



S&P Global Ratings Analysis for Single-Family MRBs

Aulii T. Limtiaco
Director
U.S. Public Finance / Housing

Homeownership Financing 101: Mortgage Revenue Bonds

HFA Institute
National Council of State Housing Agencies

January 2021

S&P Global
Ratings

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Overview

S&P Credit Ratings in
Perspective

A light blue downward-pointing arrow with a white outline, indicating a flow from the first box to the second.

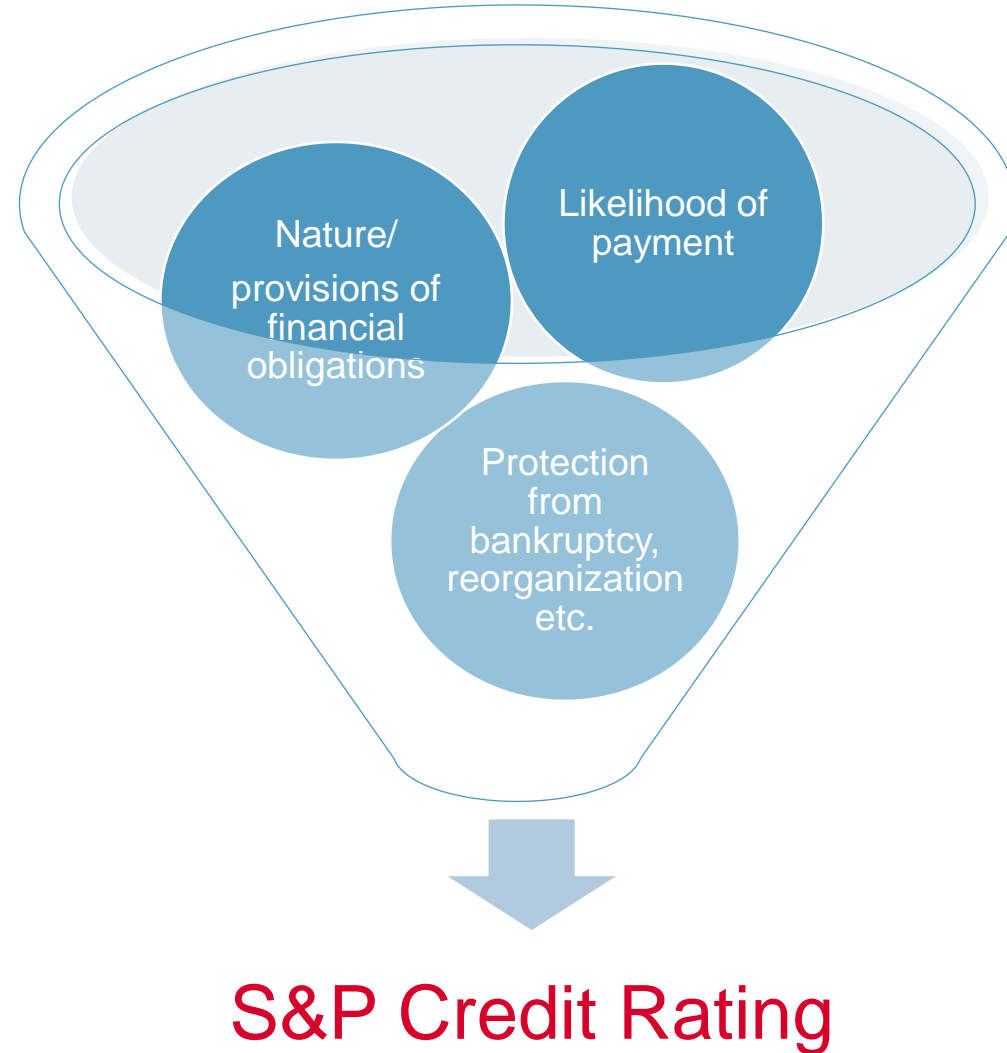
Rating Methodology

A light blue downward-pointing arrow with a white outline, indicating a flow from the second box to the third.

Key Trends

What is a credit rating?

- Forward-looking opinion about the creditworthiness of an obligor or financial obligation(s)/ program(s)
- Reflects S&P Global Ratings' view of the obligor's capacity and willingness to meet its financial commitments as they come due
- Methodology is outlined in published criteria



