

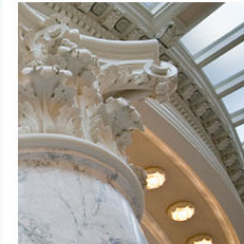
# THE HFA INSTITUTE 2019

## Financing 102: TBA and MBS – Comparing TBA and Mortgage Revenue Bond Executions

RAYMOND JAMES®

 **NCSHA**  
National Council of  
State Housing Agencies

**HOME and  
Housing Trust  
Fund**  
JANUARY 13 – 15



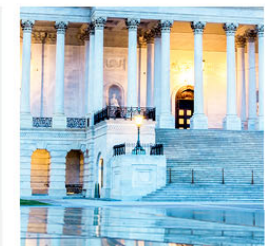
**Housing Credit**  
JANUARY 15 – 17



**MRBs and  
Other Federal  
Homeownership  
Programs**  
JANUARY 16 – 18



**Section 8 and  
Other Federally  
Assisted  
Multifamily  
Housing**  
JANUARY 16 – 18



# Financing 102: TBA and MBS

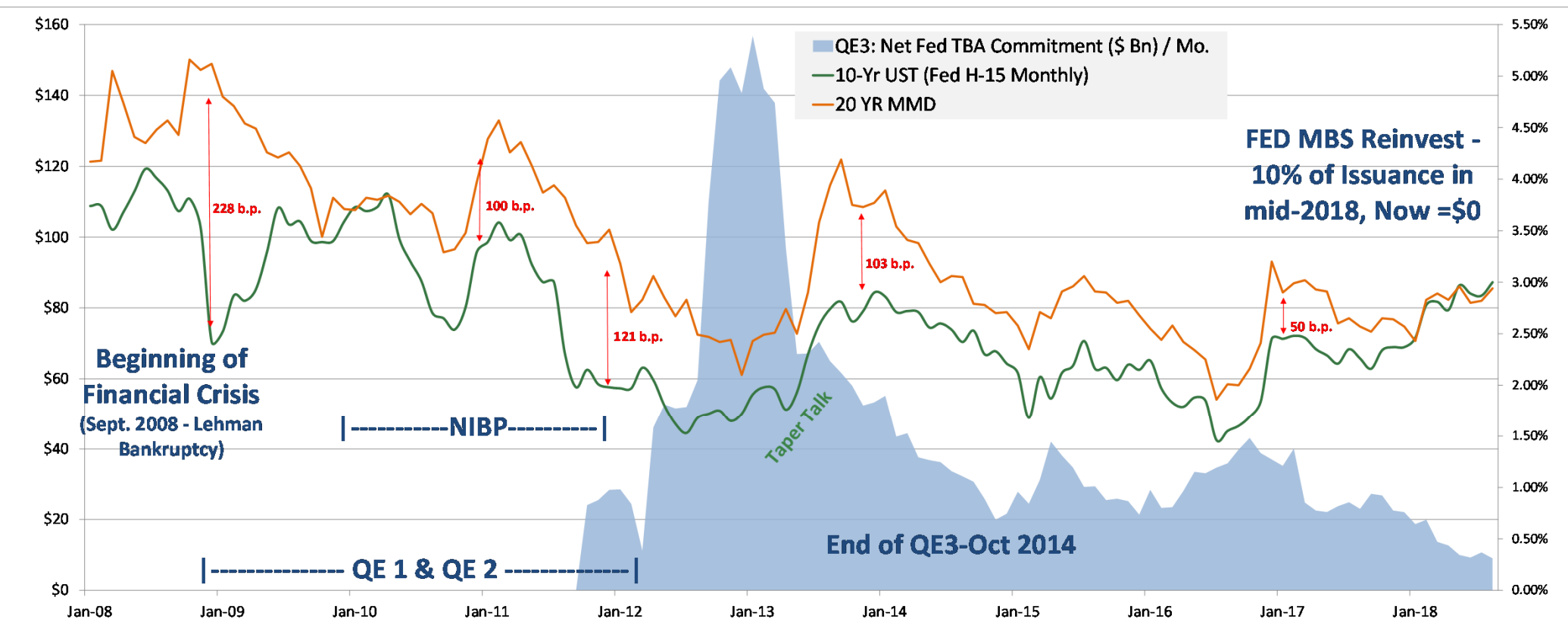
## Comparing Mortgage Revenue Bond (MRB) Execution to TBA/MBS



# Financing 102: TBA and MBS

## Comparing Mortgage Revenue Bond (MRB) Execution to TBA/MBS

- The Fed is no longer replacing MBS prepays. The market has changed.



