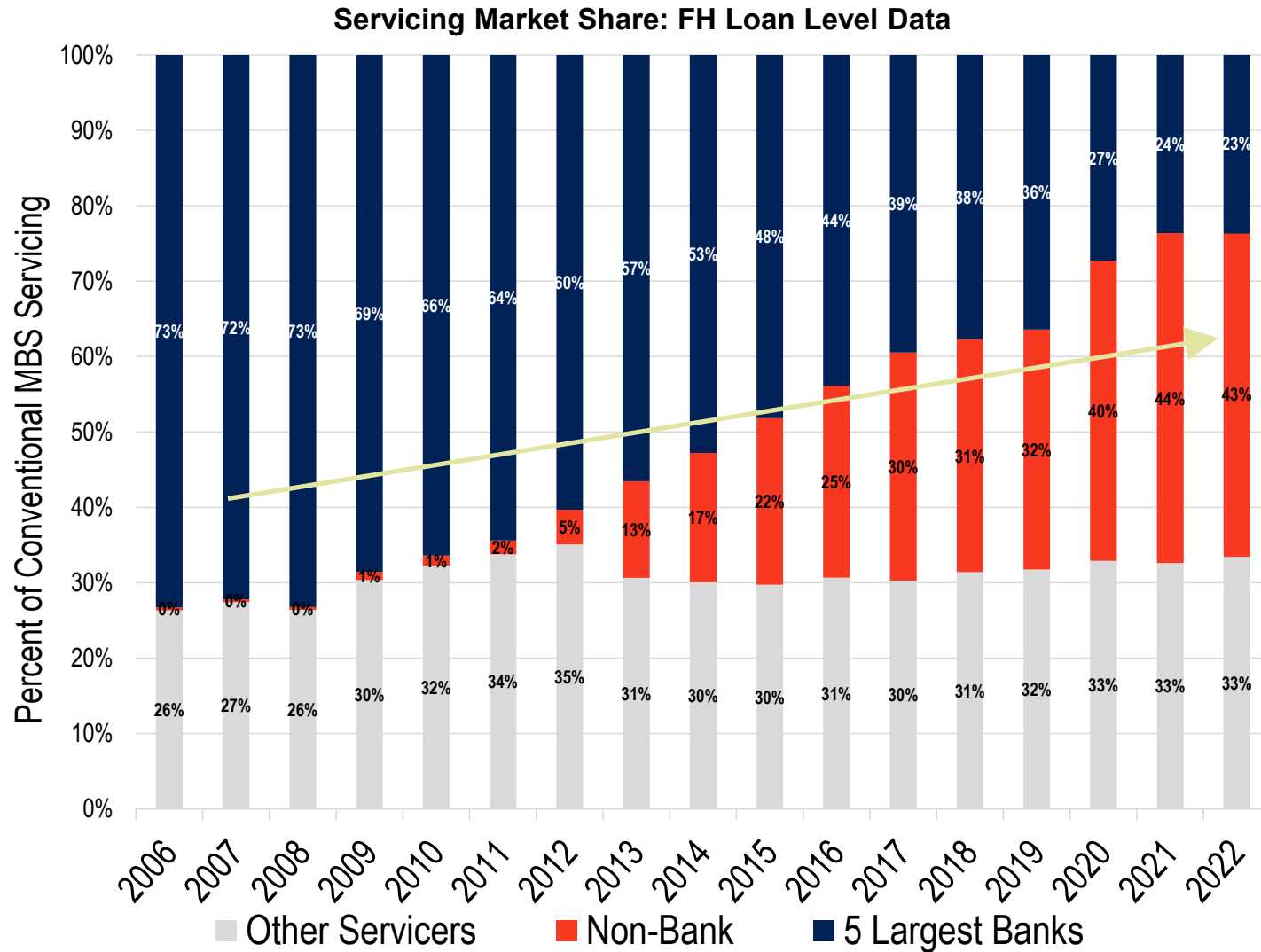


# Faster Speeds Persist in New Issue, High Percentage Cash-out Pools

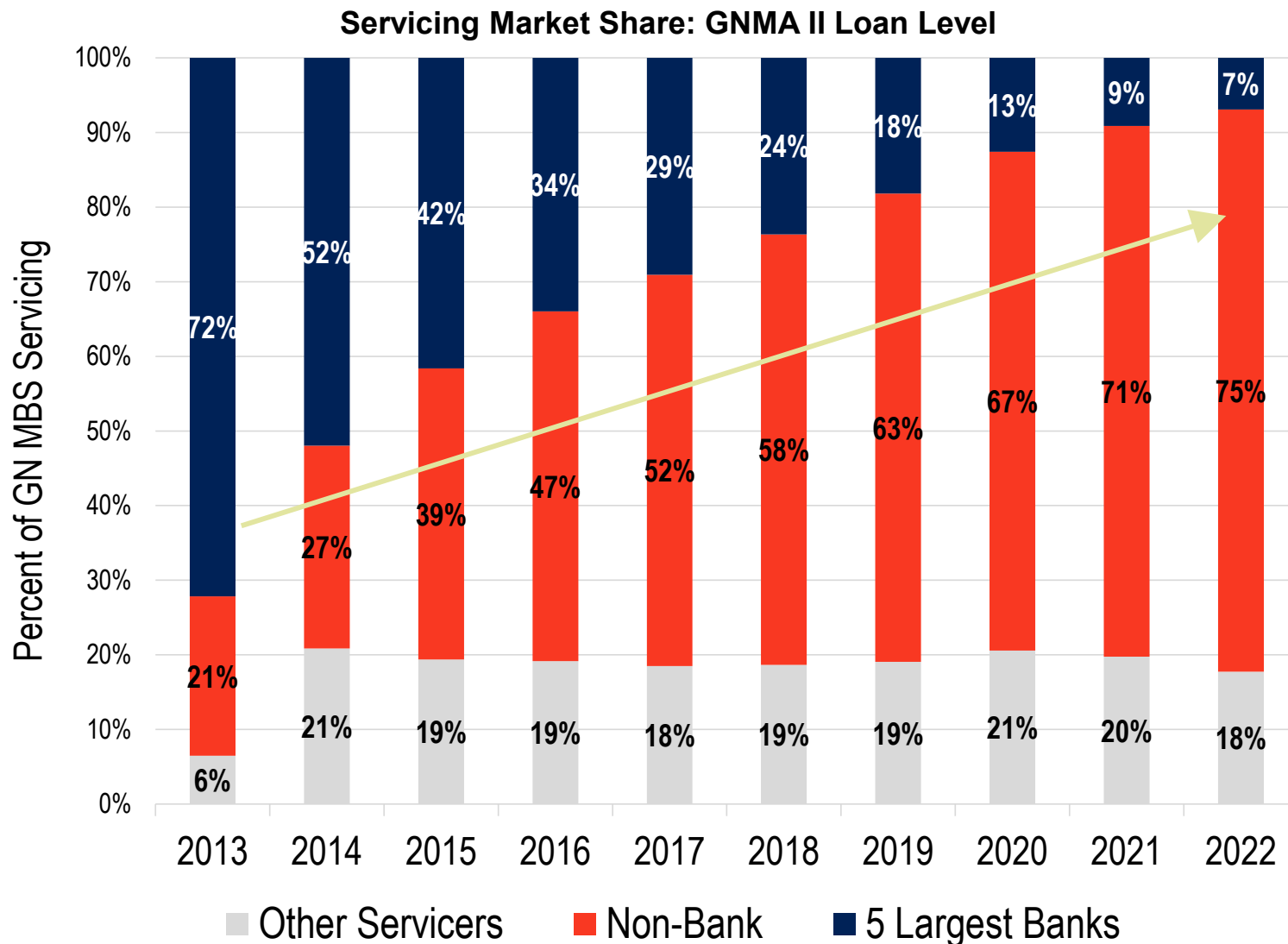
30yr Conventional S-Curves by Percent Cashout  
Last 3 Months | 0-12 WALA



