

Building the Balance Sheet — Expanding Available Tools

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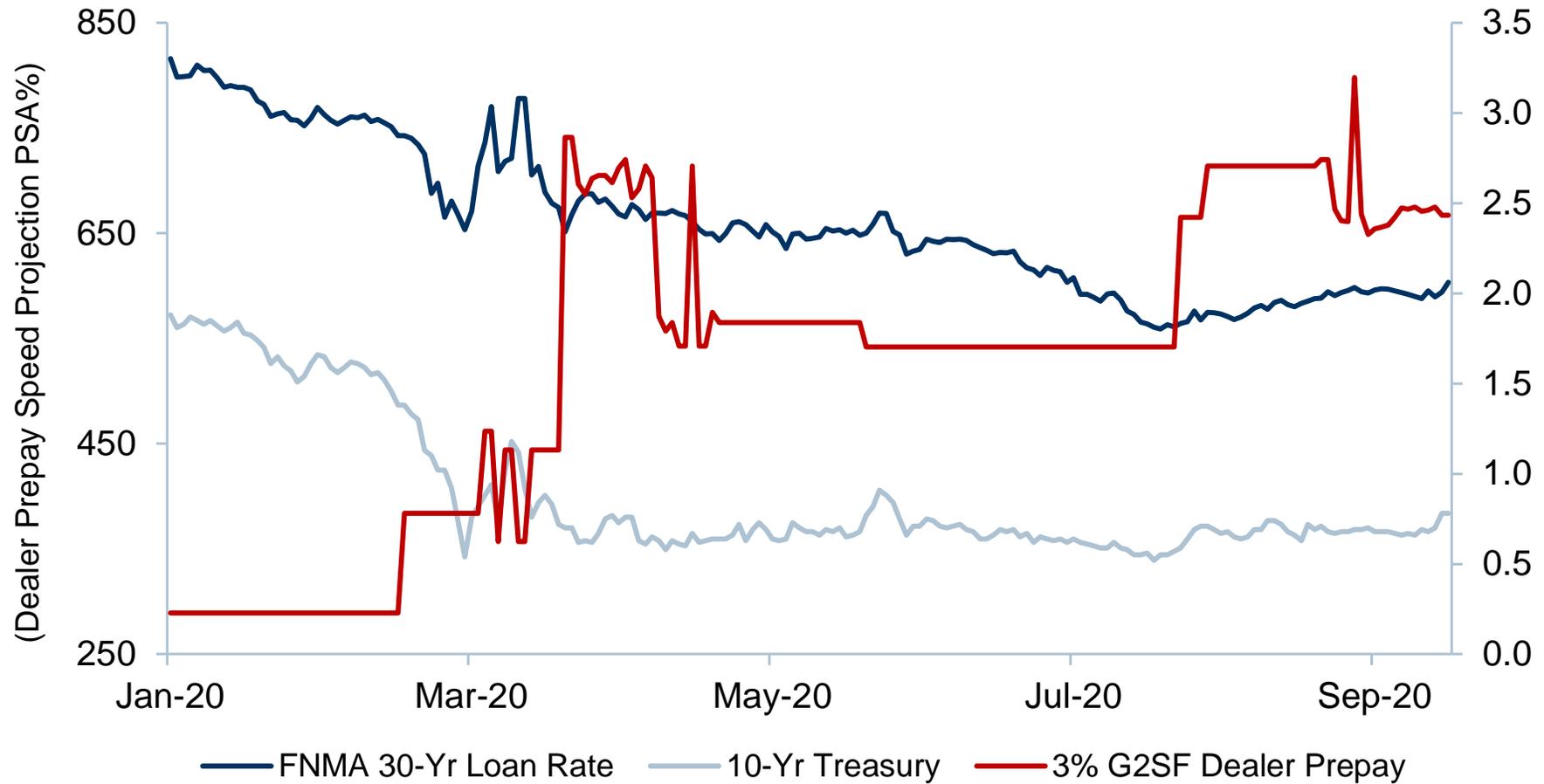
The Fed's Impact on the TBA Market

- **Narrowed pricing spread between low- and high-coupon MBS pools**
- **Raised price of low-coupon MBS pools**
- **Pricing insensitivity**



Date	G2SF 2.5%	G2SF 3.0%	G2SF 3.5%	G2SF 4.0%	G2SF 4.5%
01/02/2020	100.53	102.77	103.09	103.52	104.58
10/06/2020	104.86	104.31	105.44	106.31	107.05
Price Change	4.33	1.55	2.34	2.80	2.47

Dealer Prepayment Speed Projections in the TBA Market Remain Elevated



Date	3% G2SF Dealer Prepay	FNMA 30-Yr Loan Rate	10-Yr Treasury
01/02/2020	289% PSA	3.30	1.88
10/06/2020	667% PSA	2.06	0.78

State HFA MBS Portfolio Balances & Prepayment Speeds Tracking



						
Loan Portfolio Characteristics*						
MBS Pass-thru	4.17	2.89	4.64	3.61	3.97	3.91
Loan Rate	4.70	3.62	5.18	4.26	4.57	4.41
PSA Since Issue	379	116	691	180	572	540
PSA 1-Month	392	238	549	170	472	605
PSA 3-Month	410	228	787	185	766	723
PSA 6-Month	356	195	893	210	781	752
PSA 12-Month	549	149	556	206	471	591
Loan Portfolio Balances						
Monthly Par Amount						
Jan-20	1,249,388,624	2,209,828,809	653,264,311	640,213,284	990,420,056	350,035,076
Feb-20	1,232,140,650	2,197,336,867	648,375,278	637,233,576	983,292,907	347,003,968
Mar-20	1,217,686,243	2,185,373,224	644,214,452	634,043,141	975,470,842	343,231,079
Apr-20	1,198,749,539	2,171,191,472	638,418,913	628,549,086	966,420,422	338,633,137
May-20	1,187,547,704	2,156,023,548	632,536,917	621,940,868	956,651,723	334,435,304
Jun-20	1,173,760,357	2,135,394,430	619,887,581	612,024,615	939,102,650	328,355,391
Jul-20	1,156,671,250	2,103,718,014	561,401,832	604,701,711	888,145,914	307,843,225
Aug-20	1,135,446,287	2,071,875,756	533,588,414	595,325,824	853,435,722	293,533,781
Sep-20	1,117,151,689	2,042,544,427	515,093,414	589,136,077	825,153,322	281,833,459
Current (Oct-20)	1,003,565,273	1,988,014,926	499,264,739	578,511,760	726,478,103	270,367,316
Average Month to Month Balance Changes						
▲ Jan. - March Balances	-1.37%	-0.59%	-0.76%	-0.61%	-0.81%	-1.10%
▲ April - July Balances	-1.18%	-1.05%	-4.12%	-1.28%	-2.76%	-3.10%
▲ August - Oct. Balances	-4.54%	-1.87%	-3.83%	-1.46%	-6.39%	-4.23%

*October 2020 Factors

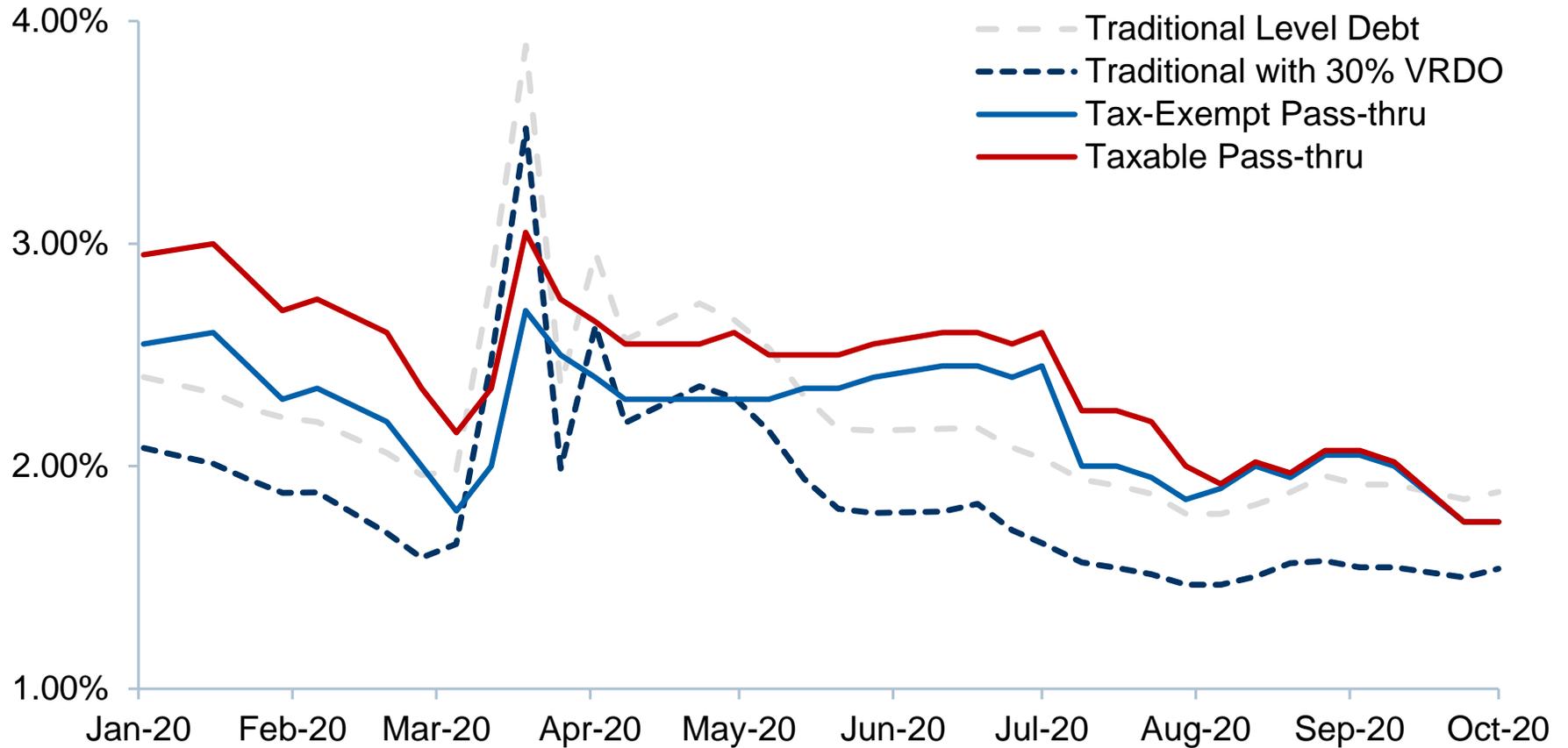
State HFA MBS Portfolio Balances & Prepayment Speeds Tracking (Continued)