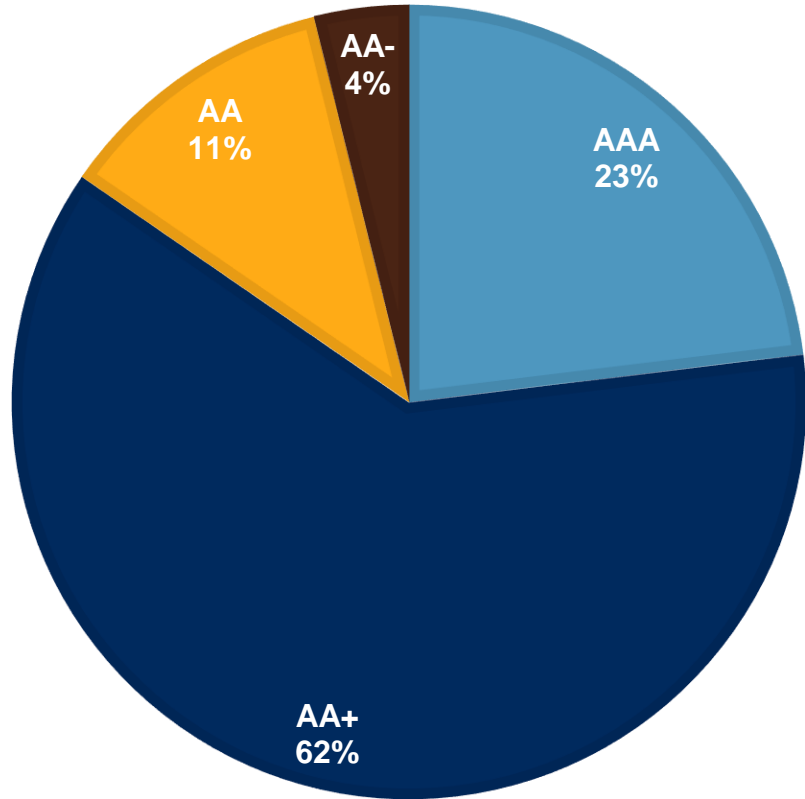
S&P Global's Credit Rating Definitions

Investment Grade

Non-Investment Grade

Rating Category	Description
AAA	The obligor's capacity to meet its financial commitments on the obligation is extremely strong .
AA	The obligor's capacity to meet its financial commitments on the obligation is very strong .
A	More susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitments on the obligation is still strong .
BBB	An obligation rated 'BBB' exhibits adequate protection parameters . However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments on the obligation.
BB, B, CCC, CC, and C	Regarded as having significant speculative characteristics . While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions.
D	An obligation rated 'D' is in default or in breach of an imputed promise . The 'D' rating also will be used upon the filing of a bankruptcy petition or the taking of similar action and where default on an obligation is a virtual certainty, for example due to automatic stay provisions .
*Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the rating categories.	

HFA SINGLE FAMILY PROGRAM RATINGS



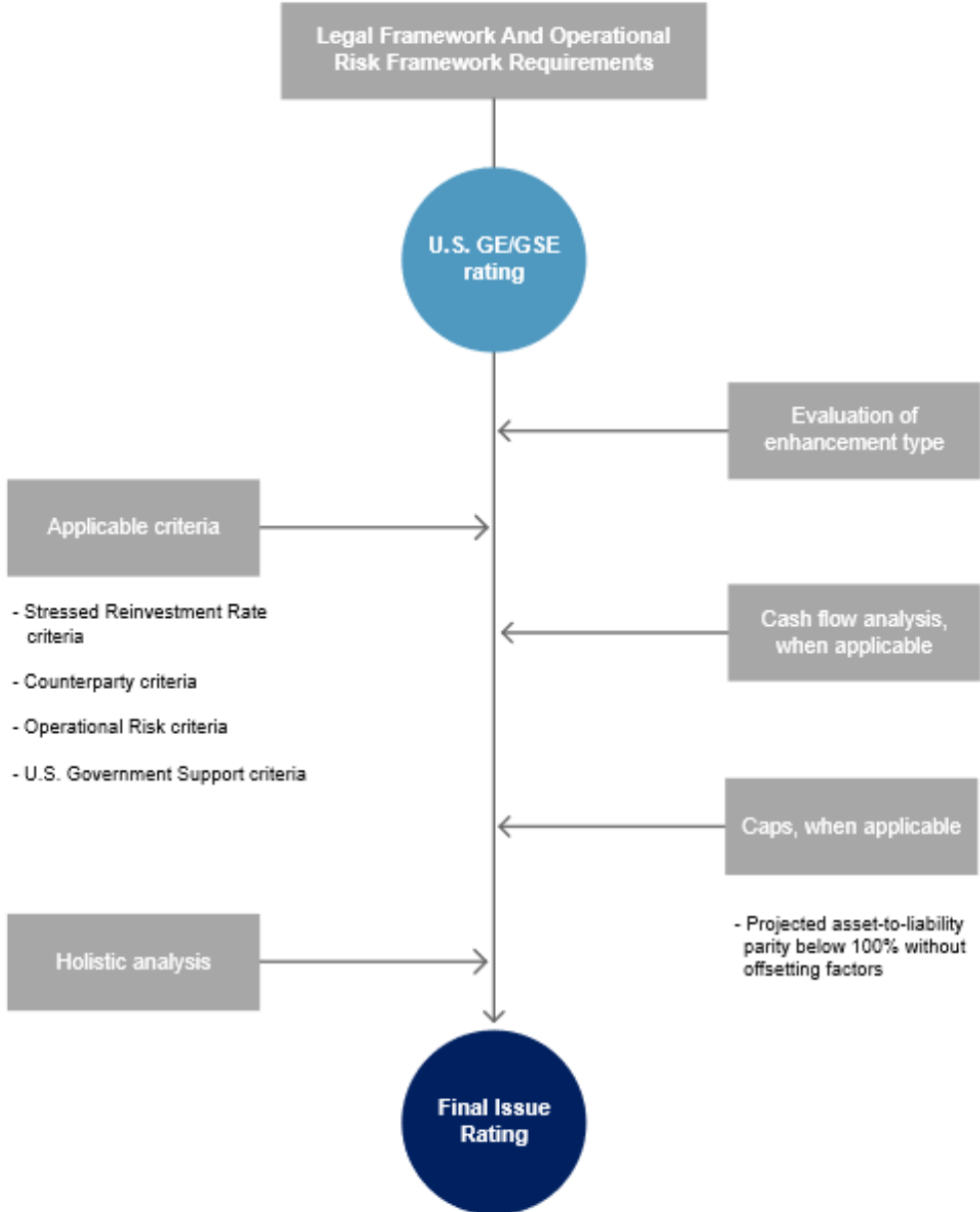
As of Oct. 13, 2020
 Source: S&P Global Ratings.
 Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

OTHER S&P RATINGS

S&P Rating	
AAA	
AA+	
AA	
AA-	
A+	
A	
A-	
BBB+	

Rating Methodology Single-Family MBS Programs

Overview



WTM: Why This Matters

Rating Methodology Single-Family MBS Programs

Key Rating Drivers



“GE” – Government Entity (e.g. FHA, Ginnie Mae)
GSE (e.g. Fannie Mae/Freddie Mac)