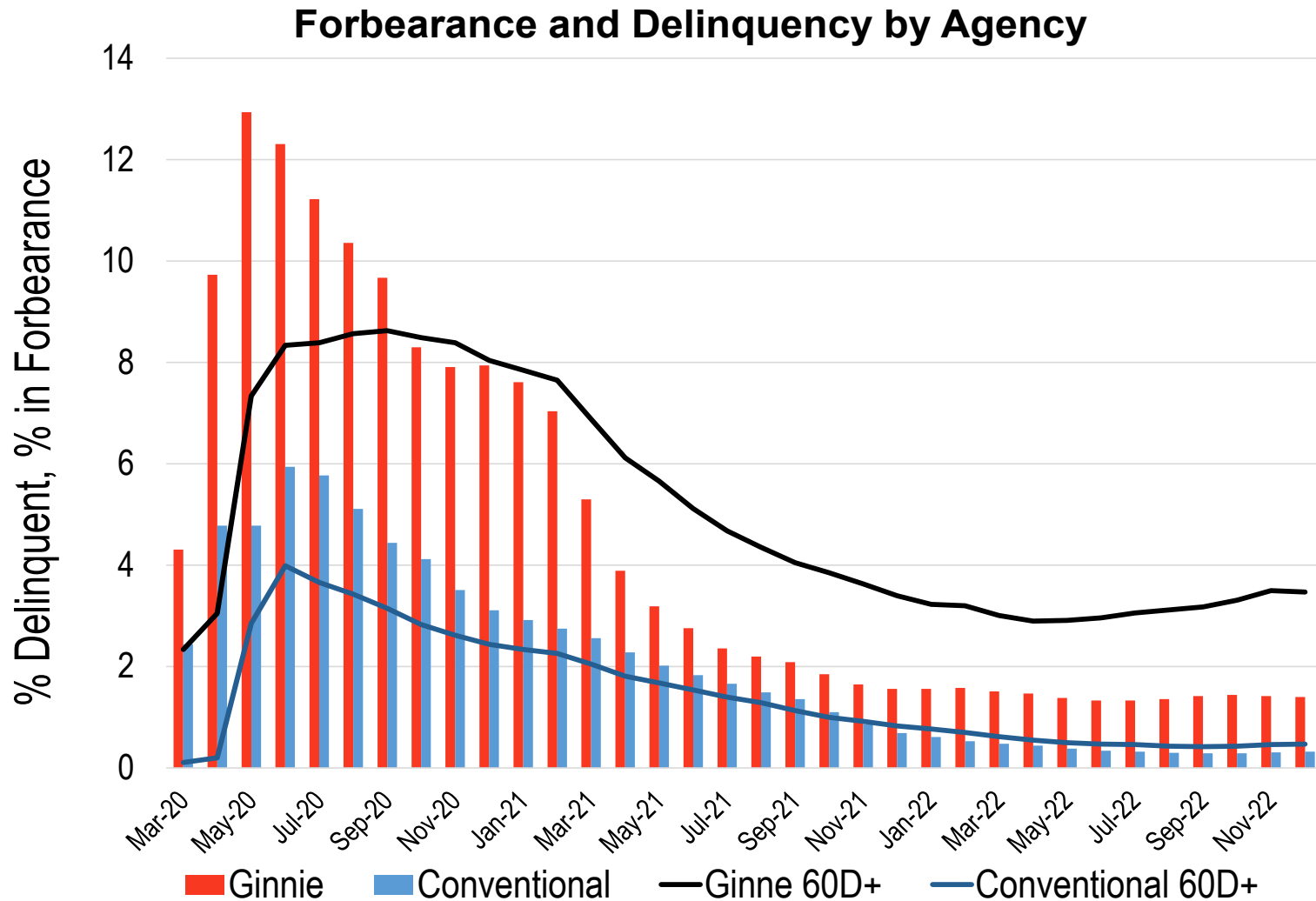
# Dominant Non-Bank Market Share Remains the “Big” Trend