## Comparing MRB Execution to TBA/MBS

- No simple “apples-to-apples” comparison.
  - On Bonds: HFA is compensated over time with \$ from permitted 1.125% bond-to-mortgage-yield spread.
  - On TBA/MBS: HFA is compensated when MBS is delivered, all \$ up-front.
- Are there exceptions? Can an HFA receive \$ up-front on a bond transaction? Can an HFA receive \$ over time on MBS?
  - On bonds ... difficult to pocket cash.
  - On TBA/MBS...\$ over time maybe, but we are not talking about the exception here.

## Financing 102: TBA and MBS

### Comparing MRB Execution to TBA/MBS

- A fair comparison? Fully informed use of NPV rate.
- Present value of expected future cash flows on bonds. What \$ today which, if invested at X%, would replicate the future MRB cash flow to the HFA?  
or
- Can we future value the investment of TBA/MBS receipts? What is the \$ value in the future of TBA/MBS receipts today, invested at X%?
- Rather than take the known thing (TBA/MBS price) and project into the future (how would I know how you plan to use the \$?) the easiest and the traditional comparison has been to simply to present value bond cash flow.
- What is a reasonable X%? Remember, NPV@ 2.5% is bigger than @ 3.5% because you would need a lot more theoretical \$ today to replicate actual \$ from bonds received in the future.
- If your expected investment rate for TBA/MBS money received today is really a low %, *then use it as NPV%*! Resulting **larger NPV of bond CF tells you that TBA/MBS \$ received today** [and reinvested at low %] **should be bigger.**

**Comparing MRB Execution to TBA/MBS**

- A fair comparison? Comparing MRB projections to known TBA/MBS.
- On Bonds: Underlying loans prepay. They can prepay very slowly or very quickly. A fair comparison shows NPV% across a range of prepayment possibilities.

<u>Prepayment Speed (PSA%)</u>	<u>NPV% or \$ on Bonds</u>	vs.	<u>TBA/MBS % or \$</u>
100%	3.70%		
200%	2.40%	vs.	????
300%	1.65%		
400%	1.25%		
⋮	⋮		
⋮	⋮		
⋮	⋮		

- Assumptions for cash out: HFA fee? Use surplus to call bonds until 100% redeemed or only use prepays?

### Comparing MRB Execution to TBA/MBS

- A fair comparison? What about loan term assumptions?
- A fair comparison will use the same assumptions on both sides.
- Does analysis use 50%/50% mix of GNMA/FN-FHs? Do it on both sides. For HFA, do you know you are looking at 50/50? Are you really 100% GNMA?
- Is HFA paid a servicing release premium (SRP) by a master servicer? How are lenders compensated? Carefully examine assumptions to ensure analysis is not accidentally skewed. (e.g. TBAs use 56.5bp svc when MRBs based on 44bp)
- What if HFA contributes \$ to bond deal? Add it to TBA/MBS, or run bond analyses with no contribution (less \$ for mortgages).
- COI/negative arbitrage included in bonds?
- Disclose assumptions!



### Comparing MRB Execution to TBA/MBS – One Example

- Bonds ~ same, 12/21/18 – 1/9/18; 100% fixed-rate, serials, terms, premium PAC structure, no points to mortgagors; \$ shortfalls from reso. to cover any neg. arb. are reimbursed.
- Loans – 4.75%/5.00% GN/FN-FH, Average 1% SRP & 2.125% lender comp are the same.
- No points; lender compensation paid by the program.