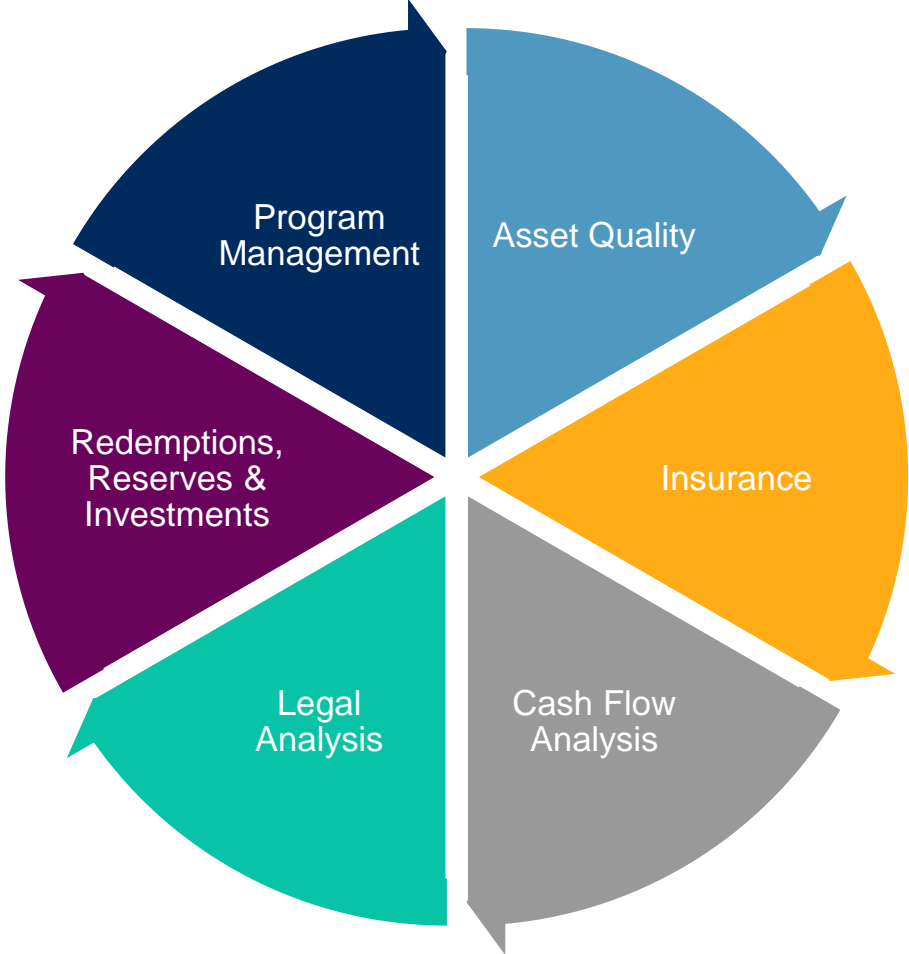
Legal Framework And Operational Risk Framework Requirements	Minimum legal provisions and operational risk requirements and guidelines for key transaction parties
Evaluation of Enhancement Type	Guarantee, insurance, or other type of enhancement (standby or direct pay LOC)
Applicable Criteria	When applicable, criteria that address reinvestment risk, counterparty risk, operational risk, ratings above the sovereign
Cash flow analysis	Various scenarios requiring specific assumptions to address program and mortgage characteristics (e.g. payment lag, redemptions, prepayments, etc.)
Caps, when applicable	Below 100% Asset-to-Liability parity is subject to rating caps below investment grade
Holistic analysis	Strengths or weaknesses that are not fully captured in the above factors. Cannot alone override rating outcomes based on caps, applicable criteria or above the GE/GSE rating

WTM: To be rated equal to (or above) the rating of the GE/GSE, the program must pass many legal & structural requirements