						
Loan Portfolio Characteristics*						
MBS Pass-thru	3.62	3.74	4.07	4.51	3.65	3.30
Loan Rate	4.36	4.28	4.60	5.01	4.24	4.41
PSA Since Issue	276	343	146	142	191	268
PSA 1-Month	317	372	171	169	235	319
PSA 3-Month	389	529	190	182	254	382
PSA 6-Month	421	541	197	172	234	406
PSA 12-Month	366	410	178	144	197	345
Loan Portfolio Balances						
Monthly Par Amount						
Jan-20	858,771,992	1,821,920,463	1,049,049,872	660,304,801	654,681,886	1,122,750,942
Feb-20	851,293,537	1,804,725,076	1,041,898,358	656,032,803	650,606,737	1,112,128,907
Mar-20	838,808,755	1,787,584,478	1,034,252,213	652,595,461	646,297,734	1,102,615,404
Apr-20	824,367,927	1,766,520,499	1,023,374,866	646,414,521	640,973,579	1,088,528,437
May-20	806,076,562	1,738,005,547	1,012,235,923	642,082,811	633,733,910	1,069,854,810
Jun-20	785,090,998	1,703,587,483	1,001,320,216	634,719,958	624,960,115	1,046,890,704
Jul-20	758,663,573	1,628,788,087	983,921,857	625,569,180	617,117,828	1,019,130,372
Aug-20	740,034,227	1,575,535,388	970,570,080	616,230,908	606,065,890	997,148,497
Sep-20	716,590,896	1,522,824,926	957,651,204	608,417,372	597,806,619	973,043,811
Current (Oct-20)	661,750,384	1,476,326,335	847,737,333	599,103,466	583,670,722	931,079,354
Average Month to Month Balance Changes						
▲ Jan. - March Balances	-1.35%	-1.02%	-0.82%	-0.71%	-0.70%	-1.03%
▲ April - July Balances	-2.73%	-2.66%	-1.30%	-1.09%	-1.26%	-2.17%
▲ August - Oct. Balances	-4.43%	-3.22%	-4.72%	-1.43%	-1.84%	-2.96%

*October 2020 Factors

Housing Bond Rate Trend (YTD 2020)



	Min	Max	Average	Current
Traditional Level Debt	1.79%	3.89%	2.22%	1.88%
Traditional with 30% VRDO	1.47%	3.52%	1.86%	1.54%
Tax-Exempt Pass-thru	1.75%	2.70%	2.20%	1.75%
Taxable Pass-thru	1.75%	3.05%	2.41%	1.75%



Building the Balance Sheet — Expanding Available Tools Part 2

October 27, 2020

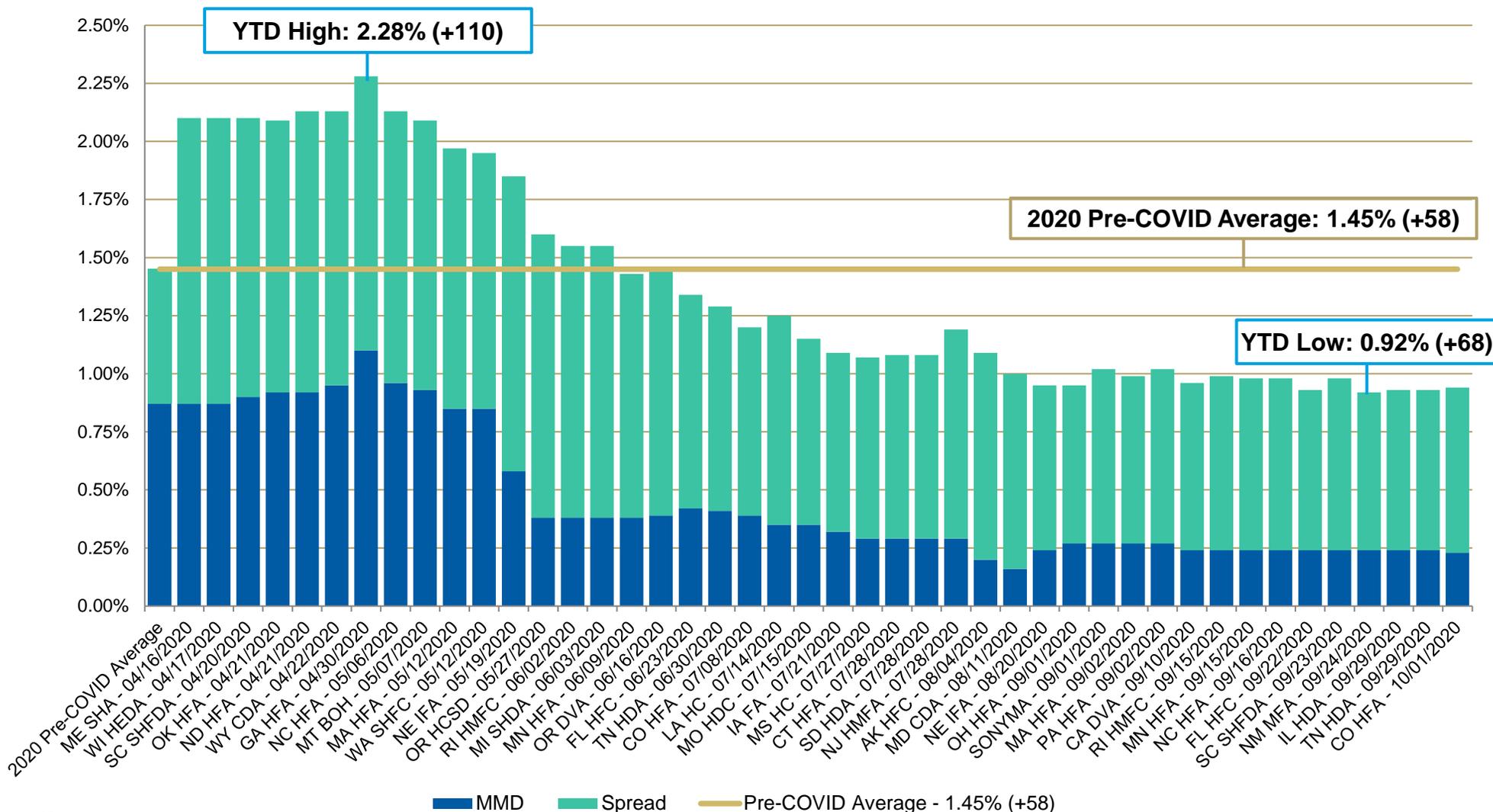
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PAC Yields Continue to Reach New Lows