MRB Financed Mortgage Loans (12/21/18-1/9/19)				
Prepayment Speed	NPV of HFA Fee and Surplus @ NPV% Shown			
	2.5%	3.0%	3.5%	4.0%
50%	3.4%	3.0%	2.7%	2.5%
100%	4.5%	4.0%	3.6%	3.2%
200%	2.9%	2.7%	2.4%	2.2%
300%	2.0%	1.8%	1.7%	1.6%
400%	1.4%	1.3%	1.3%	1.2%
500%	1.4%	1.3%	1.2%	1.1%

ADVANTAGE:

MRB

TBA

TBA Net Profit to HFA			
Date	GNMA	FNMA	Average/Ttl
12/21/2018	1.331%	0.483%	0.907%
12/26/2018	1.253%	0.545%	0.899%
12/31/2018	1.409%	0.733%	1.071%
1/2/2019	1.691%	1.061%	1.376%
1/4/2019	1.894%	1.279%	1.587%
1/7/2019	1.909%	1.232%	1.571%
1/9/2019	1.550%	0.951%	1.251%

(at given PSA speed, gross CF projections are identical but NPV, the \$ which if invested at %, by definition will be lower for higher % reinvest)

- Prepay speeds would need to be fairly high for TBA to be better than MRBs.



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## Financing 102: TBA and MBS

### Comparing MRB Execution to TBA/MBS – One Example

- Custom MBS pools move the dial for TBA but in today's market you need a lot.
- With 1% pay-up (shown below), TBA economics improve relative to MRB but a strong case can still be made for MRBs in low rate environment.



MRB Financed Mortgage Loans (12/21/18-1/9/19)				
Prepayment Speed	NPV of HFA Fee and Surplus @ NPV% Shown			
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200%	2.9%	2.7%	2.4%	2.2%
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400%	1.4%	1.3%	1.3%	1.2%
500%	1.4%	1.3%	1.2%	1.1%

ADVANTAGE:

MRB

TBA

TBA Net Profit to HFA			
IF HFA RECEIVES AVG. OF 1% PAY-UP ON TBA			
Date	Average/Tt	Add-On	Total for TBA
12/21/2018	0.907%	1.00%	1.907%
12/26/2018	0.899%	1.00%	1.899%
12/31/2018	1.071%	1.00%	2.071%
1/2/2019	1.376%	1.00%	2.376%
1/4/2019	1.587%	1.00%	2.587%
1/7/2019	1.571%	1.00%	2.571%
1/9/2019	1.251%	1.00%	2.251%

## Comparing MRB Execution to TBA/MBS

- MRB loan rates look relatively good. Any downside?
  - Yes - rates can go down!
  - Bloomberg consensus forecasts for 2019 Fed Funds completely flipped the last two weeks of December

**Fed Funds Day of FOMC Move Futures Rate**

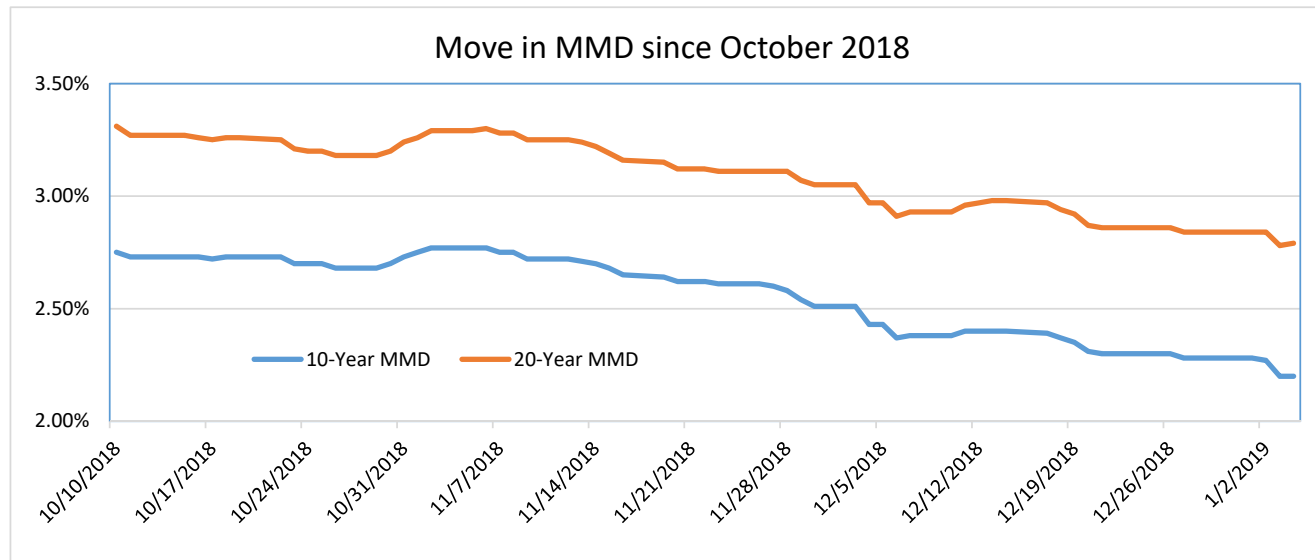
FOMC Target Rate Projections (as of December 19, 2018)				
Rate Increase	-25 bps	Current Rate	+25 bps	+50 bps
Target Rate	2.00 – 2.25%	2.25 – 2.50%	2.50-2.75%	2.75 -3.00%
<b>1/30/2019</b>	0.0%	97.9%	2.1%	0.0%
<b>3/20/2019</b>	0.0%	78.1%	21.5%	0.4%
<b>5/1/2019</b>	0.0%	73.2%	25.0%	1.7%
<b>6/19/2019</b>	0.0%	63.8%	31.3%	4.7%
<b>7/31/2019</b>	0.0%	60.7%	32.8%	6.0%
<b>9/18/2019</b>	0.0%	55.5%	35.2%	8.3%
<b>10/30/2019</b>	0.0%	55.2%	34.1%	8.4%
<b>12/1/2019</b>	2.4%	54.4%	30.3%	8.1%