Rating Methodology Single-Family Whole Loan Programs

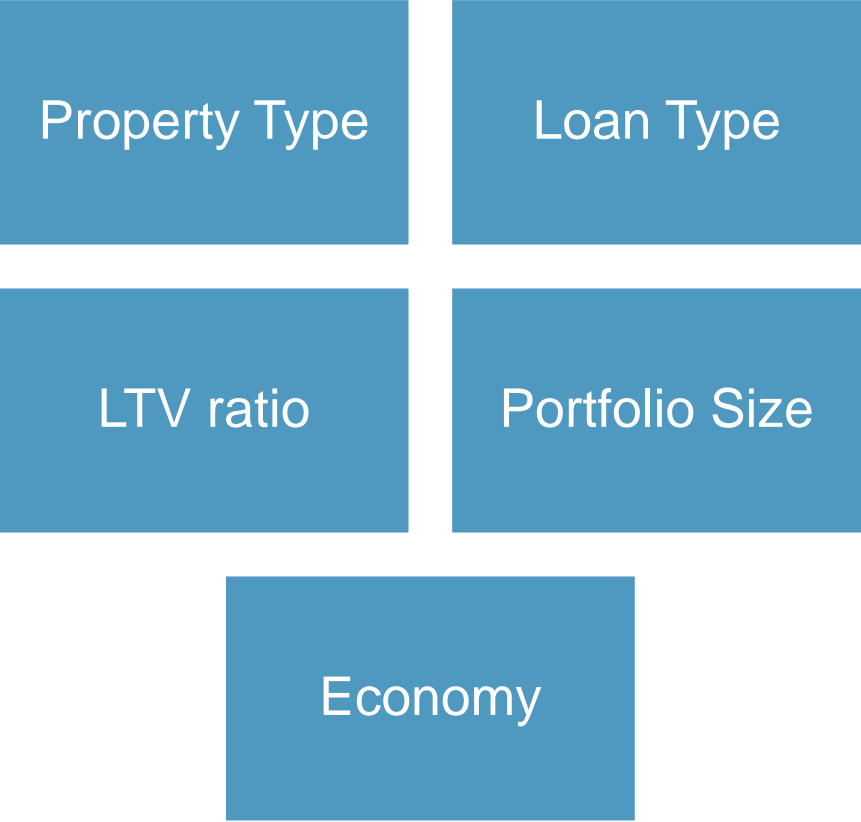
Overview

Six areas of analysis for rating **Whole Loan MRBs**



Rating Methodology Single-Family Whole Loan Programs

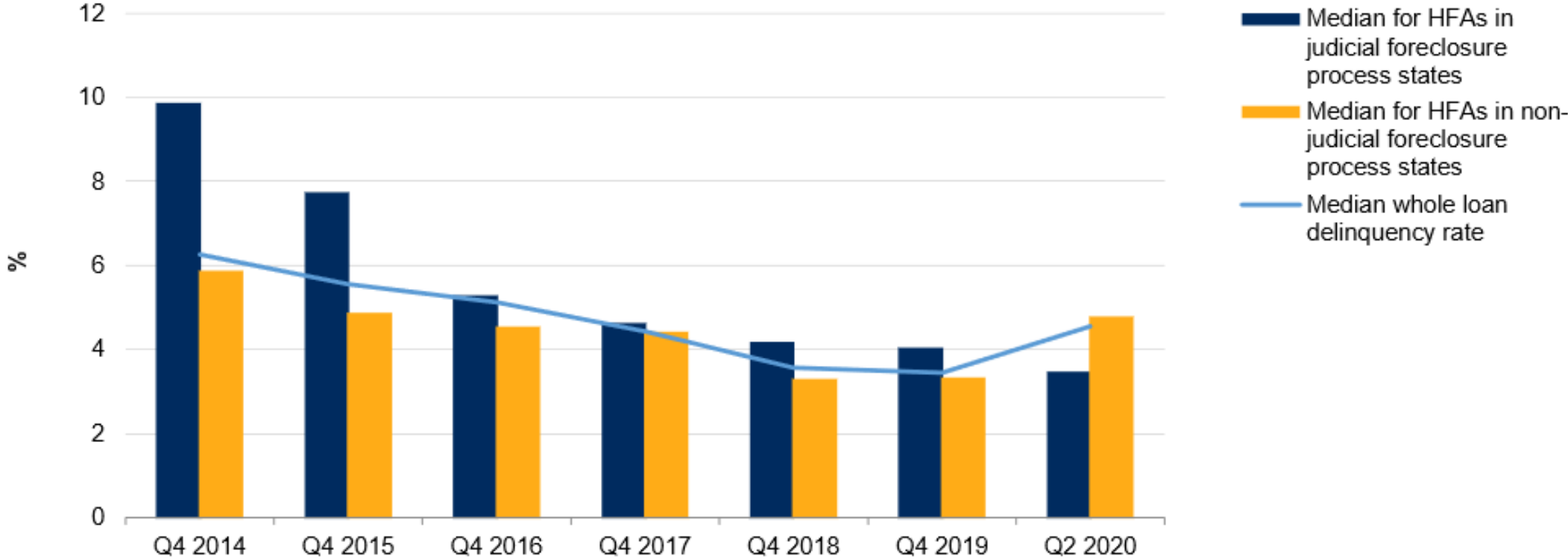
Asset Quality



WTM: If loan quality is weak or payment is delayed, there could be less revenue to pay bondholders

Rating Methodology Single-Family Whole Loan Programs

Median HFA Whole Loan Delinquency Rates



Source: S&P Global Ratings.

Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

Rating Methodology Single-Family Whole Loan Programs

Insurance

Insurance Types

- Conventional
- FHA/VA/RD
- Mortgage pool insurance
- Cash advance coverage
- Standard hazard insurance
- Special hazard insurance
- Title insurance
- Other loss coverage credit enhancements

Loss Coverage (worst case scenarios)

- Credit Coverage
- Liquidity Coverage
- Effect of various factors



WTM: In case of failure to pay, strong insurance providers can mitigate potential weaknesses in loan quality (i.e., delinquencies/foreclosures → losses)

Rating Methodology Single-Family Whole Loan Programs

Cash Flows

Typical Cash Flow Projections

- **Full origination of loans**
 - 0%/Minimum PSA, 100% PSA, 3-year avg. life
- **Non-origination of loans**
- Rapid prepayment (for AAA-rated issues)
- PAC stress (if applicable)
- Super-sinker stress (if applicable)
- Liquidity stress (if applicable)