# Non-Banks Service ~75% of Ginnie



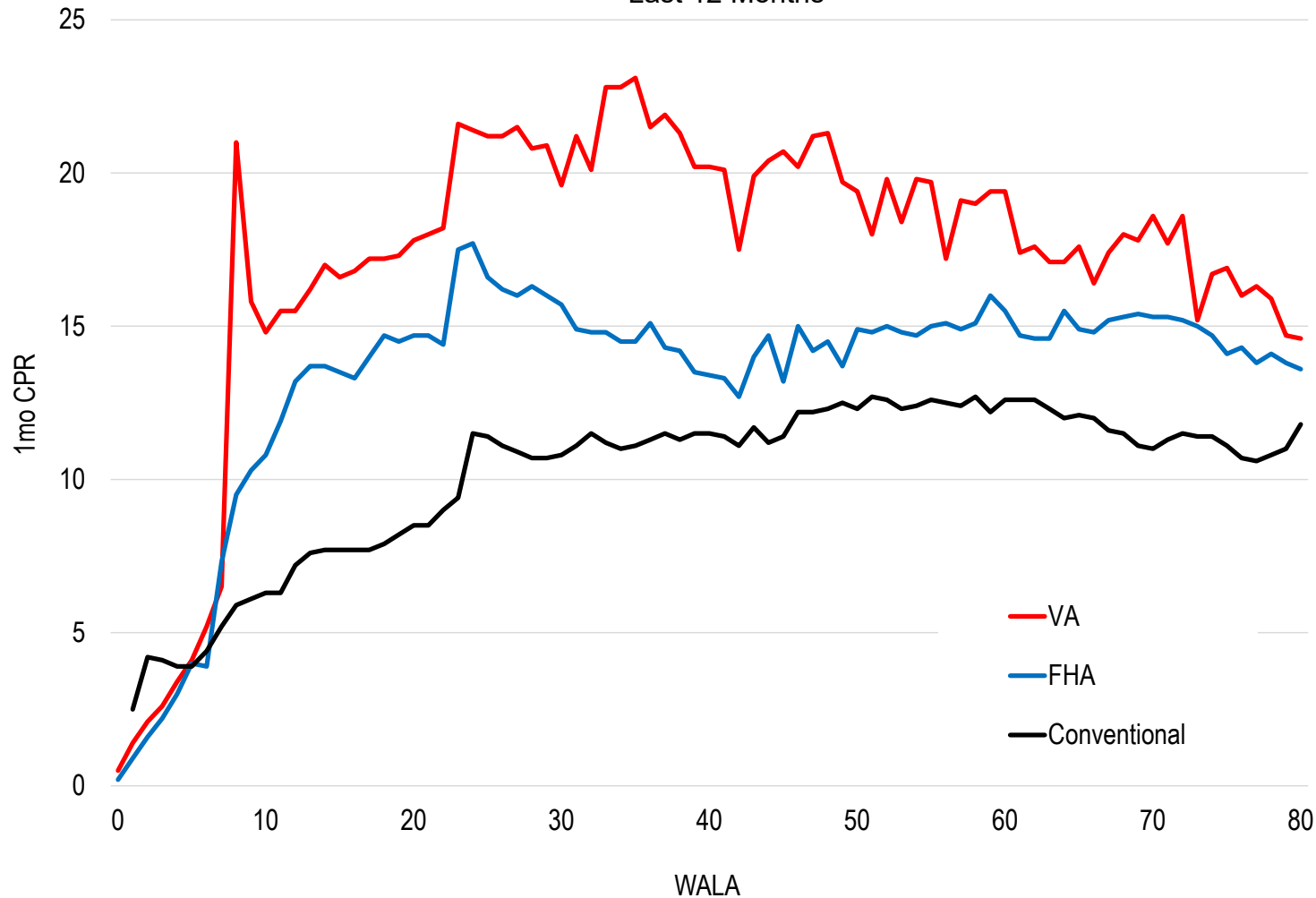
# Serious Delinquencies Higher in GN





# Negative Incentive Ageing Curves Demonstrate Value in Ginnie

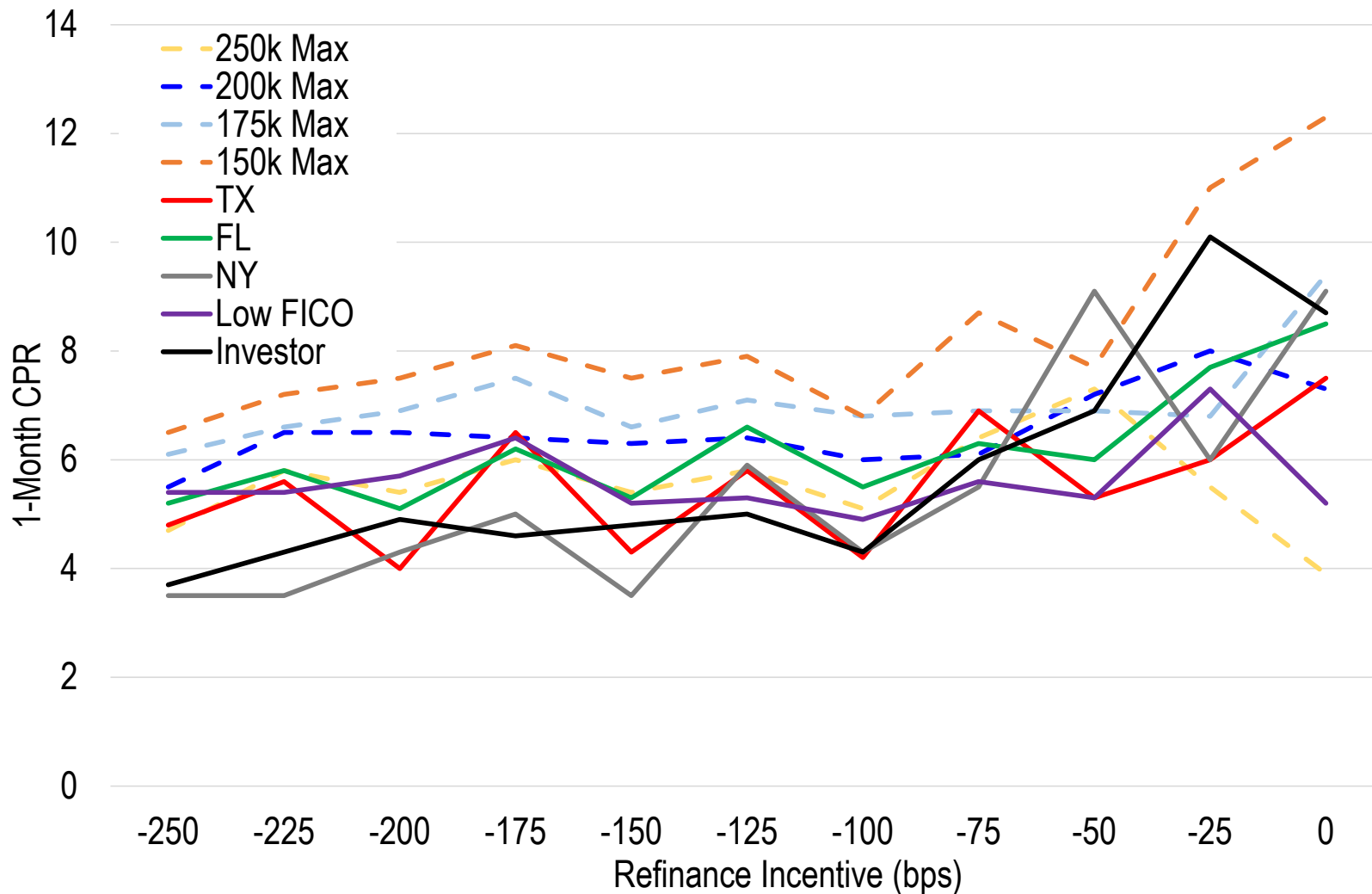
A-Curve Analysis | -200bps to -50bps Incentive  
Last 12 Months



— VA  
— FHA  
— Conventional

# Loan Balance is a Good Turnover Story, As Well

S-Curve Analysis by Loan Size | 30yr Conventional MBS  
6-36 WALA | Last 3 Months