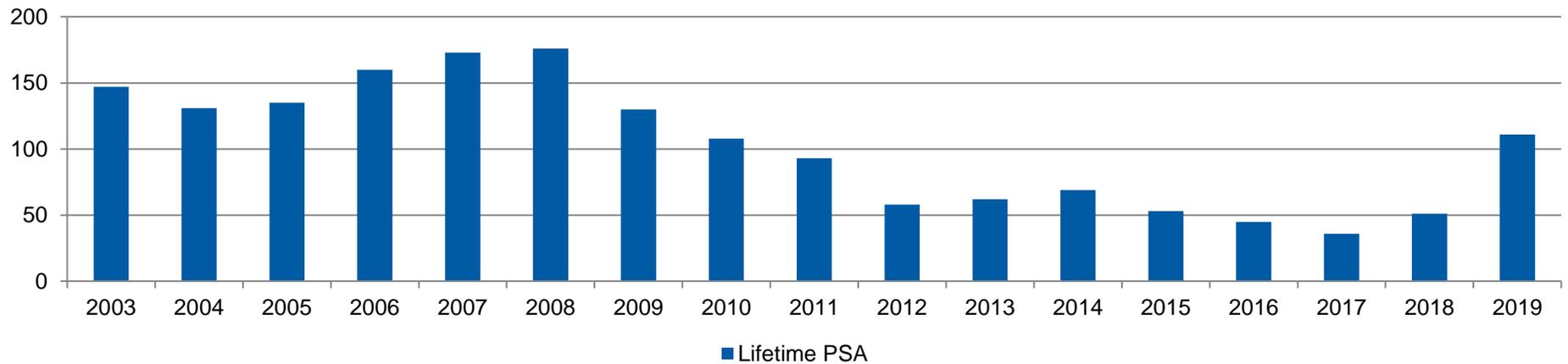
Notes

- (1) Includes 100% PSA 5Y Average Life Non-AMT PAC Bonds (Negotiated Sale)
- (2) Sources: Morgan Stanley, Bloomberg

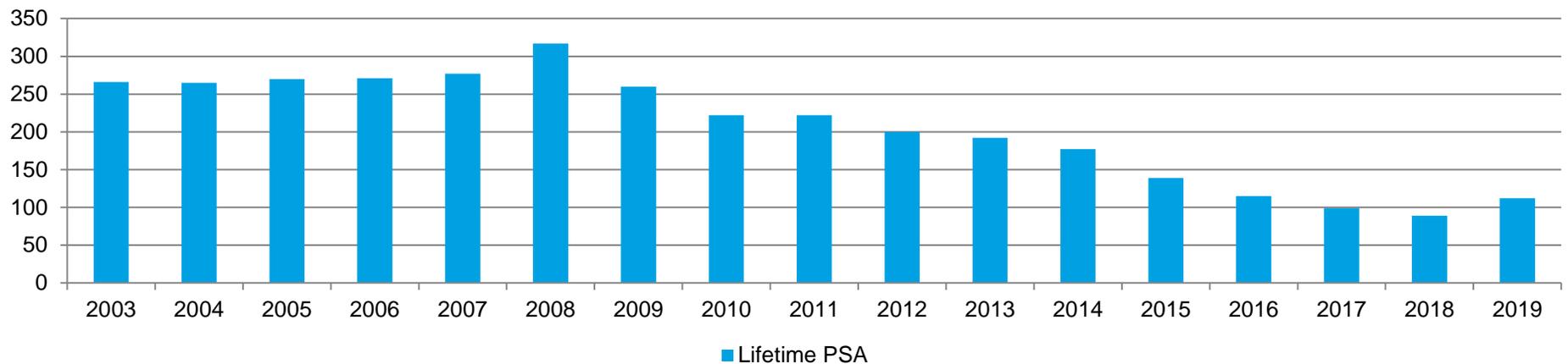
Newly Originated Mortgages May Have Slower Prepayment Speeds

Historical Prepayment Speeds by Year Originated

Example: Northeast State HFA



Example: Western State HFA



Sources: Morgan Stanley, State HFA Official Statements

PAC Amortization: 100% PSA vs. 75% PSA

Maturity	(A) Prepayments at 75% PSA	(B) 100% PSA PAC Amortization	(C) Difference
7/1/2021	--	\$15,000	\$15,000
1/1/2022	\$535,000	720,000	185,000
7/1/2022	950,000	1,265,000	315,000
1/1/2023	1,340,000	1,785,000	445,000
7/1/2023	1,700,000	2,255,000	555,000
1/1/2024	1,910,000	2,515,000	605,000
7/1/2024	1,845,000	2,410,000	565,000
1/1/2025	1,755,000	2,270,000	515,000
7/1/2025	1,665,000	2,135,000	470,000
1/1/2026	1,580,000	2,010,000	430,000
7/1/2026	1,495,000	1,885,000	390,000
1/1/2027	1,410,000	1,760,000	350,000
7/1/2027	1,325,000	1,640,000	315,000
1/1/2028	1,245,000	1,520,000	275,000
7/1/2028	1,165,000	1,415,000	250,000
1/1/2029	1,080,000	1,295,000	215,000
7/1/2029	1,005,000	1,190,000	185,000
1/1/2030	930,000	1,085,000	155,000
7/1/2030	850,000	295,000	--
Total	\$23,785,000	\$29,465,000	\$6,235,000

The cost to pay down a 100% PSA PAC if prepayments occur at 75% PSA averages \$623,500 per year

Current Market Single Family Funding Costs

Pair 75% PSA PAC with Premium Fixed Rate Soft Put

Term	Structure	Indicative Rates as of 10/2/20	(A)	(B)	(C)
			100% PSA PAC	75% PSA PAC	75% PSA PAC w/ Soft Put
2021 – 2032	Serials	0.20% - 1.95%	\$26,215,000	\$26,215,000	\$26,215,000
2033 – 2035	Term	2.00%	8,730,000	8,730,000	8,730,000
2036 – 2040	Term	2.15%	16,670,000	16,670,000	16,670,000
2041 – 2045	Term	2.375%	15,990,000	19,725,000	18,330,000
2046 – 2050	Term	2.50%	--	3,690,000	--
2045 – 2050	PAC (5Y WAL)	0.95%	29,465,000	22,710,000	22,710,000
2041 – 2050	Premium Fixed Rate Soft Put	0.87%	--	--	4,570,000
	Premium (\$5k Rounded)		2,930,000	2,260,000	2,775,000
Total Proceeds			\$100,000,000	\$100,000,000	\$100,000,000
Bond Yield			1.86%	1.95%	1.86%
Yield Drag			--	9 bps	--

Financing Assumptions

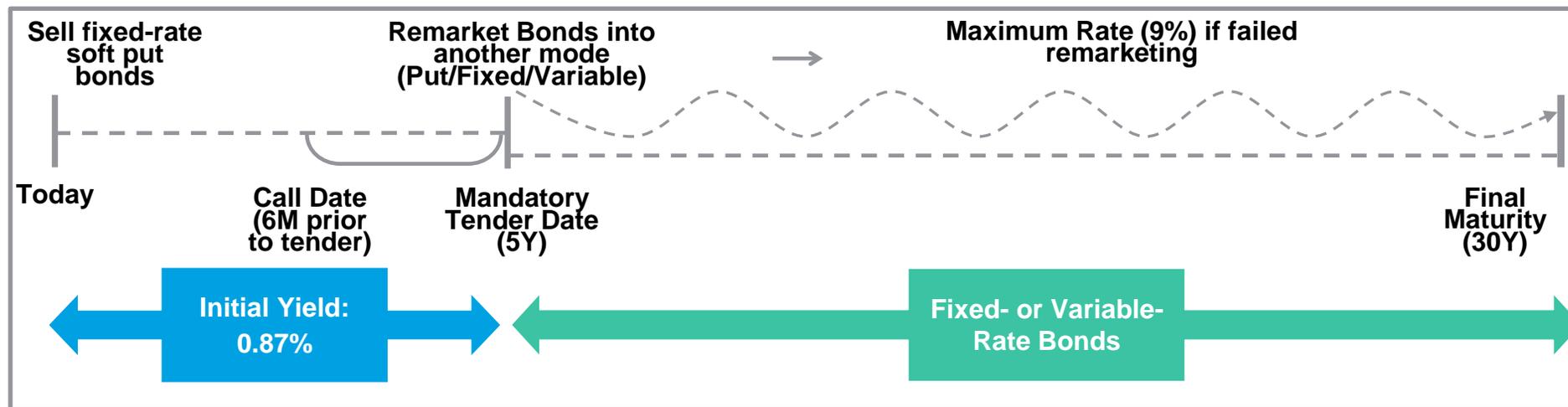
1. Originations of 5 equal monthly draws beginning at closing
2. Fixed Rate Soft Put remarketed at 5 year average of 5Y MMD (1.34%) + 5 year credit spread (0.65%)

Source: Morgan Stanley

Reducing Funding Costs – Fixed Rate Soft Put Bonds

Mechanics and Current Pricing

Soft Put Bond Mechanics: 5-Year Soft Put Bond with Par Call 6 Months Prior to Mandatory Tender Date



PAC Pricing

MMD	0.24%
Spread	0.71%
Yield	0.95%
Coupon	3.00%
Price	109.935

Indicative Pricing: Fixed-Rate Soft Put Bonds

Put Date	Call Date	MMD	Par Pricing		Premium Pricing			
			Spread	Coupon	Coupon	Spread	Yield	Price
3Y	2.5Y	0.13%	52	0.65%	4.00%	41	0.54%	105.732
5Y	4.5Y	0.22%	73	0.95%	4.00%	65	0.87%	111.270
7Y	6.5Y	0.44%	86	1.30%	4.00%	76	1.20%	115.293