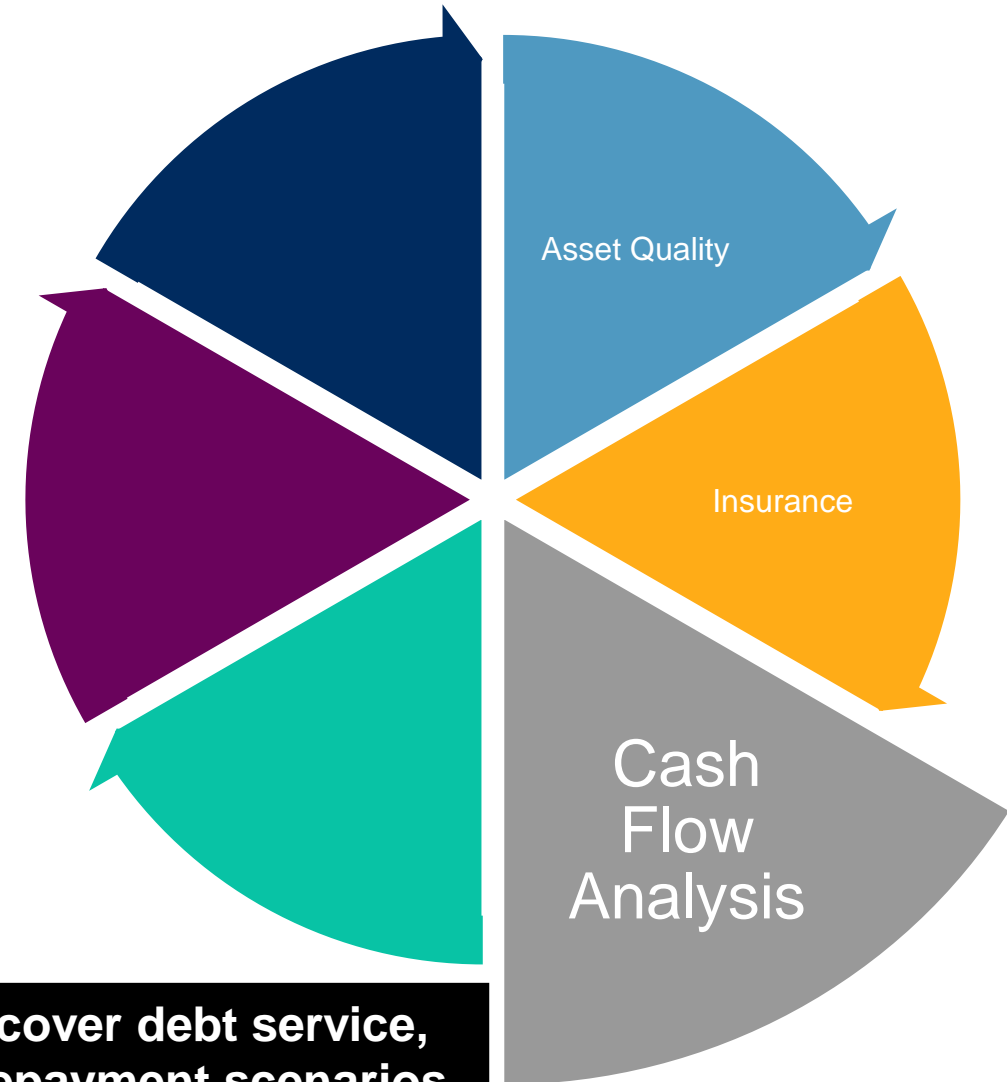
Various assumptions

- Payment lag, reinvestment rates, other structural features

Adjusted Parity Analysis

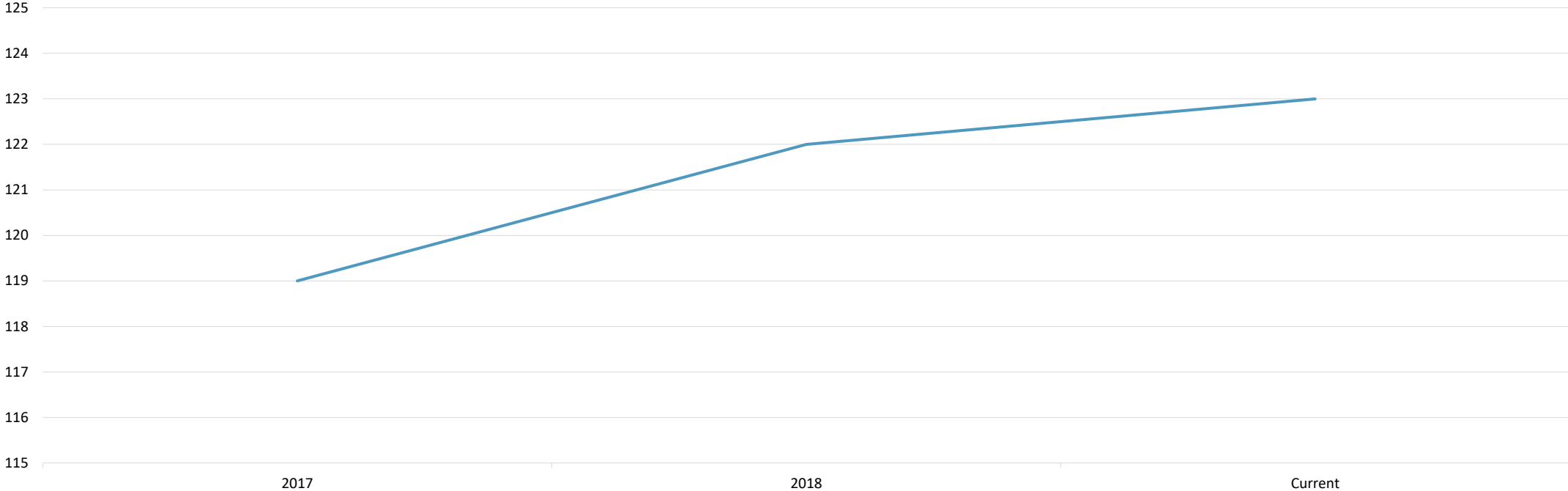
- Applying loss coverage analysis to cash flow parity

WTM: Assesses the strength of program assets to cover debt service, cover outstanding bonds, withstand origination/prepayment scenarios



Rating Methodology Single-Family Whole Loan Programs

HFA Single-Family Programs' Median Parity (%)



Source: S&P Global Ratings.
Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

Rating Methodology Single-Family Whole Loan Programs

Legal Analysis

Analytical Factors

- Debt service schedule
- Level of reserve fund requirements
- Flow of funds
- Permitted investments
- Provisions for additional bonds
- Trustee and servicer responsibilities
- Events of default
- Taxability provisions

WTM: Mortgage revenues should be legally available to pay debt, bond provisions should be disclosed to bondholders