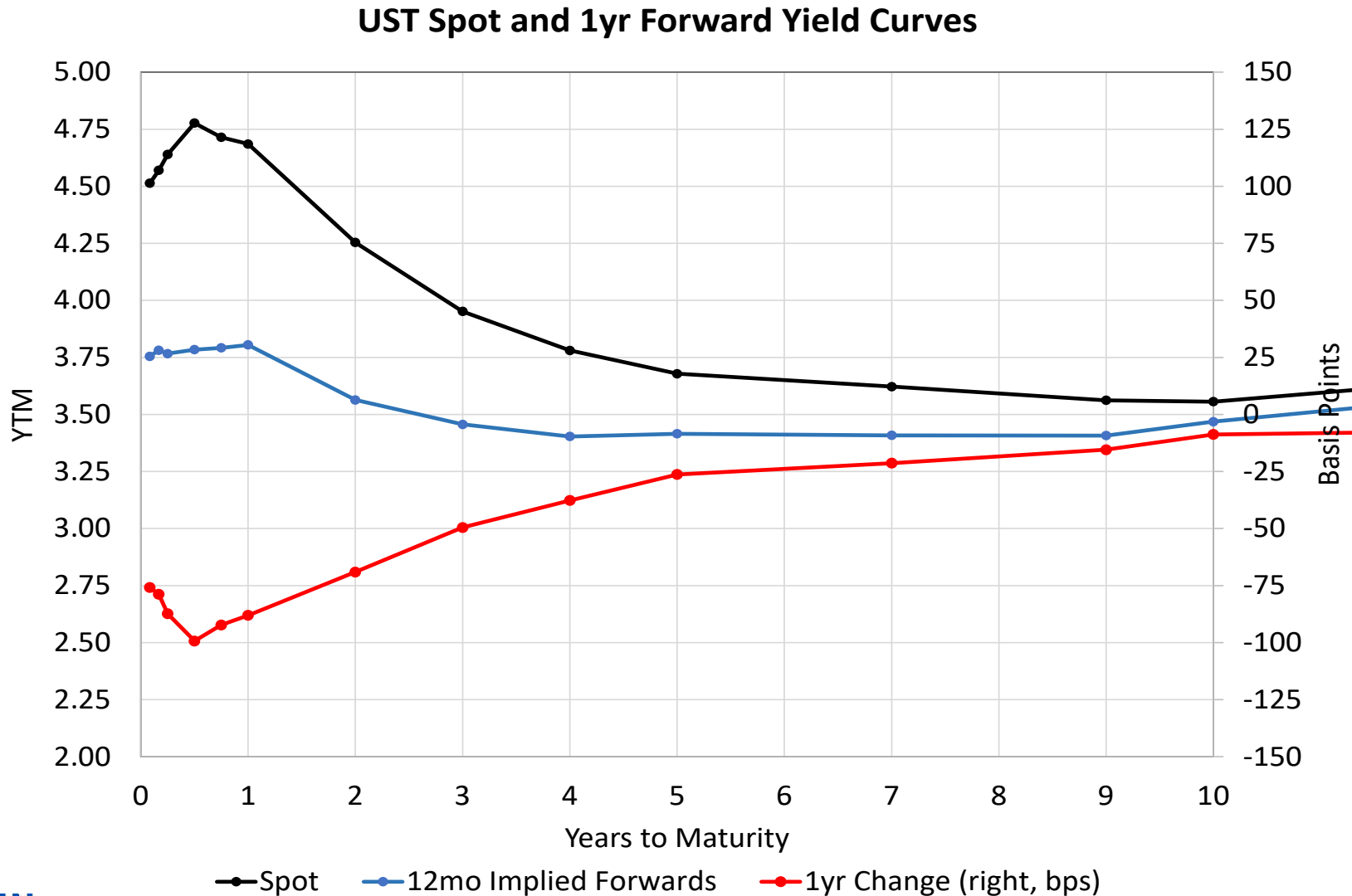


1. Market Structure
2. Prepayments
- 3. Relative Value**

# Three Basic Levers to Pull In Fixed Income

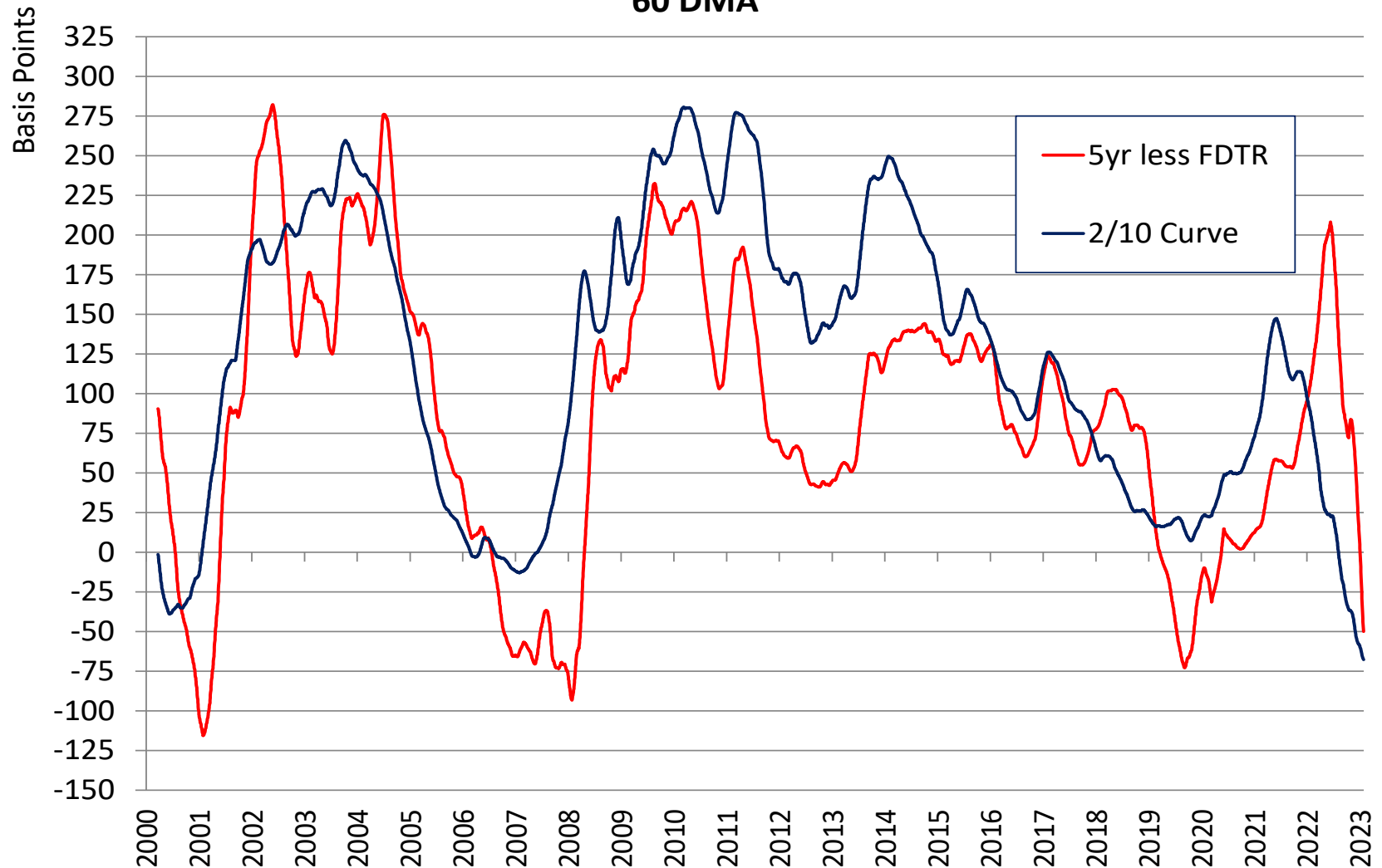
- ***Duration:*** Rates are higher in current QT era, but YC is inverted.
- ***Optionality:*** The BofA MOVE index near historical highs. Selling options looks like a winning strategy.
- ***Credit:*** Bloomberg/Barclays High Grade Index OAS/Spread is percolating, but is still slightly below long-term averages.

# Bull Steepener in Forward Curve, But Curve Still Inverted in One Year



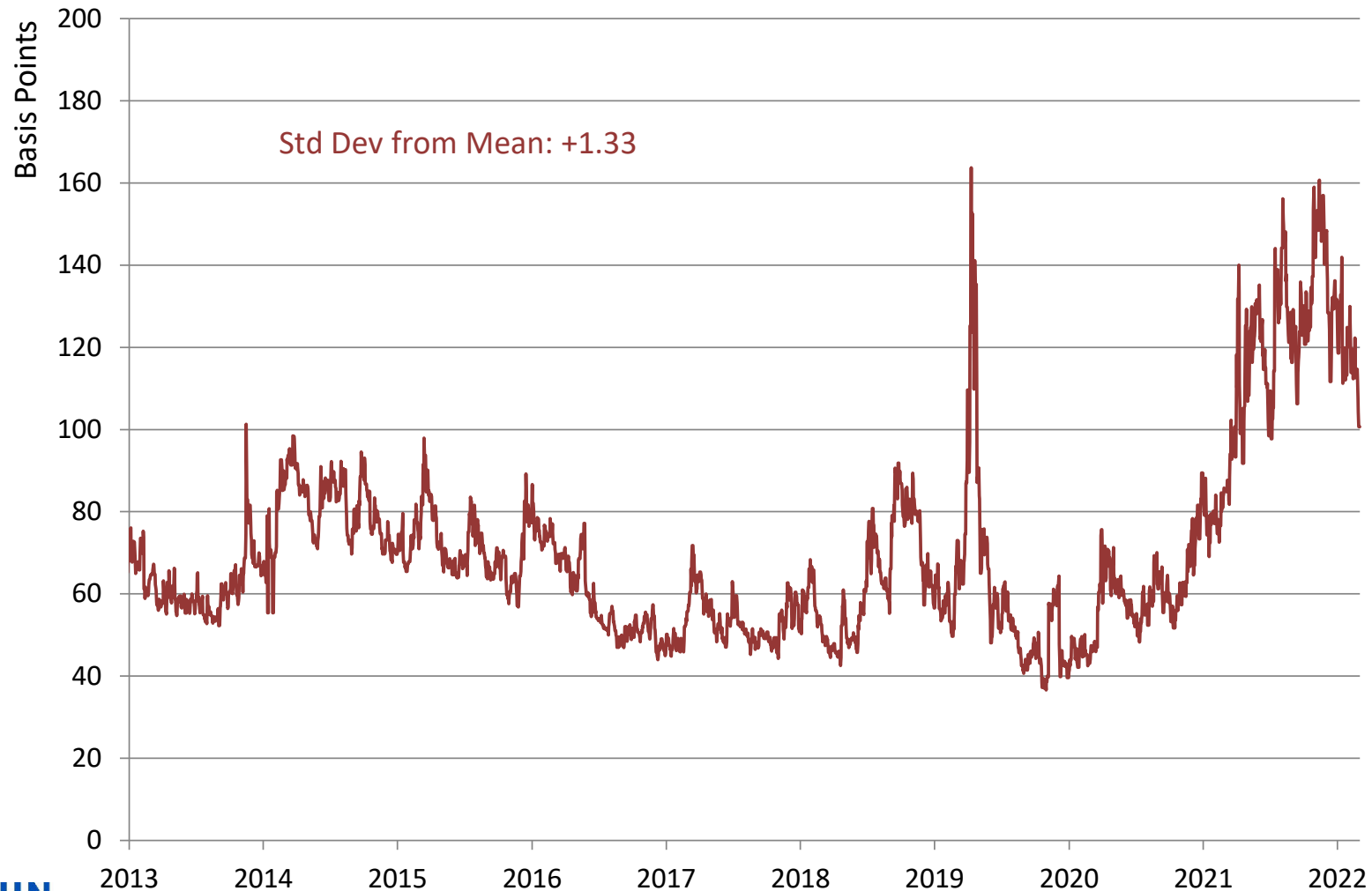
# Yield Curve Historically Flat/Inverted