Additional Considerations: Multi-Modal, No Liquidity Facility Required, No Term Out Provisions, Variable

Source: Morgan Stanley

Current Market Single Family Funding Costs

Pair 75% PSA PAC with Fixed Rate Soft Put or Variable Rate Debt

			(A)	(B)	(C)	(D)
Term	Structure	Indicative Bond Rates as of 10/2/20	100% PSA PAC	75% PSA PAC	75% PSA PAC w/ Soft Put	75% PSA PAC w/ VR
2021 – 2032	Serials	0.20% - 1.95%	\$26,215,000	\$26,215,000	\$26,215,000	\$26,215,000
2033 – 2035	Term	2.00%	8,730,000	8,730,000	8,730,000	8,730,000
2036 – 2040	Term	2.15%	16,670,000	16,670,000	16,670,000	16,670,000
2041 – 2045	Term	2.375%	15,990,000	19,725,000	18,330,000	19,725,000
2046 – 2050	Term	2.50%	--	3,690,000	--	--
2045 – 2050	PAC (5Y WAL)	0.95%	29,465,000	22,710,000	22,710,000	22,710,000
2041 – 2050	Premium Fixed Rate Soft Put	0.87%	--	--	4,570,000	--
2041 – 2050	Unhedged Variable	1.32%	--	--	--	3,690,000
	Premium (\$5k Rounded)		2,930,000	2,260,000	2,775,000	2,260,000
Total Proceeds			\$100,000,000	\$100,000,000	\$100,000,000	\$100,000,000
Bond Yield			1.86%	1.95%	1.86%	1.86%
Yield Drag			--	9 bps	--	--

Financing Assumptions

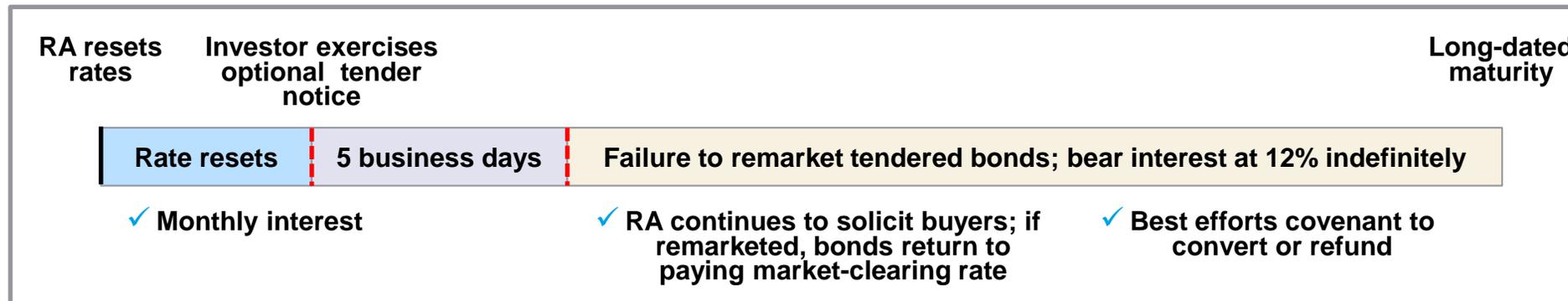
1. Originations of 5 equal monthly draws beginning at closing
2. Fixed Rate Soft Put remarketed at 5 year average of 5Y MMD (1.34%) + 5 year credit spread (0.65%)
3. Variable remarketed at 5 year average of SIFMA (0.92%) plus estimated spread of 40 bps for trading level and remarketing fee

Source: Morgan Stanley

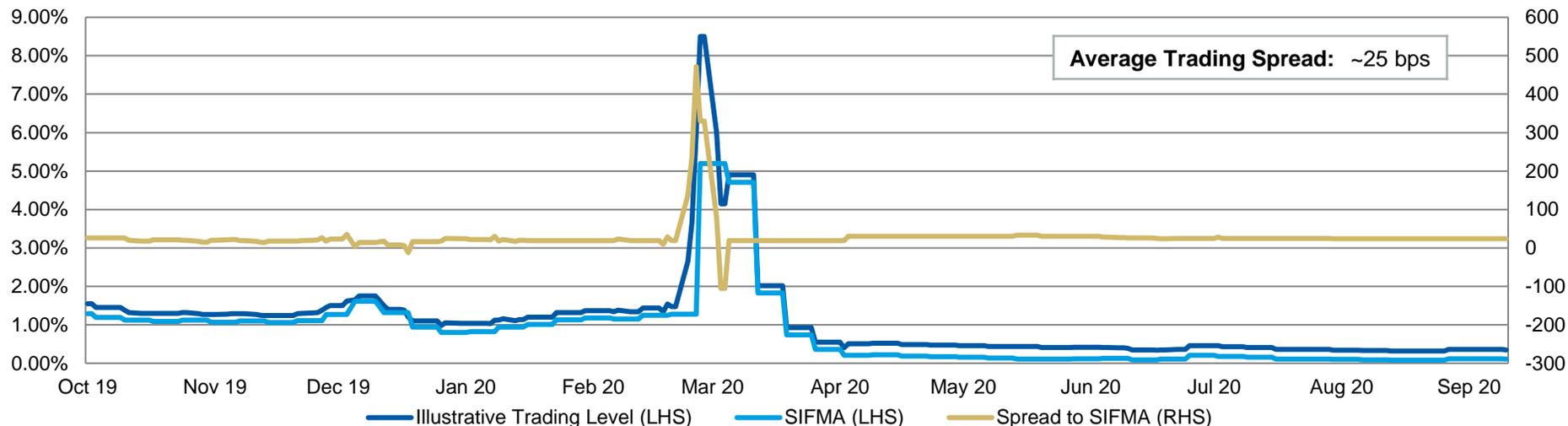
Reducing Funding Costs – Variable Alternative w/o Liquidity

Mechanics and Current Pricing

Remarketing Mechanics (Daily or Weekly Rate Mode)



Illustrative Trading Levels: Variable Rate Bonds w/o Liquidity



Additional Considerations: Multi-Modal, No Liquidity Facility Required, No Term Out Provisions, Variable

Source: Morgan Stanley

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Building the Balance Sheet — Expanding Available Tools Part 2

Balance Sheet Tools and Management of Funding Executions

- MRB
- TBA
- Cash Window
- Specified Pools
- IO Strip
- Interest Rate Swaps
- Risk Retention Fund

Balance Sheet Lending

- Multifamily Loans
 - 15 to 35yr terms with 2yr IO period
 - Cash flow loans (Soft Money)
- Single Family Mortgages
 - Held within the Agency's 1982 Indenture
 - Closing Cost Assistance Loans
 - 10yr fully amortizing at 0%
 - Forgivable Grants Coming Soon
 - From MRB Proceeds

MRB – Single Family

- Public Negotiated Sale
- Private Placement
- Indenture Management
 - Cross Calling
 - In Issue Early Maturity Calls
 - Debt Management
 - Cross calling AMT bonds and issuing Non-AMT bonds in new issue
 - Mix of taxable debt – especially for refundings

Secondary Marketing

- Active interest rate risk management
- In house management
 - Utilize PowerSeller software application
- Cash Window (Fannie)
- TBA
- Specified Pools
 - <85K
 - 85-110K
 - 110-150K
 - 150-175K
 - <200K
 - New issuance

Alternative Investment

- GNMA IO Strip
 - How it Works
 - Sell MBS to dealer
 - Buy IO strip from dealer on same collateral
 - AAA security
 - Potential for significant returns
 - Great investment opportunity especially in this low yield environment

IO Strip Evaluation

- Best Execution
 - IO Strip is another execution option
 - Specified pool payup
 - LLB, CRA etc.
- Knowing the underlying collateral
 - Loan balances
 - LTV
 - FICO
 - Loan type

IO Strip Evaluation

Yield Summary - 2.5 CPN IO Strip

Bond		50PSA	75PSA	100PSA	125PSA	150PSA	175PSA	200PSA	225PSA	250PSA	275PSA	300PSA	325PSA	350PSA	375PSA	400PSA	425PSA	450PSA	475PSA	500PSA
CS1	Yield	15.41	14.132	12.848	11.557	10.26	8.958	7.648	6.333	5.011	3.683	2.348	1.008	-0.34	-1.693	-3.053	-4.42	-5.793	-7.172	-8.557
	WAL	13.273	11.765	10.518	9.48	8.609	7.873	7.247	6.71	6.246	5.842	5.489	5.178	4.902	4.657	4.437	4.239	4.059	3.897	3.748
CS2	100 Yield	1.348	1.347	1.346	1.345	1.345	1.344	1.343	1.342	1.342	1.341	1.34	1.339	1.338	1.338	1.337	1.336	1.335	1.335	1.334
	WAL	13.273	11.765	10.518	9.48	8.609	7.873	7.247	6.71	6.246	5.842	5.489	5.178	4.902	4.657	4.437	4.239	4.059	3.897	3.748