Rating Methodology Single-Family Whole Loan Programs

Redemptions, Reserves, & Investments

Redemptions

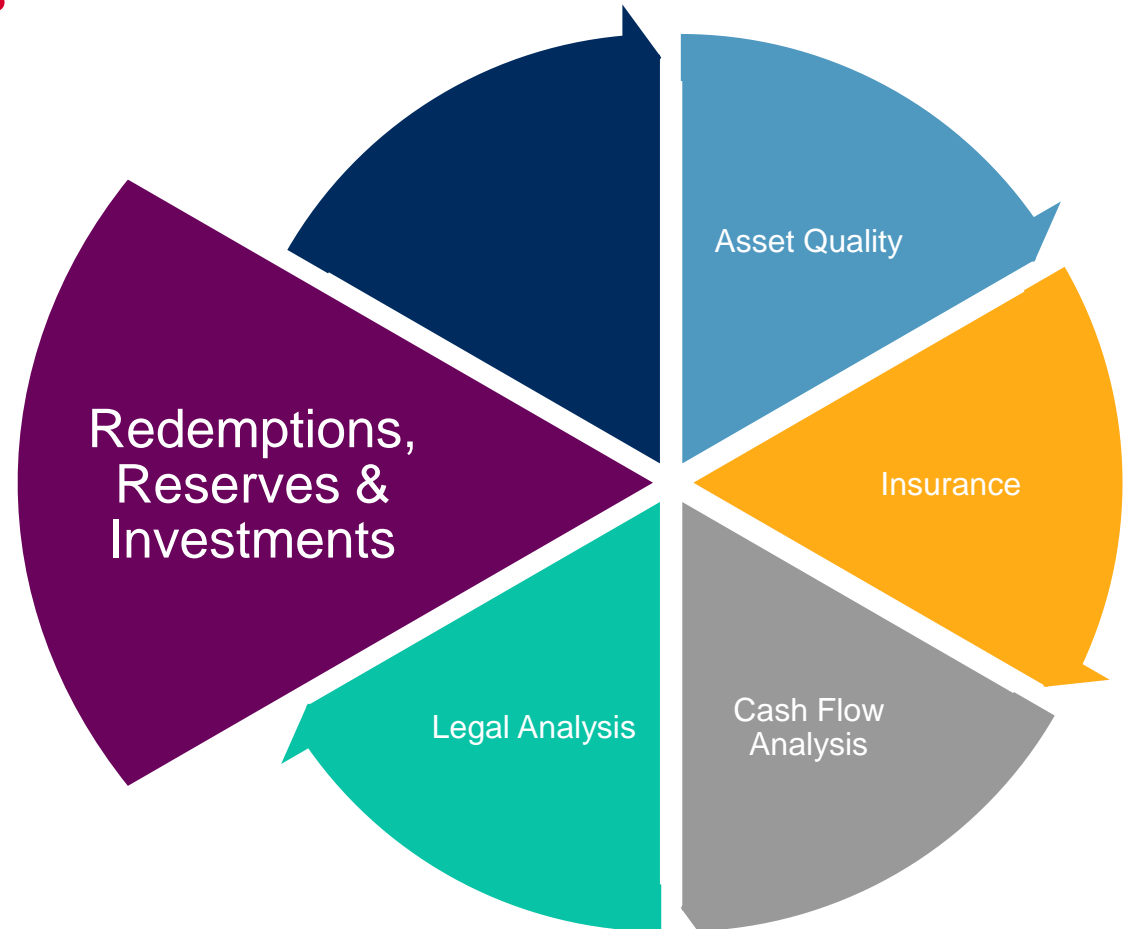
- Debt service structured assuming mortgage revenues received as scheduled (no prepayments)
- How bonds will be called

Reserves

- For deficiencies in cash flow to pay debt service payments between delinquency and when insurance
- At least 2% of outstanding mortgages

Investments

- Usually risk-free or minimal risk investments
- Could include investment agreements with banks whose unsecured debt is rated high as bond rating



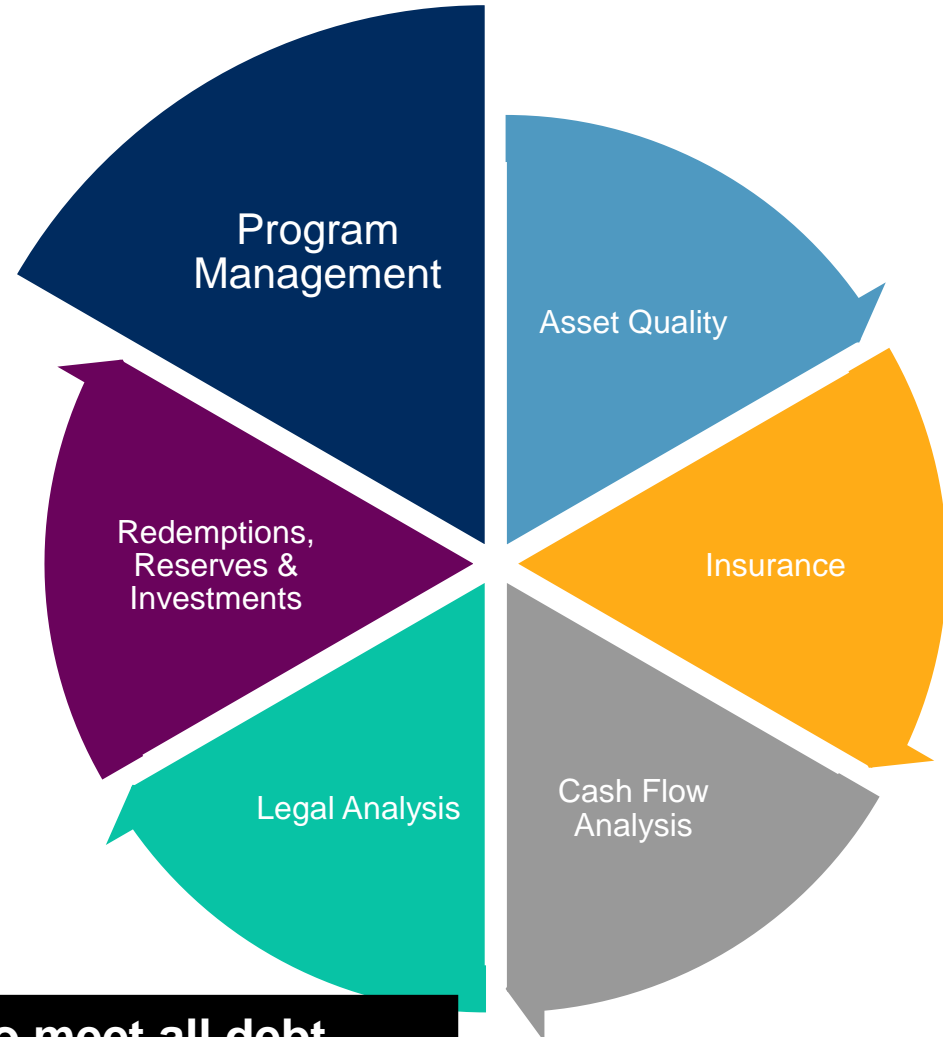
WTM: Reserves help mitigate severity of potential loan losses; Aggressive investments can potentially limit availability of funds to pay debt service