Shape of UST Yield Curve  
60 DMA



# Implied Volatility Ratcheting Lower But Still Plenty of Room to Fall

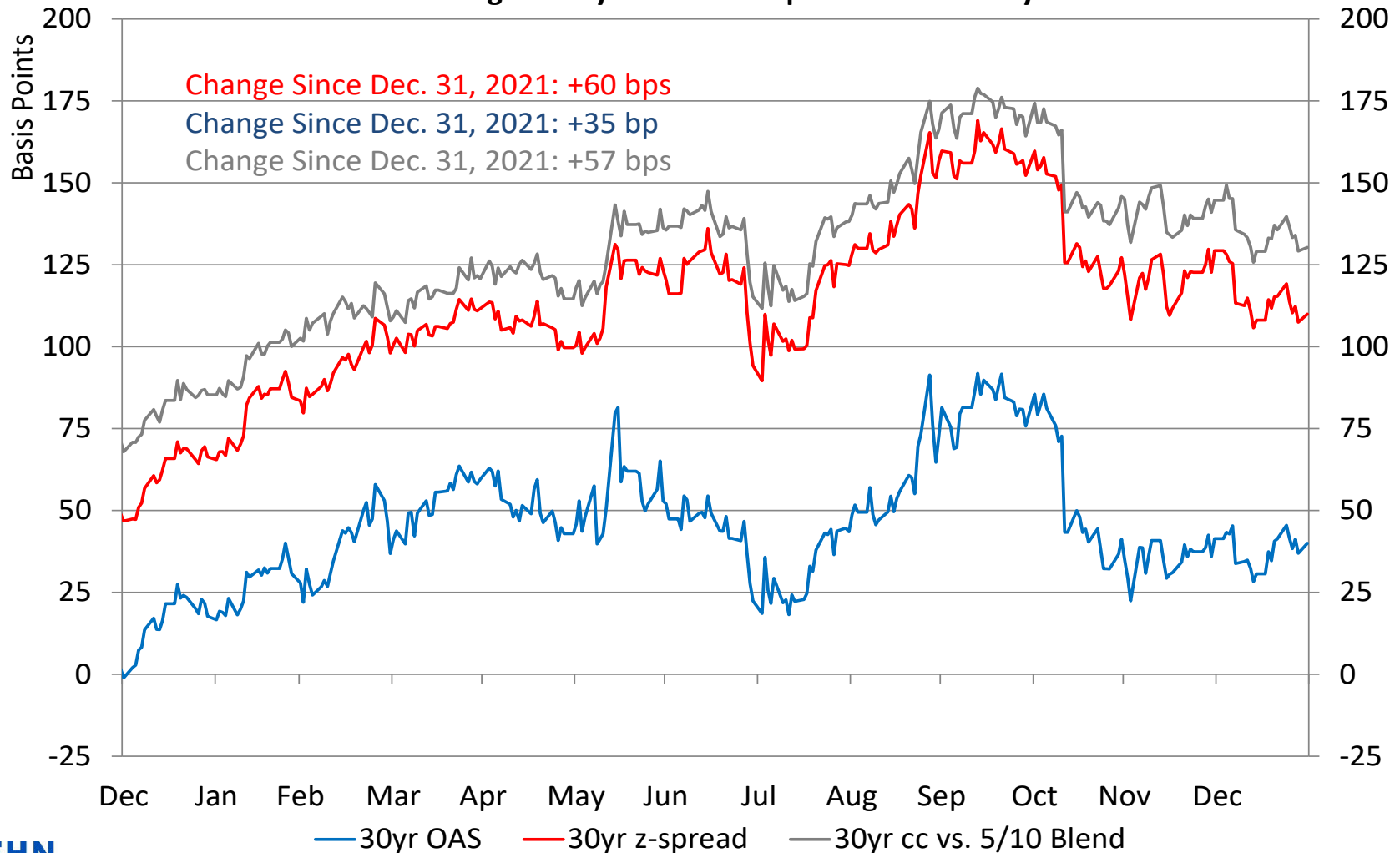
Implied Volatility - MOVE Index



# 30yr CC Spreads Still Wide Despite Recent Strong Performance

Current Coupon OAS, z-spread and Spread to 5/10 Blend

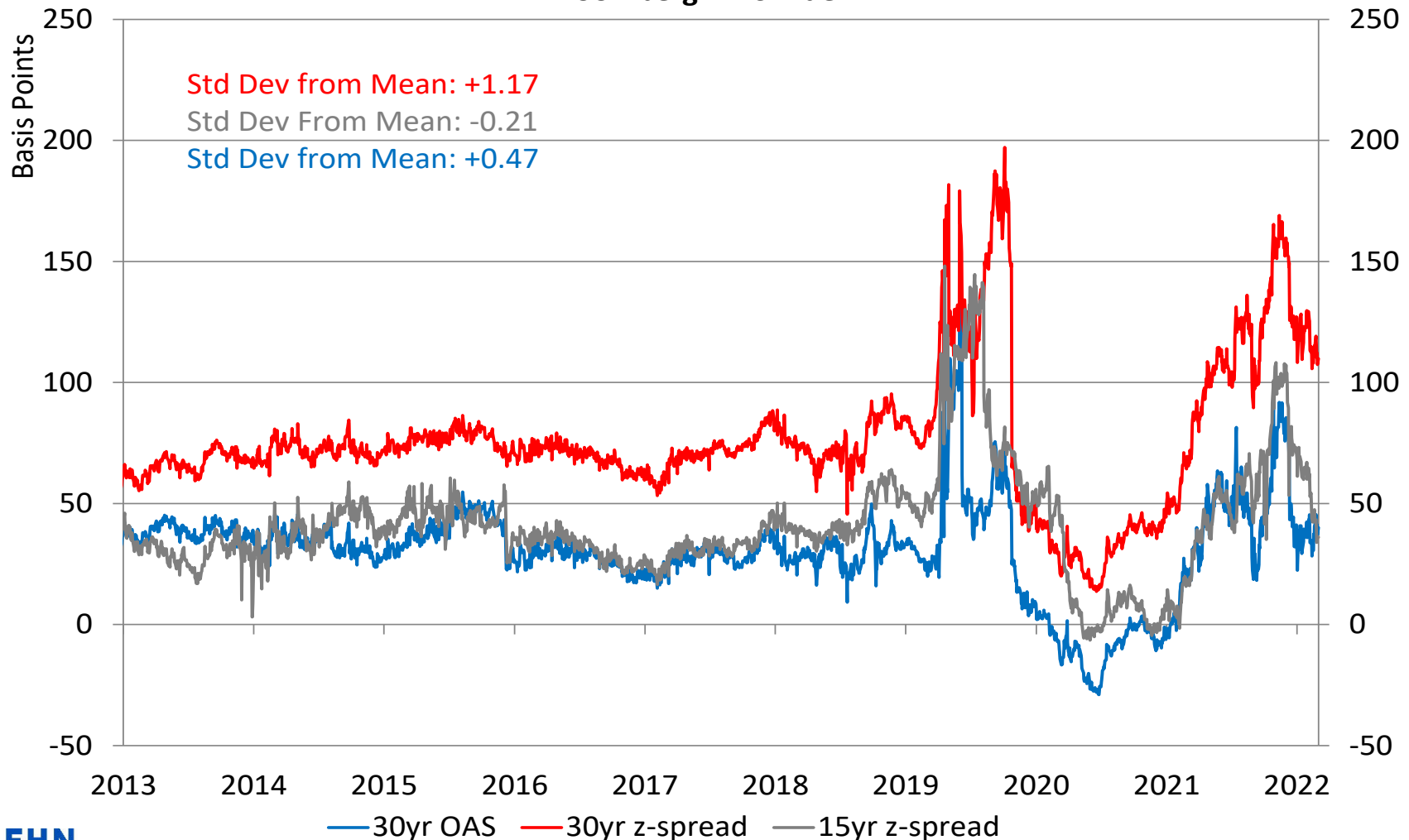
Bloomberg Barclays MBS Index | One-Year History