**January 2 - Fed Funds Move Futures Rate**

FOMC Target Rate Projections (as of January 3, 2019)				
Rate Increase	-25 bps	Current Rate	+25 bps	+50 bps
Target Rate	2.00 – 2.25%	2.25 – 2.50%	2.50-2.75%	2.75 -3.00%
<b>1/30/2019</b>	6.7%	93.3%	0.0%	0.0%
<b>3/20/2019</b>	15.1%	84.3%	0.0%	0.0%
<b>5/1/2019</b>	19.4%	79.1%	0.0%	0.0%
<b>6/19/2019</b>	24.2%	72.7%	0.0%	0.0%
<b>7/31/2019</b>	27.4%	67.8%	0.0%	0.0%
<b>9/18/2019</b>	30.9%	62.0%	0.0%	0.0%
<b>10/30/2019</b>	34.1%	55.5%	0.0%	0.0%
<b>12/1/2019</b>	37.0%	48.0%	0.0%	0.0%

## Comparing MRB Execution to TBA/MBS

- Downside to bonds? (other than returns dependent on % prepays)
  - Rates continue to go down.
  - Lots of bond issuance in Oct.–Nov. is now ~0.25%+ “behind”.
  - If you have bond proceeds, would you shift production to TBA in a falling rate environment?



## Comparing MRB Execution to TBA/MBS

- Enhancing bonds?
  - Bond programs more easily produce DPA. Not always easy to do with TBA.
  - HFAs may opt to take additional risk, using swaps, for example, to lower MRB financing costs. Unlike MRBs it is difficult to lower the cost of TBA financing.
- In the current market, the problem with both TBA and MRB is that neither produces rates that are low enough.
  - National average mortgage APR = 5.15% (FHA; 680-699 FICO).
  - Our 4.75%/5.00% examples have lender compensation paid.
  - Is this competitive in your state?
  - TBA and MRB rates can be (just barely) lowered to 4.50%/4.75% GN/FN-FH.

## Comparing MRB Execution to TBA/MBS

- Where do we go from here?
  - “Normalized” TBA
  - No sub-prime craziness
  - MRBs back to 2006-2007 levels ...
    - the good – retail support, strong institutional interest and no real whole loan market penalty
    - the bad – after the GSEs stopped buying MRBs, spreads spiked

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**Financing 102: TBA and MBS**

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**Comparing MRB Execution to TBA/MBS**

- 40+ HFAs have the ability to finance through both MRBs and TBA. HFAs have already won. For now, when choosing between MRBs and TBA, the winner is!



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