Yield Summary - 3.0 CPN IO Strip

Bond		50PSA	75PSA	100PSA	125PSA	150PSA	175PSA	200PSA	225PSA	250PSA	275PSA	300PSA	325PSA	350PSA	375PSA	400PSA	425PSA	450PSA	475PSA	500PSA
CS1	Yield	17.147	15.878	14.602	13.32	12.033	10.739	9.44	8.135	6.823	5.506	4.183	2.853	1.518	0.176	-1.171	-2.525	-3.884	-5.249	-6.621
	WAL	13.49	11.942	10.664	9.601	8.71	7.958	7.319	6.771	6.299	5.889	5.53	5.214	4.934	4.685	4.462	4.262	4.08	3.916	3.765
CS2	100 Yield	1.298	1.297	1.296	1.296	1.295	1.294	1.293	1.293	1.292	1.291	1.29	1.29	1.289	1.288	1.287	1.287	1.286	1.285	1.285
	WAL	13.49	11.942	10.664	9.601	8.71	7.958	7.319	6.771	6.299	5.889	5.53	5.214	4.934	4.685	4.462	4.262	4.08	3.916	3.765

Summary of Trade Details

G2 2.5

PHFA sells 10,505,336 G2 2.5 pool @ 105-06 9/21 settle
 PHFA buys 4,832,454 2.5% fixed rate IO @ 11-07 9/30 settle
 Dealer retains 10,505,336 1.35% fixed rate strip @ 100-00

G2 3.0

PHFA sells 2,930,616 G2 3.0 pool @ 105-10 9/21 settle
 PHFA buys 1,660,682 3.0% fixed rate IO @ 9-10 9/30 settle
 Delear retains 2,930,616 1.30% fixed rate strip @ 100-00

IO Structures can be analyzed using Bloomberg's STRU tool

Pennsylvania Housing Insurance Fund (PHIF)

- Risk retention program
- Alternative to private mortgage insurance
- Provides for 97% conventional financing under PHFA's MRB program
 - Up to 100% financing when combined with closing cost assistance loan
- Viewed as G.O. rating by rating agencies (smaller haircut)
- Significant increase in conventional volume
 - Great credit quality – Average FICO of 736 (as of 9/2020)
 - <3% total delinquency (as of 9/2020)
- Additional Revenue Source

Interest Rate Swaps

- Goal is perfect hedge
- Actively utilizing optionality to extract value
 - Extending trades
 - Reducing fixed rates
 - SIFMA Swaps
 - Purchasing optionality
- Reducing LIBOR Exposure



2020 ANNUAL CONFERENCE & SHOWCASE

BUILDING BALANCE SHEET - EXPANDING AVAILABLE TOOLS - PART 2

USING BEST EXECUTION ANALYSIS TO BUILD THE HFA BALANCE SHEET

OCTOBER 27, 2020

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01 / BUILDING THE HFA BALANCE SHEET

Advantages of a strong HFA balance sheet

Characteristics of “building balance sheet”

Optimizing growth through best execution

A strong
HFA balance
sheet can...

STRONG BALANCE SHEET **ADVANTAGES**

- 1** Strengthen credit / improved credit ratings
- 2** Create financing structure flexibility (back-ended PAC bonds, variable rate / swaps, put bonds, premium lockout bonds, etc.)
- 3** Lower borrowing costs
- 4** Facilitate program subsidy through cross calling
- 5** Enhance sustainability of existing affordable housing programs
- 6** Generate resources for new affordable housing programs
- 7** Increase the momentum of growth and financial strength

Building
balance
sheet is
often
characterized
by...

“**BUILDING** BALANCE SHEET”

- 1 Generating ongoing “spread” income
- 2 Leveraging assets / debt financing
- 3 Reinvesting upfront gains back into programs
- 4 High net worth (assets less liabilities)
- 5 Consistently strong mortgage production year after year
- 6 High average return on origination (per loan profitability)

SINGLE FAMILY **FINANCING TOOLS**

There are currently an unprecedented number of tools available to HFAs

MRB Primary Market

Tax-Exempt

Taxable

Serial / Term Bonds

PAC Bonds

Premium Lockout Bonds

Variable Rate / Swaps

Put Bonds

Pass-Throughs

TEMS

MBS Secondary Market

TBA Hedges

Specified Pools (Pay Ups)

- HFA loan w/ DPA 2nd
- Loan balance
- CRA
- New issue

Interest Only CMOs

MBS Reinvest
(Buy and Hold)

Many tools are associated with ongoing / “spread” income...

Many involve leveraging assets / debt financing...

Other tools are associated with generating premium / upfront income...

Only by analyzing all available financing tools in the context of prevailing market conditions can an HFA achieve best execution, optimize production and returns, and maximize net worth