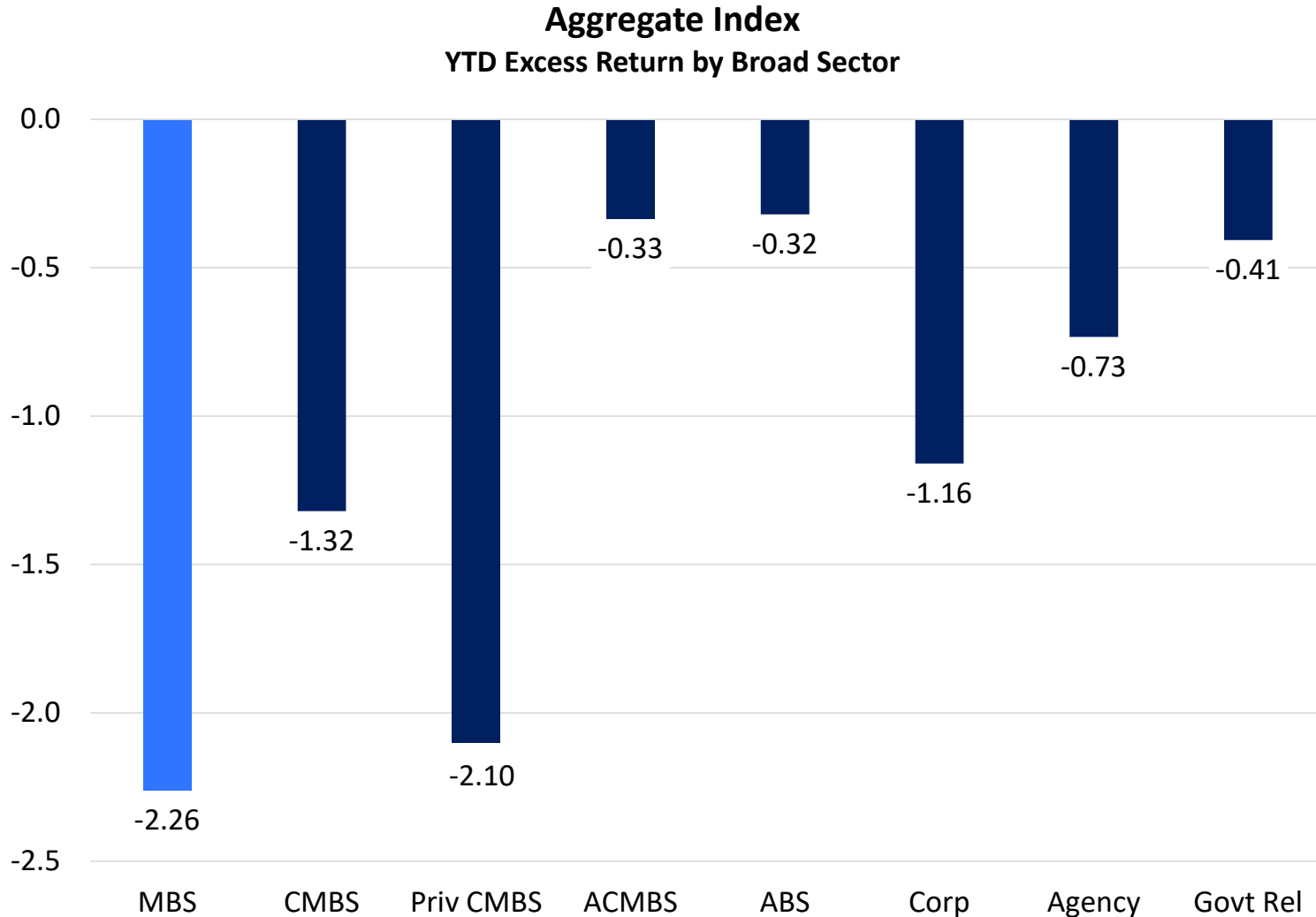


# 30yr CC Static Spread & OAS Also Generous on an Historical Basis

Current Coupon OAS and z-spread  
Bloomberg MBS Index

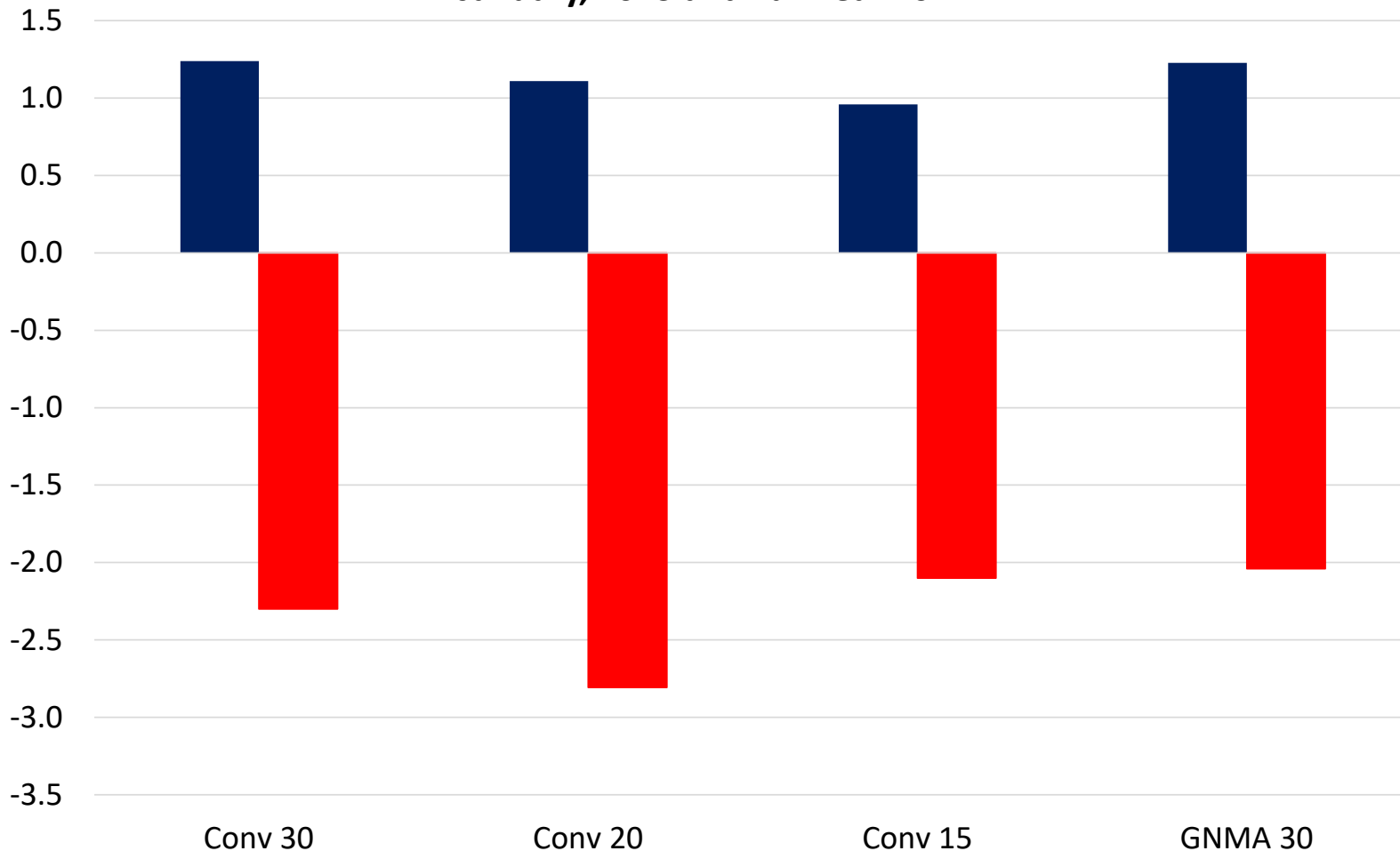


# High Volatility/Inverted YC Produced Negative ER for Spread Product in '22



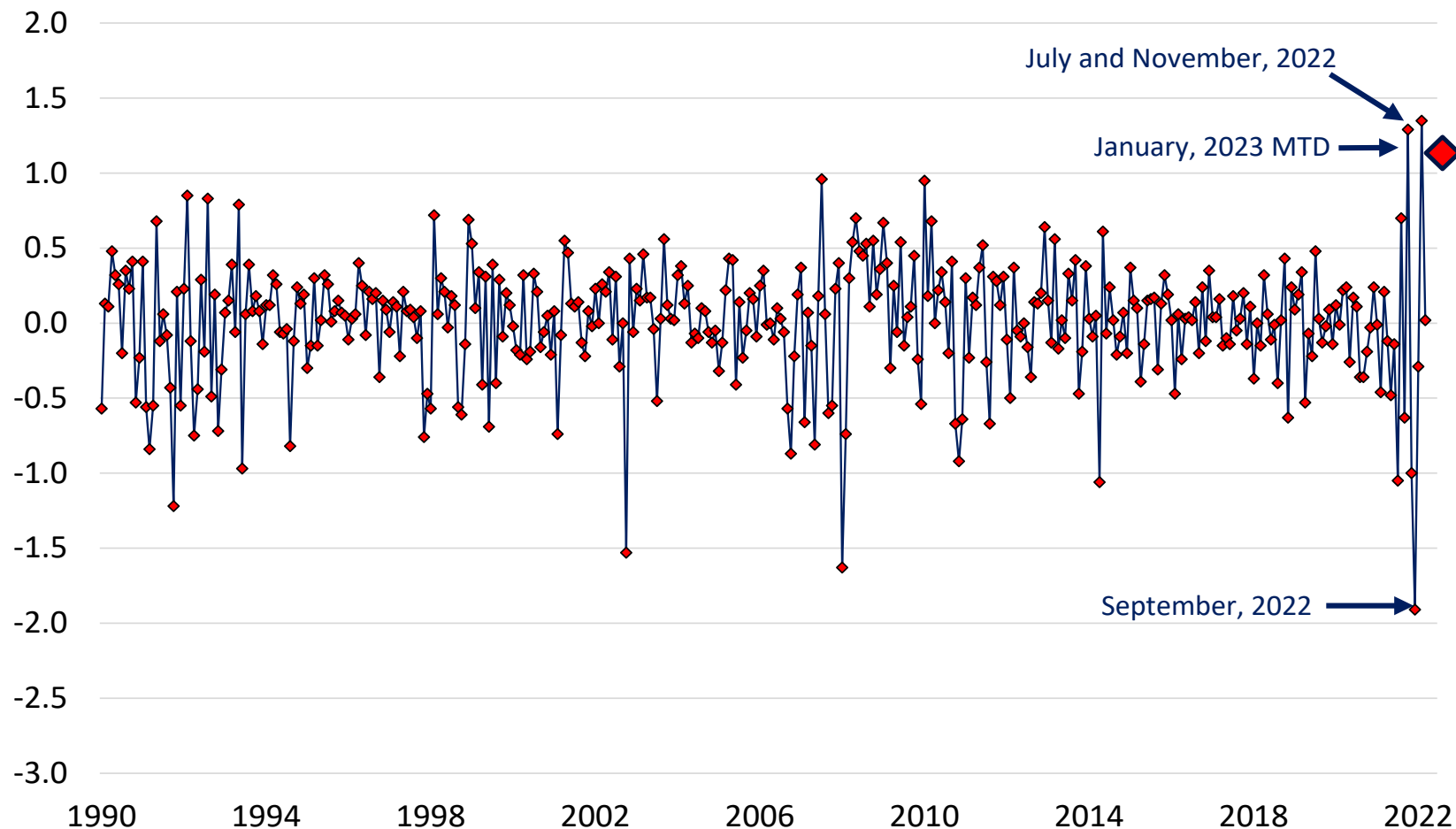
# Cleanest Dirty Shirt: Ginnie Relatively Better During QT