Rating Methodology Single-Family Whole Loan Programs

Redemptions, Reserves, & Investments

Analytical Factors

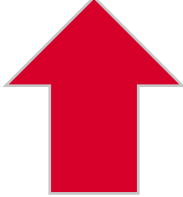



- Administrative and managerial reviews (upfront & ongoing)
- Trustee responsibilities
- Administrator responsibilities and track record
- Mortgage servicer responsibilities and track record
- Cash flow administration



WTM: Strong issuers and servicers are more likely to meet all debt obligations and operate effectively

Key Trends Among Single-Family Programs

Per S&P Global's 2020 HFA Program Report Card

Delinquencies		As a result of forbearance programs and increasing unemployment, delinquencies have reached or surpassed Great Recession Levels
Demand		The homeownership rate is increasing; mortgage rates at historic low in 2020
MBS		MBS as a share of HFA assets continues to grow
HFA & Program Financial Strength		HFA balance sheets & programs have built sizeable cushions to absorb the impact of the pandemic

Contact Information

Aulii T. Limtiaco

Director

One California Street, 31st Floor

San Francisco, CA 94111

T: 415.371.5023

aulii.limtiaco@spglobal.com



HOMEOWNERSHIP FINANCING 101: MORTGAGE REVENUE BONDS

FEBRUARY 1, 2021

DISCLOSURE

Caine Mitter & Associates Incorporated (“Caine Mitter”) is a municipal advisor registered with the Securities and Exchange Commission (SEC) and the Municipal Rule Making Board (MSRB). The MSRB’s website address is www.msrb.org.

The following are MSRB Rule G-42 disclosures. Caine Mitter, in its conduct of all municipal advisory activities for municipal entities, is subject to a fiduciary duty that includes a duty of loyalty and a duty of care. Based on the method of compensation, an opportunity for conflict of interest may exist. If compensation is based on specific transactions or tasks, there may be a benefit to increasing the number of transactions or tasks. If compensation is based on the dollar amount of transactions, there may be a benefit to increasing the dollar amount of transactions. If compensation is based on hours of work, there may be a benefit to increasing the number of hours of work performed. If compensation is based on a fixed dollar amount, there may be a benefit to minimize the hours of work performed. To mitigate this opportunity for conflict of interest, invoices are reviewed by a senior official for compliance with client agreements and appropriateness of the work performed. Outside business activities of Caine Mitter associated persons involved in municipal advisory activities may provide an opportunity for conflict of interest. To mitigate this conflict, associated persons are not permitted to have outside business activities that create a conflict of interest. Associated persons are required to immediately report any new occurrence of outside business activity to a senior official of the firm and to annually provide a certificate listing all outside business activity. Reports of new occurrences of outside business activity and annual certifications of outside business activity are reviewed by a senior official of the firm for conflicts of interest. Investments held by Caine Mitter associated persons involved in municipal advisory activities may provide an opportunity for conflict of interest and/or transactions involving insider trading. To mitigate this conflict, associated persons are not permitted to invest in securities issued by municipal advisory clients of the firm. On an annual basis, associated persons are required to complete a certificate stating that they have not traded in securities issued by municipal advisory clients. Annual certifications of trading in securities issued by municipal advisory clients are reviewed upon completion by a senior official of the firm. Caine Mitter is not aware of any other actual or potential conflicts of interest that could reasonably be anticipated to impair its ability to provide advice in accordance with the established standards of conduct. Caine Mitter is not aware of other scenarios that may give rise to a material conflict of interest that requires disclosure. There are no legal or disciplinary events related to Caine Mitter or its associated persons involved in municipal advisory activities.

In accordance with MSRB Rule G-10, any complaint involving the municipal advisory activities of Caine Mitter or any of its associated persons involved in municipal advisory activities should be directed to William Caine, Chief Compliance Officer, at wcaine@cainemitter.com. A municipal advisory client brochure is posted on the website of MSRB that describes the protections that may be provided by MSRB rules and how to file a complaint with an appropriate regulatory authority.

In accordance with MSRB Rule G-42, Caine Mitter’s most recent Form MA and each most recent Form MA-I can be accessed electronically at SEC.gov by clicking on “Company Filings” on the top right, typing in Caine Mitter & Associates Inc, and clicking on “Search”.