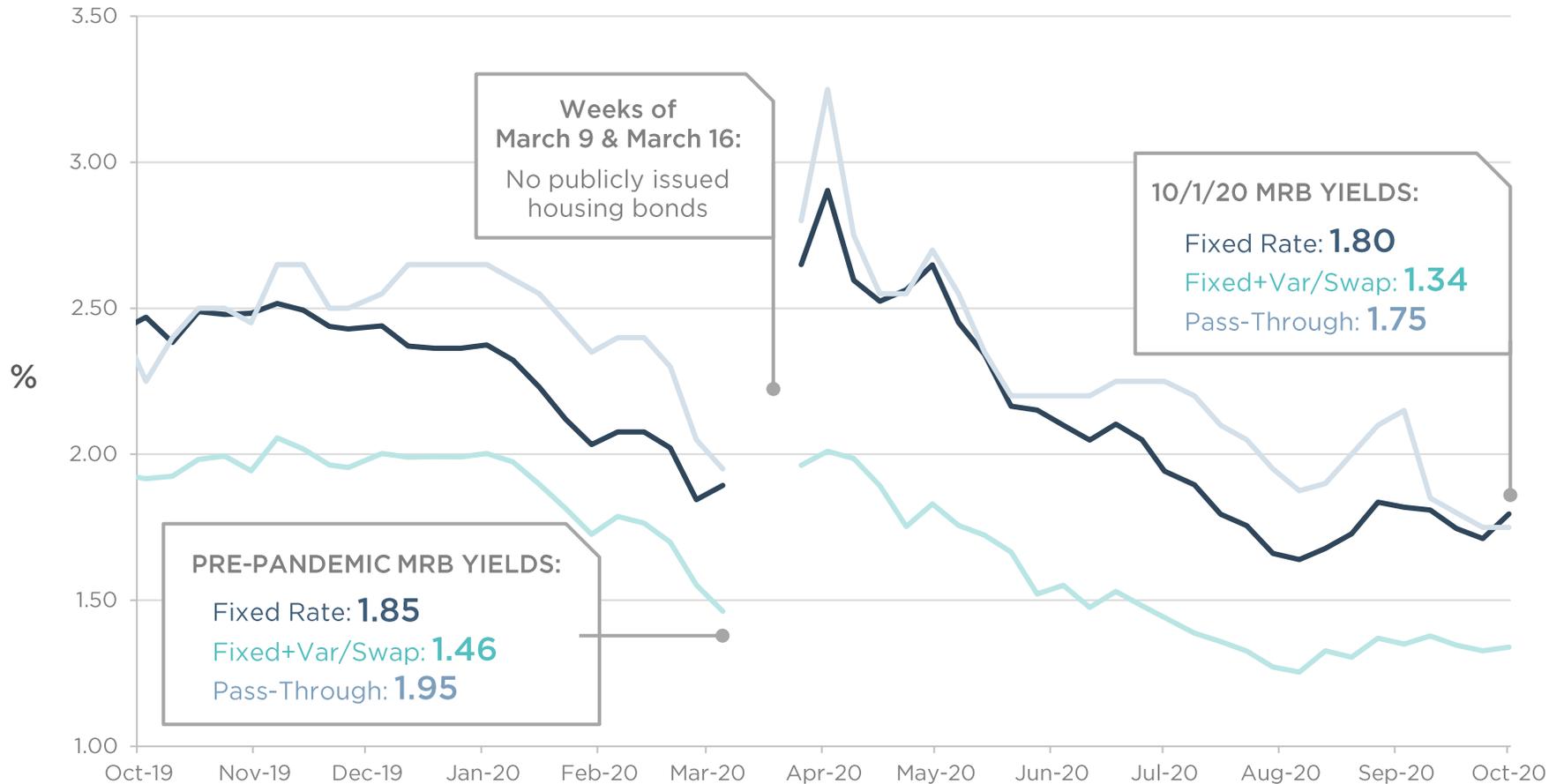
02 / RECENT MARKET DYNAMICS

MRB market is strong, slightly outperforming pre-pandemic lows

TBA market is significantly strong than pre-pandemic levels

MRB RECOVERED WITHOUT FED SUPPORT

TAX-EXEMPT MRB COST OF FUNDS / OCT 2019 - OCT 2020

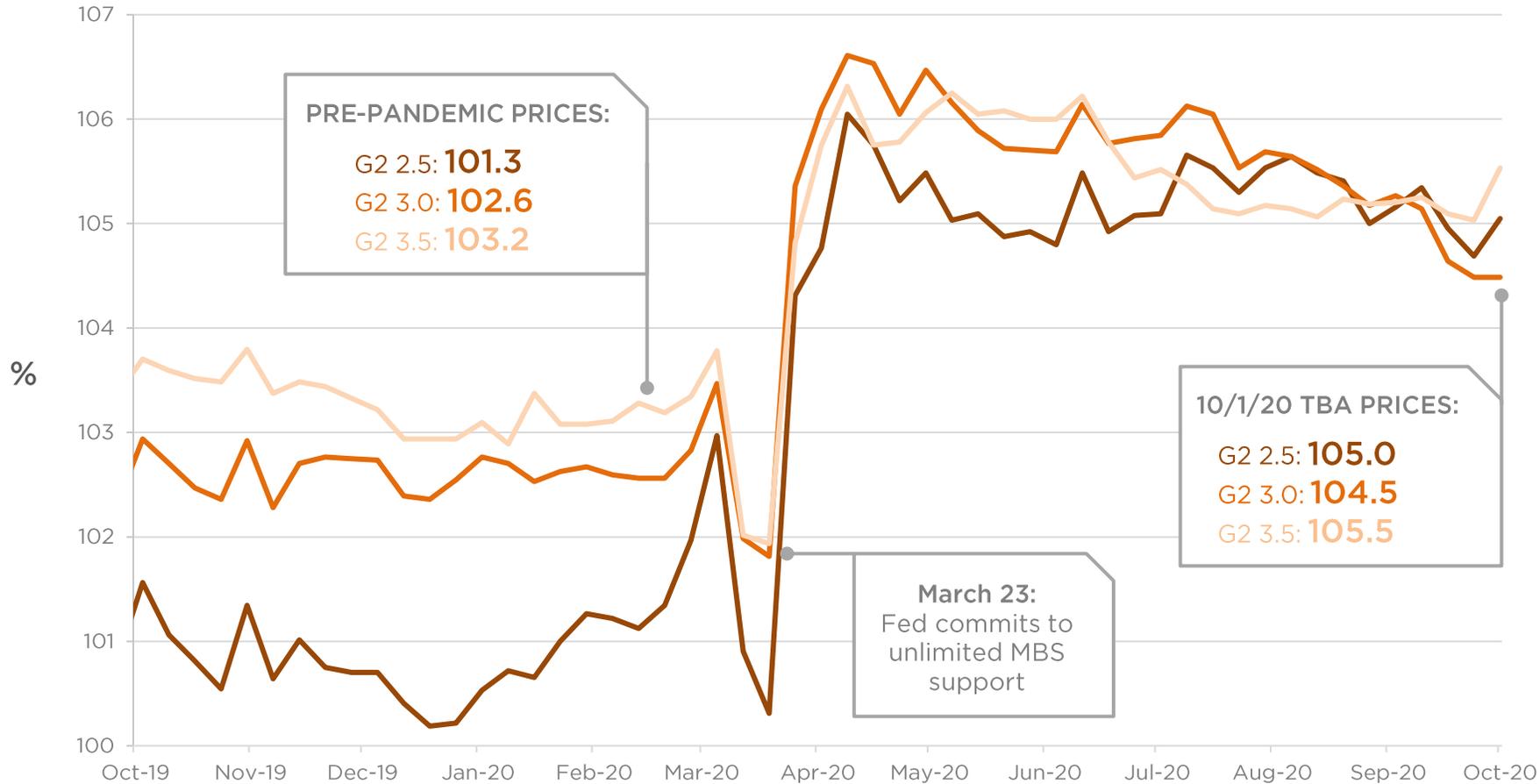


MRB
yields have
returned to
pre-
pandemic
all-time lows

8 Fixed rate: Level debt w/ 100% PSA back-ended PAC, serial and term bonds
Fixed + var/swap: Level debt w/ 100% PSA back-ended PAC, VRDO term bond w/ %LIBOR swap, and 12 years of serial bonds

TBA PRICES SOARED WITH FED SUPPORT

GNMA II TBA PRICES / OCT 2019 - OCT 2020



Current TBA prices significantly exceed pre-pandemic levels

HFA SINGLE FAMILY **MORTGAGE RATES**

GOVERNMENT



CONVENTIONAL



GOVERNMENT w/ DPA



CONVENTIONAL w/ DPA



MRB mortgage rates are back to pre-pandemic lows

TBA mortgage rates are 1.00% to 1.50% lower than pre-pandemic levels

For mortgages that do not have premium-funded down payment assistance, absent subsidy, TBA products currently achieve a lower rate than MRB

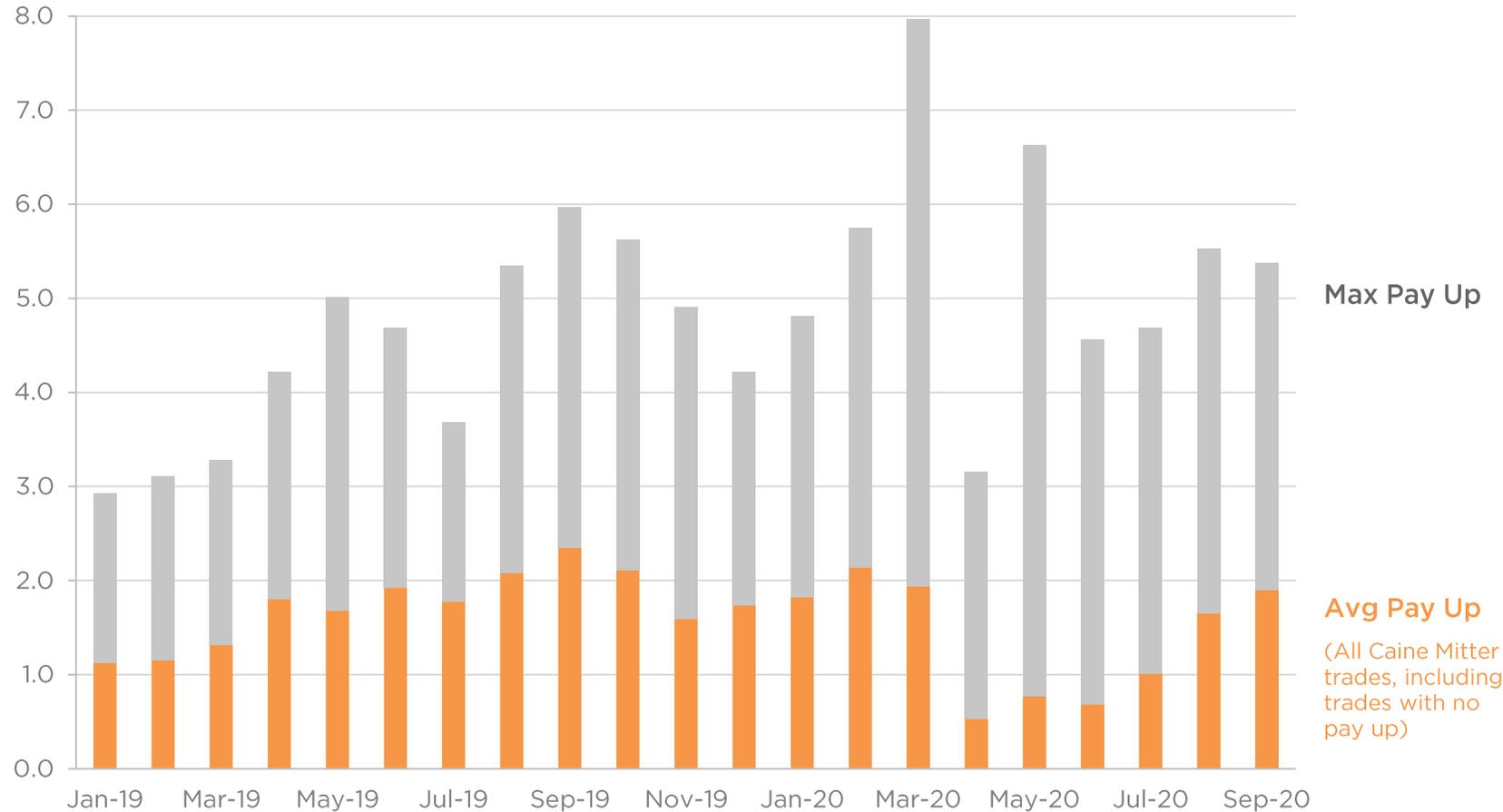
For mortgages that have premium-funded down payment assistance, the story is more nuanced... MRB is still competitive for most programs with balance sheet resources