Cumulative Excess Return by MBS Sub-Sector  
January, 2023 and Full Year 2022



# Recent Performance, Positive and Negative, Has Been “Historical”

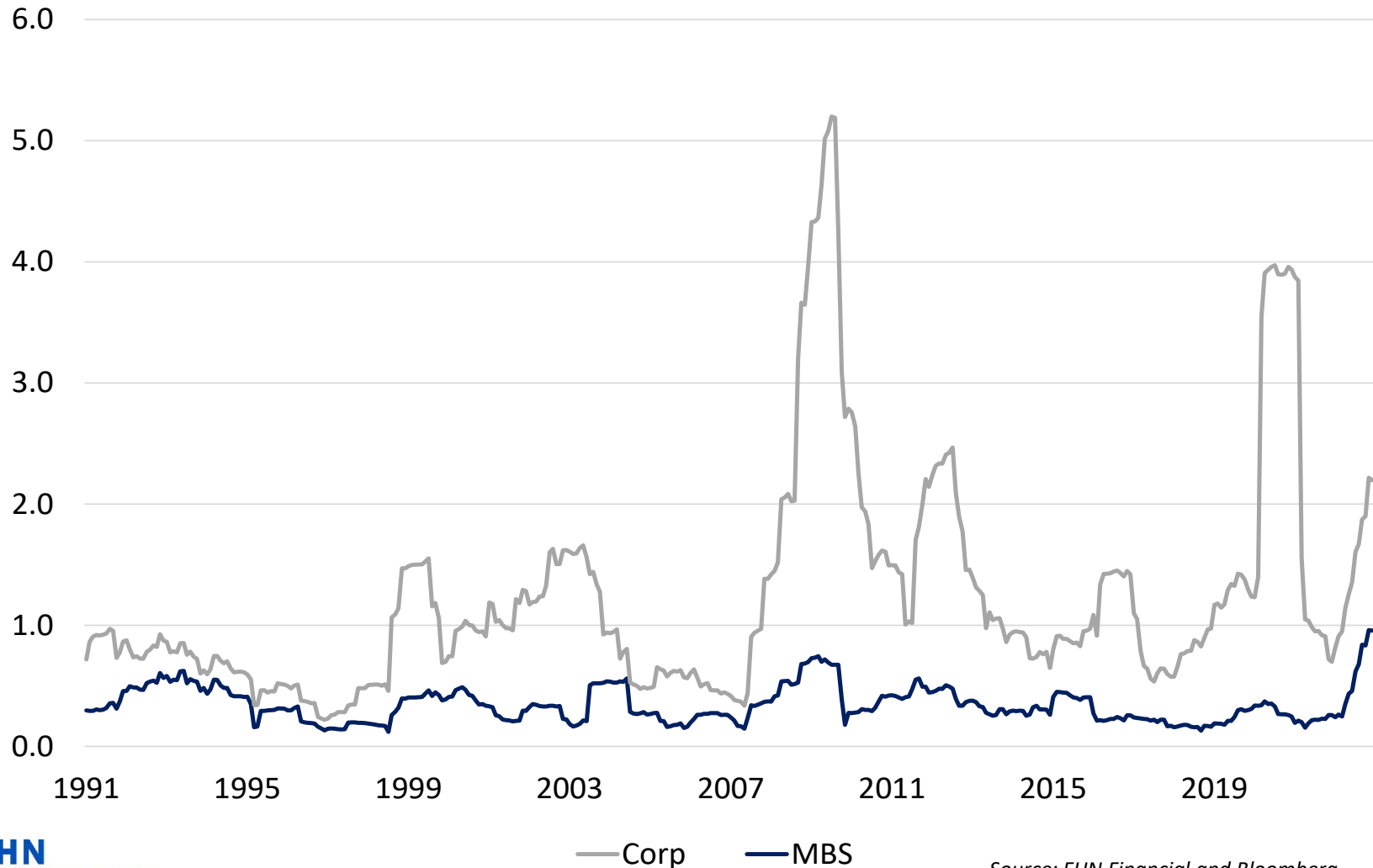
**MBS Index Monthly Excess Returns**  
30+ Year History to January, 1990



Source: FHN Financial and Bloomberg

# But Std Dev of Returns in MBS Far Lower Than in Corporate Credit

12-Month Standard Deviation of Excess Returns  
30+ Year History from January, 1990



Source: FHN Financial and Bloomberg

# The 4.0 through 5.0 Coupons Are “Sweet Spot” on the 30yr Stack

## FHN Coupon Relative Value Analysis (One Year History)

30yr FNMA	Points		32nds		
	Swap	Predicted	Rich/Cheap <sup>o</sup>	Roll-Adj. †	Momentum ‡
2.5/2.0	3.33	3.21	3.91	3.91	(0.65)
3.0/2.5	3.23	3.08	4.89	4.89	0.03
3.5/3.0	3.02	2.90	3.56	3.56	2.07
4.0/3.5	2.67	2.68	(0.25)	(0.25)	0.46
4.5/4.0	2.20	2.28	(2.30)	(2.30)	(0.64)
5.0/4.5	1.63	1.88	(8.28)	(8.28)	1.82
5.5/5.0	1.28	1.33	(1.59)	(1.59)	(1.14)

15yr FNMA	Points		32nds		
	Swap	Predicted	Rich/Cheap <sup>o</sup>	Roll-Adj. †	Momentum ‡
2.5/2.0	2.66	2.48	5.52	5.52	2.66
3.0/2.5	2.23	1.88	11.20	7.47	(1.42)
3.5/3.0	1.69	1.65	1.13	4.86	(1.88)
4.0/3.5	1.75	1.49	8.19	8.01	0.15
4.5/4.0	1.44	1.42	0.61	0.78	(0.85)
5.0/4.5	0.81	1.21	(12.83)	(13.98)	(6.05)

GNMA II/FNMA 30yr	Points		32nds		
	Swap	Predicted	Rich/Cheap <sup>o</sup>	Roll-Adj. †	Momentum ‡
2.0	2.34	2.44	(3.07)	(3.07)	(2.40)
2.5	1.72	1.93	(6.71)	(6.71)	(1.57)
3.0	1.11	1.41	(9.49)	(9.49)	(5.21)
3.5	0.80	0.96	(5.14)	(5.14)	(2.48)
4.0	0.66	0.66	(0.25)	(0.25)	(3.29)
4.5	0.56	0.43	4.09	4.09	(0.22)
5.0	0.38	0.24	4.44	4.44	0.40
5.5	0.09	(0.01)	3.17	3.10	0.59

30yr/15yr FNMA	Points		32nds		
	Swap	Predicted	Rich/Cheap <sup>o</sup>	Roll-Adj. †	Momentum ‡
2.5/2.0	(3.55)	(3.79)	7.77	7.77	1.24
3.0/2.5	(2.97)	(3.21)	7.78	7.78	(1.07)
3.5/3.0	(2.19)	(2.23)	1.46	5.19	1.05
4.0/3.5	(1.20)	(1.27)	2.18	2.18	4.08
4.5/4.0	(0.75)	(0.55)	(6.47)	(6.30)	3.26
5.0/4.5	(0.56)	(0.20)	(11.51)	(11.51)	8.43
5.5/5.0	(0.09)	(0.16)	2.02	3.16	8.58

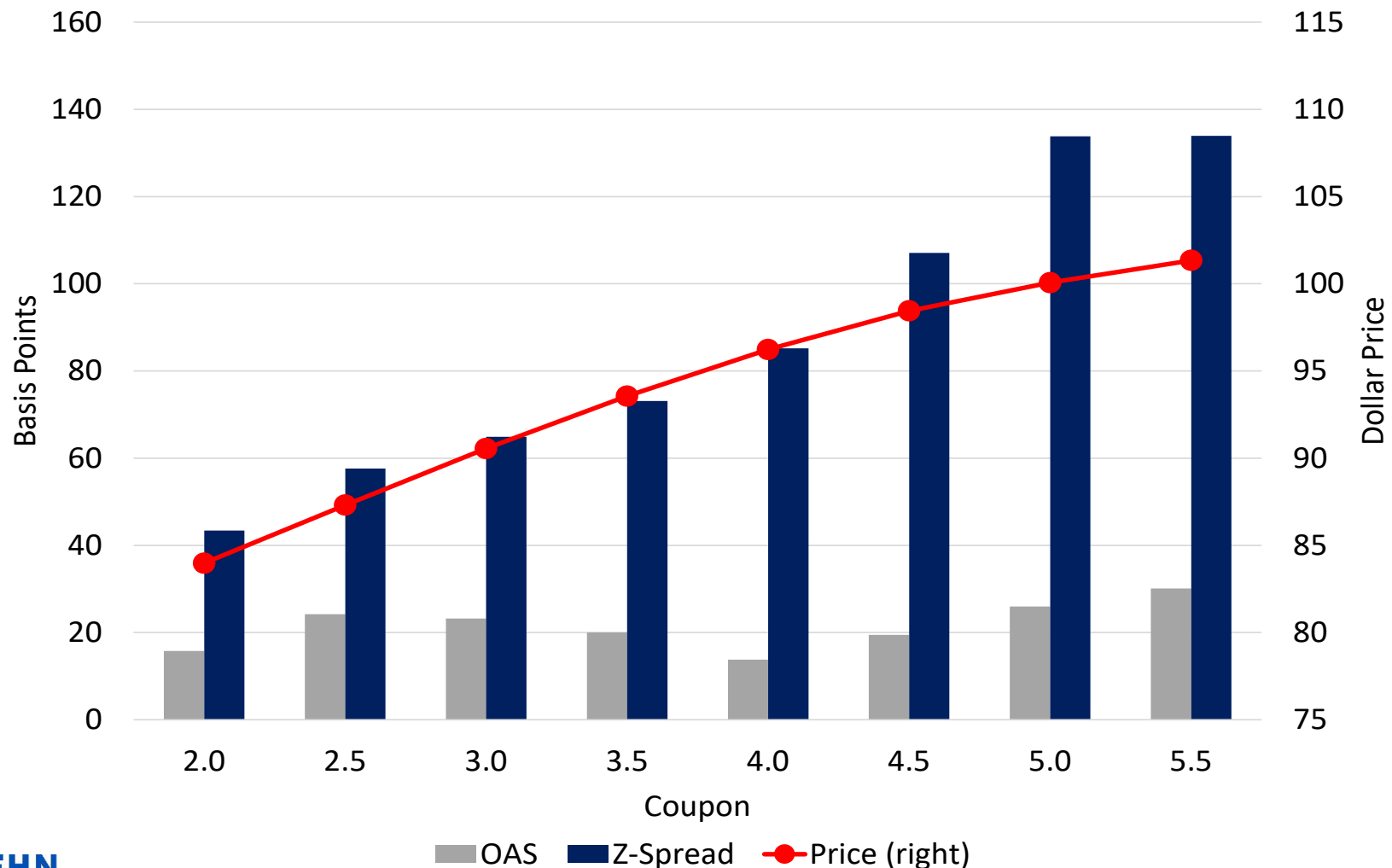
<sup>o</sup> Higher coupon/GNMA/30yr CHEAP when negative, RICH when positive.

† Swap value adjusted for dollar roll when coupon(s) is "special".

‡ Negative Momentum = swap getting cheaper. Positive Momentum = swap getting richer

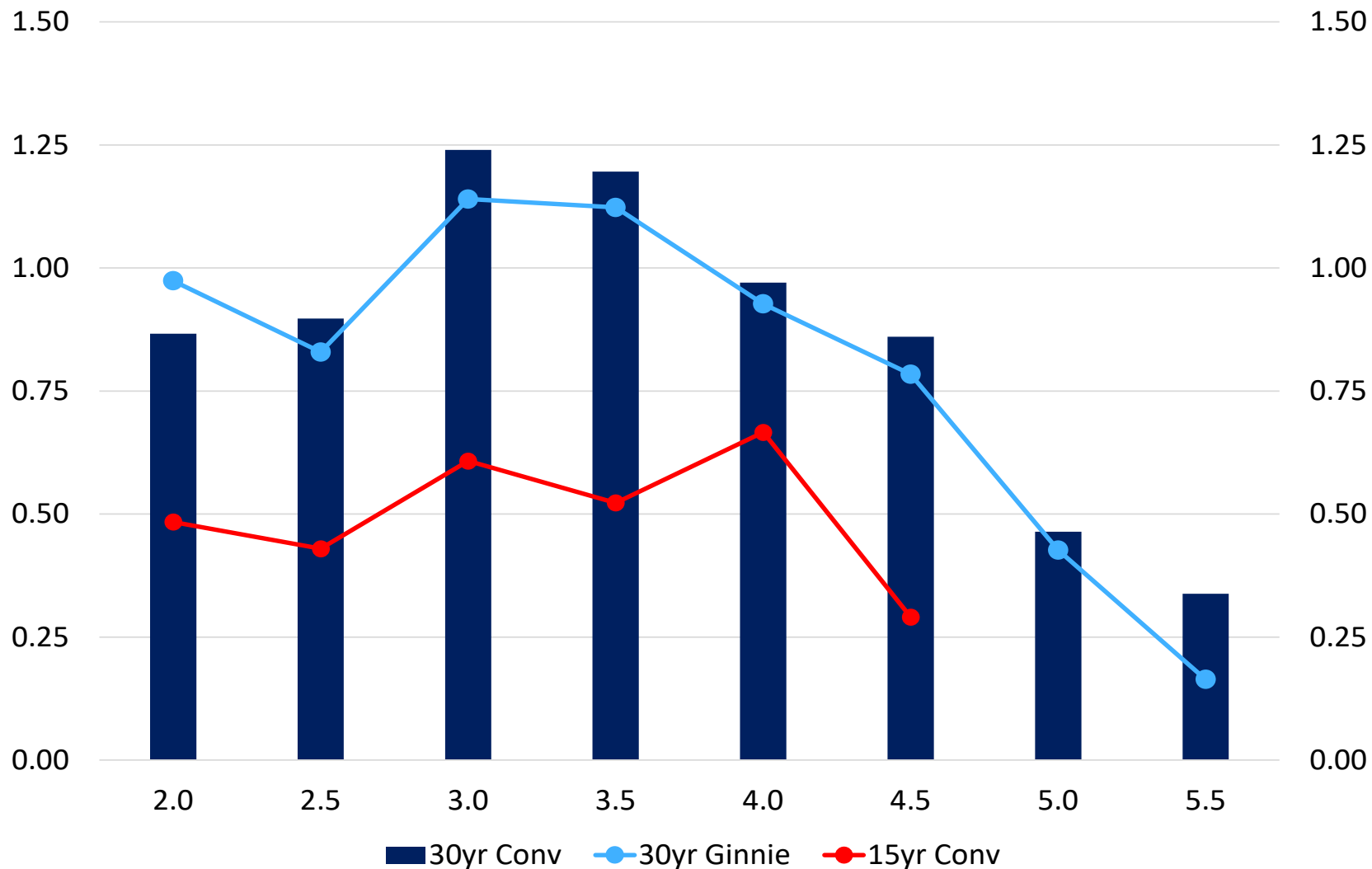
# Spread Is Clearly a Function of Price, OAS Flat Across Stack

30yr UMBS Coupon Stack | TBA OAS and Z-Spread  
YieldBook Model



# The 3.0 and 3.5 Coupons Leading The Way So Far in 2023

MBS Index | MTD Excess Return by Coupon





# Market is Cheaper Now; Looking for Next “Big” Buyer

- ***CURRENT COUPON MBS spreads now wider than past Fed unwinds:*** Spreads still in a good spot, but market relies on “fast money”.
- ***This is now a “turnover market”:*** Alpha can be derived from superior turnover in a discount environment.
- ***Relative Value has changed:*** **Front Sequentials**, UIC on 20yr and 30yr stacks and longer CMOs cheap vs. low-coupon index constituents. (We do NOT like 30yr 2.0s and 2.5s.) But two key themes:
- **Diversification and Dollar-Cost Averaging.**

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