Fixed rate: Level debt w/ 100% PSA back-ended PAC, serial and term bonds

10 Fixed + var/swap: Level debt w/ 100% PSA back-ended PAC, VRDO term bond w/ %LIBOR swap, and 12 years of serial bonds

SPECIFIED POOL **PAY UPS**

SPECIFIED POOL PAY UPS BY MONTH / % OF MBS FACE VALUE, CAINE MITTER TRADING ACTIVITY



Average pay ups have returned to pre-pandemic levels

PAY UPS UNLOCK ADDITIONAL VALUE OF HFA LOANS

Depending on pool type, in recent years, pay ups have been as high as:

- HFA DPA loan **3.8%** or more
- Smaller loan sizes **6.0%** or more
- CRA credit **1.0%** or more
- New issue GNMA II multi-issuer pools **1.0%** or more



03 / ANALYTICAL TOOLS FOR BEST EXECUTION

Evaluate relative economics in the context of available resources

Use real-time market data to set mortgage rates

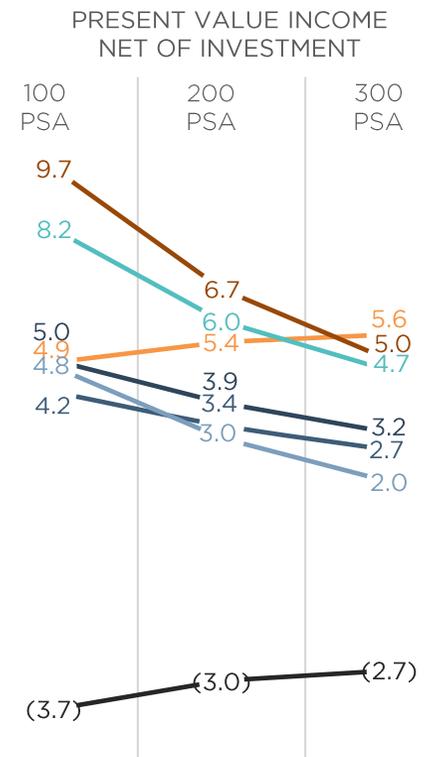
Introduce competition

EVALUATE RELATIVE **ECONOMICS**

ECONOMIC COMPARISON OF COMMONLY USED SINGLE FAMILY STRUCTURES

1st Mortgage: 3.125% Government Loan | DPA: 3pt, Due on Sale, Zero Interest 2nd Mtg

BOND STRUCTURE	BOND YIELD % MTG	AVERAGE FULL SPREAD MORTGAGE RATE % MTG	OVER/ (UNDER) FULL SPREAD % MTG	ZEROS CREATED / (USED) % MTG	UPFRONT INVEST. / (RCPT.) % MTG
IO Strip	-	-	-	-	3.60
Tax-Exempt, 2/3 Fixed Rate w/ 100psa PAC, 1/3 Swapped VRDO	1.34	2.74	0.38	14.8	1.45
Specified Pool Sale	-	-	-	-	(3.10)
Full Spread MRB	-	-	-	-	1.45
Tax-Exempt Passthrough	1.75	3.19	(0.07)	(2.3)	4.93
Taxable Passthrough	1.75	3.19	(0.07)	(2.3)	4.93
Tax-Exempt MRB, 100% Fixed Rate w/ 100psa PAC	1.80	3.21	(0.12)	(2.8)	1.45
Taxable MRB, 100% Fixed Rate w/ 100psa PAC	2.50	3.93	(0.81)	(27.3)	1.45



Stay current on prevailing relative economics among multiple executions at various prepayment speeds

Evaluate in the context of available zeroes, volume cap, funding sources for DPA, and other resources

SET RATES USING **REAL-TIME MARKET INTEL**

Proactively set mortgage rates with the mortgage market to maintain sustainable affordability and strong production levels

SAMPLE DAILY TBA RATE SHEET

Product / Rate		MBS Info			Loan Cost Detail			Sale Px	No DPA	DPA 2nd			
Product	Mtg	Pass-Thru				Lender	Loan	Dec	No	80%		PV Exp.	
Type	Rate	Rate	G-Fee	Svc Fee	SRP	Fee	Cost	Settle	DPA	Exp.	Avg	2nd Mtg	DPA
								Price	Net	Pay Up	DPA	Repay	Net
No DPA MRB	2.250	2.000	0.060	0.190	0.25	(2.50)	(102.25)	103.34	1.09	0.10	(3.00)	1.50	(0.31)
No DPA	2.375	2.000	0.060	0.315	0.80	(2.50)	(101.70)	103.34	1.64	0.10	(3.00)	1.50	0.24
	2.500	2.000	0.060	0.440	1.40	(2.50)	(101.10)	103.34	2.24	0.10	(3.00)	1.50	0.84
	2.625	2.000	0.060	0.565	1.90	(2.50)	(100.60)	103.34	2.74	0.10	(3.00)	1.50	1.34
	2.750	2.500	0.060	0.190	0.25	(2.50)	(102.25)	104.48	2.23	1.00	(3.00)	1.50	1.73
	2.875	2.500	0.060	0.315	0.80	(2.50)	(101.70)	104.48	2.78	1.00	(3.00)	1.50	2.28
DPA MRB	3.000	2.500	0.060	0.440	1.40	(2.50)	(101.10)	104.48	3.38	1.00	(3.00)	1.50	2.88
DPA	3.125	2.500	0.060	0.565	1.90	(2.50)	(100.60)	104.48	3.88	1.00	(3.00)	1.50	3.38
	3.250 (RD)	2.500	0.060	0.690	2.10	(2.50)	(100.40)	104.48	4.08	1.00	(3.00)	1.50	3.58
	3.375	3.000	0.060	0.315	0.80	(2.50)	(101.70)	104.47	2.77	2.40	(3.00)	1.50	3.67
	3.500	3.000	0.060	0.440	1.40	(2.50)	(101.10)	104.47	3.37	2.40	(3.00)	1.50	4.27
	3.625	3.000	0.060	0.565	1.90	(2.50)	(100.60)	104.47	3.87	2.40	(3.00)	1.50	4.77
	3.750	3.500	0.060	0.190	0.25	(2.50)	(102.25)	105.13	2.88	3.60	(3.00)	1.50	4.98
	3.875	3.500	0.060	0.315	0.80	(2.50)	(101.70)	105.13	3.43	3.60	(3.00)	1.50	5.53
	4.000	3.500	0.060	0.440	1.40	(2.50)	(101.10)	105.13	4.03	3.60	(3.00)	1.50	6.13

-0.125% MRB rate spread to TBA

-0.125% MRB rate spread to TBA

Use a TBA rate sheet to set mortgage rates for both **TBA** and **MRB** programs each morning

TBA rate should be the ceiling rate for all mortgage products

Based on prevailing MRB pricing and available subsidy (zeroes), set a “MRB rate spread” to TBA

Follow MRB pricing for a variety of structures each week and periodically re-evaluate MRB rate spread

SAMPLE WEEKLY FULL SPREAD MORTGAGE RATE INDICATIONS

- 30yr non-AMT fixed rate, level debt: 3.55% (+0.15%)
- 30yr non-AMT fixed rate w/ 100% PSA PAC, level debt: 3.10% (+0.10%)
- 30yr non-AMT 67% fixed rate, 33% unhedged variable rate, level debt: 2.85% (+0.05%)
- 30yr non-AMT 67% fixed rate, 33% swapped variable rate, level debt: 3.15% (+0.05%)
- 30yr taxable swapped variable rate, level debt: 3.25% (+0.05%)
- 30yr 50% Non-AMT Fixed Rate, 50% Taxable Variable Rate with Swap: 3.20% (+0.10%)
- 30yr non-AMT MBS pass-through: 3.05% (no change): 2.90% (no change)
- 30yr non-AMT 67% fixed rate w/ 100% PSA PAC, 33% swapped variable rate, level debt: 2.60% (no change)

INTRODUCE **COMPETITION**

At the time of pooling, solicit bids in the specified pool and CMO markets for all pools. Use real time analytics and market intelligence to create optimal pool structures

SAMPLE EXERPTS FROM SPECIFIED POOL BWIC LISTS

All 100% DPA Grants (with two exceptions noted below on item 1. and 6a. and 6b.)

1. \$1.4MM* G2 2.5% Custom (110k max) WAC - 3.04 ALS - 97k 6% RD, 94% FHA 6% non DPA
2. \$1.6MM* G2 2.5% Custom (125k max) WAC - 3.05 ALS - 117k 7% RD, 93% FHA
3. \$2.1MM* G2 3.0% Custom (125k max) WAC - 3.35 ALS - 104k 9% RD, 91% FHA

- 4a. \$6.0MM* G2 2.5% Custom (150k max) WAC - 3.12 ALS - 137k 2% VA, 2% RD, 96% FHA
- 5a. \$1.1MM* G2 3.0% Custom (150k max) WAC - 3.53 ALS - 136k 100% FHA
- OR
- 4b. \$3.7MM* G2 2.5% Custom (150k max) WAC - 3.04 ALS - 137k 2% VA, 98% FHA
- 5b. \$3.4MM* G2 3.0% Custom (150k max) WAC - 3.34 ALS - 137k 2% RD, 98% FHA

All 100% DPA 2nds:

1. \$2.0MM* G2 3.0% Custom (150k max) WAC - 3.64 ALS - 130k 6% VA, 94% FHA
2. \$2.5MM* G2 3.0% Custom (175k max) WAC - 3.63 ALS - 162k 7% RHS, 93% FHA
3. \$2.9MM* G2 3.0% Custom (200k max) WAC - 3.63 ALS - 187k 6% RHS, 94% FHA
4. \$4.9MM* G2 3.0% Custom (225k max) WAC - 3.63 ALS - 213k 100% FHA
5. \$28.3MM* G2 3.0% Custom (no loan balance) WAC - 3.63 ALS - 298k 3% VA, 2% RHS, 95% FHA

Execution	Type	Rate	Pool Number	CUSIP	Original Face	Factor	Pool Detail	Bid (Spread to TBA)
Swap*	FN	3.00	BQ3609	3140KPAK9	1,859,575	1.00000	175k max	
Swap*	FN	3.00	BQ3610	3140KPAL7	1,145,865	1.00000	200k max	
Swap*	FN	3.00	BQ3611	3140KPAW5	1,492,689	1.00000	225k max	
Swap*	FN	3.00	BQ3612	3140KPAW3	7,129,047	1.00000	HFA	
Swap*	FG	3.00	QB4264	3133AAWZ1	1,412,108	1.00000	225k max	
Swap*	FG	3.00	QB4265	3133AAWZ4	4,619,090	1.00000	HFA	
Swap**	FN	4.50	BQ3613	3140KPAW8	1,009,354	1.00000	HFA	
Swap**	FG	4.50	QB4266	3133AAWZ2	1,703,824	1.00000	HFA	
Total					20,371,552			

The MBS secondary market lends itself well to competition

Analytical tools are available to evaluate specified pool sales in real time

SAMPLE IO STRIP VALUATION ANALYSIS

Basic Inputs					Spec Comparison			PSA Target:	Interest Only CMO Bid				1		
Line	Type	PassThru Rate	Original Face	Story	Valuation	Best	Best	Px	PassThru	IO	Breakeven	PSA			
1	GNMA II	2.500%	1,400,000	LLB	2.500%	108.64	1	100.00	1.250%	1.250%	167%				
2	GNMA II	2.500%	6,000,000	HLB	2.500%	107.47	1	100.00	1.250%	1.250%	219%				
3	GNMA II	2.500%	3,900,000	HFA DPA	2.500%	106.19	1	100.00	1.250%	1.250%	298%				
4	GNMA II	3.000%	3,207,780	LLB	3.000%	109.25	1	100.00	1.250%	1.750%	262%				
5	GNMA II	3.000%	2,000,000	HLB	3.000%	108.63	1	100.00	1.250%	1.750%	294%				
6	GNMA II	3.000%	8,300,000	HFA DPA	3.000%	107.50	1	100.00	1.250%	1.750%	365%				
Basic Inputs					Best IO Bid Valuation at Various Prepay Speeds (%PSA)										
Line	Type	PassThru Rate	Original Face	Story	0%	50%	100%	150%	200%	250%	300%	400%	500%	750%	1000%
1	GNMA II	2.500%	1,400,000	LLB	116.65	113.22	110.83	109.11	107.85	106.90	106.16	105.10	104.38	103.31	102.71
2	GNMA II	2.500%	6,000,000	HLB	116.65	113.22	110.83	109.11	107.85	106.90	106.16	105.10	104.38	103.31	102.71
3	GNMA II	2.500%	3,900,000	HFA DPA	116.65	113.22	110.83	109.11	107.85	106.90	106.16	105.10	104.38	103.31	102.71
4	GNMA II	3.000%	3,207,780	LLB	122.64	118.04	114.83	112.52	110.81	109.52	108.51	107.06	106.08	104.60	103.78
5	GNMA II	3.000%	2,000,000	HLB	122.64	118.04	114.83	112.52	110.81	109.52	108.51	107.06	106.08	104.60	103.78
6	GNMA II	3.000%	8,300,000	HFA DPA	122.64	118.04	114.83	112.52	110.81	109.52	108.51	107.06	106.08	104.60	103.78

Solicit IO strip bids as part of your monthly specified pool bidding process

04 / CONCLUSION

Incorporating elements of best execution can increase production and profitability, leading to long-term balance sheet growth and enhancing housing affordability

IN SUMMARY

- 1 A strong HFA balance sheet promotes program sustainability, lower borrowing costs, and growth in housing affordability
- 2 Focusing on growing net worth, consistently strong production and return on origination is the most effective way to build balance sheet
- 3 Currently there are an unprecedented number of effective financing tools available to HFAs; Best Ex analysis of available products facilitates strong production and high returns
- 4 Over the past month, MBS secondary market products (TBA, spec pools, IOs, etc) have outperformed traditional MRBs
- 5 Mortgage revenue bonds remain a viable option, especially for programs with premium-funded down payment assistance
- 6 Real-time Best Ex analysis of all MRB and MBS market products when setting rates, pooling, and settling pools, and utilizing a competitive process facilitates a strong balance sheet

THANK YOU

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NCSHA Annual Conference 2020: Building the Balance Sheet — Expanding Available Tools Part 2

Florence Zeman, AMD

October 27, 2020

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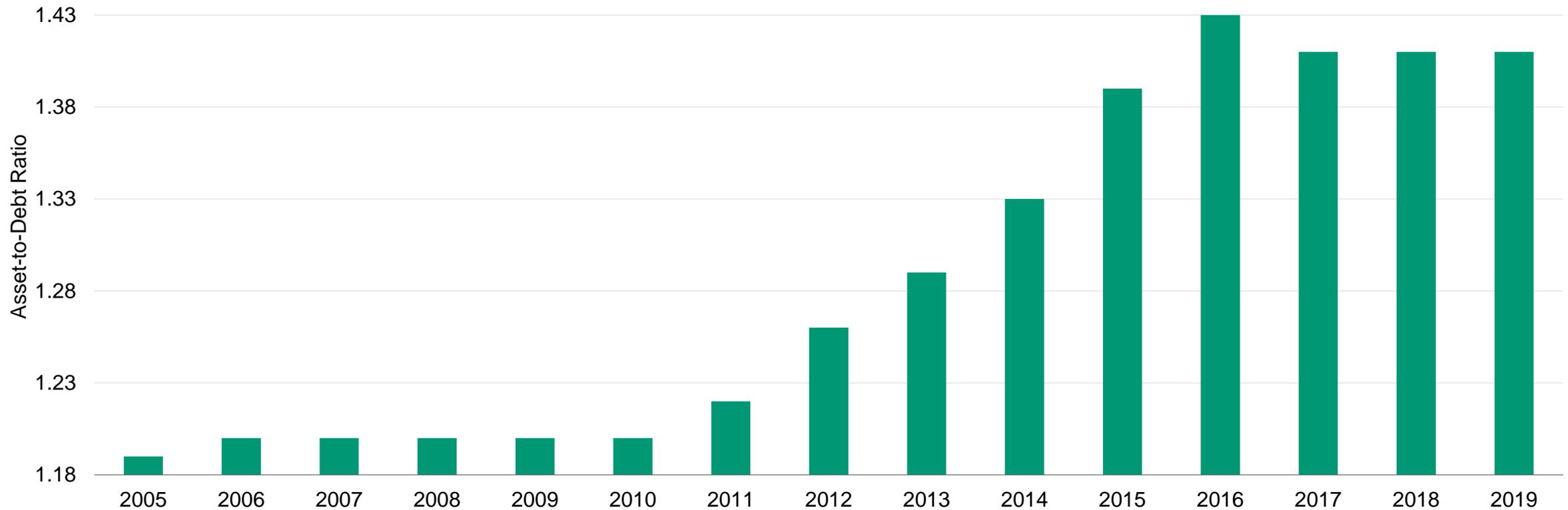
Engagement

Meaningful interactions across multiple channels between our analysts and market participants.



HFAs entered the crisis in a strong financial position

HFA Program Asset-to-Debt Ratio from 2005 to 2019



Source: Moody's Investors Service

Strong balance sheets offer financial strength & flexibility

Benefits of excess assets include:

- » Coverage of loan losses
 - Offset non-payments from forbearance
 - MBS program less reliant on balance sheets
- » Mitigation on risks associated with complex structures
- » Subsidies for new loans
 - Lower interest rates
 - Down payment or closing cost assistance
- » Payment of bond costs

Mix of assets an important consideration

Different types of assets bring varying strengths and risks

- » Cash provides liquidity but investment returns are limited
- » Credit, term, and structure of investments drive or mitigate returns & risk
- » TBA sales increase assets but how it's invested drives profile
- » Mortgage loans offer good returns but bring risk of loan loss
 - MBS returns somewhat lower but payment guaranteed
 - Second loans have highest loss upon default
- » Diversification of assets and balancing risk and returns is an important approach

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