BOND DEFINITION AND TYPES

DEFINITION OF A BOND

- The written evidence of debt, which upon presentation entitles the bondholder or owner to a fixed sum of money plus interest. The debt bears a stated rate(s) of interest or states a formula for determining that rate and matures on a certain date.
- For purposes of computations made on a “per bond” basis, a \$1,000 increment of a security (no matter what the actual denominations are) (e.g. 10 bonds refers to a \$10,000 investment)
- Generally refers to debt securities with a maturity of greater than 13 months (this is not a strict cut off and depends on context)
- Bonds vs loans
 - Both are a promises to pay
 - The difference may vary based on context
 - Bonds are generally marketable
 - Loans are generally illiquid

TYPES OF BONDS ISSUED IN THE UNITED STATES

- U.S. Treasuries (“Government Bonds”)
- Corporate Bonds
- Agency Mortgage-Backed Securities
- Municipal Bonds
- Federal Agency Securities (“Agencies”)
- Other Mortgage-Related Bonds: Collateralized Mortgage Obligations, Commercial Mortgage Backed Securities, Other Non-Agency MBS
- Other Asset-Backed Securities

A bond is a
“promise to
pay”

MUNICIPAL BONDS OVERVIEW

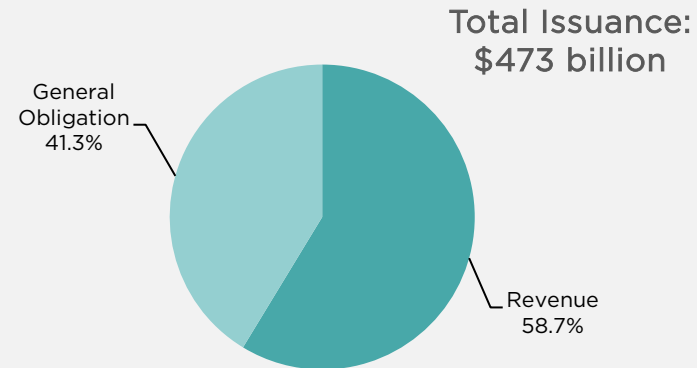
MUNICIPAL ENTITY

A State, political subdivision of a State, or municipal corporate instrumentality of a State.

TYPES OF MUNICIPAL BONDS

- **General obligations bonds** – Generally, entail the full faith and credit (and many cases taxing power) of the issuer
- **Limited obligation bonds** – Generally, payable taxes that are limited by law in rate or amount.
- **Revenue bonds** – Generally, payable from a specific limited source of revenue.
- **Lease Revenue bonds** – Generally, secured by lease payments from the party leasing the facilities financed by the bonds; payments may be subject to annual appropriation when the lessee is municipal government.

2020 MUNICIPAL BOND ISSUANCE BY SOURCE OF PAYMENT



Source: The Bond Buyer

TYPES OF REVENUE BONDS

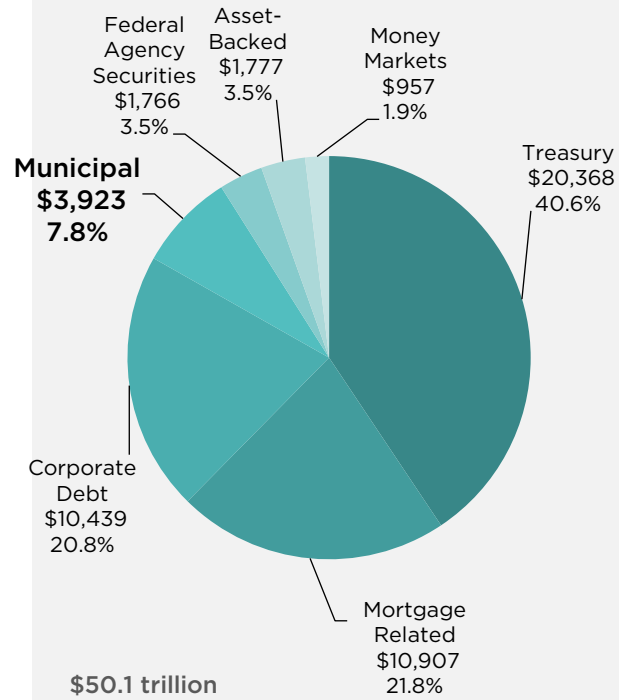
- **Housing bonds**
- **Industrial bonds**
- **Hospital bonds**
- **Student loan bonds**
- **Utility bonds** – (water, sewer, electric or gas systems)
- **Airport bonds**
- **Toll road bonds**
- **College dormitory bonds**
- **Conduit bonds** – (revenue bonds financing a single project for a private party that is solely responsible for payment)

Housing bonds are revenue bonds

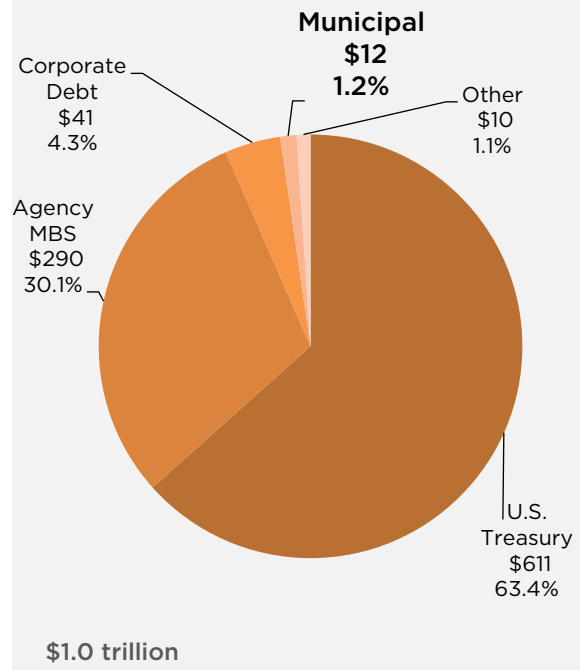
FIXED INCOME MARKET TYPES OF SECURITIES

(\$BILLION)

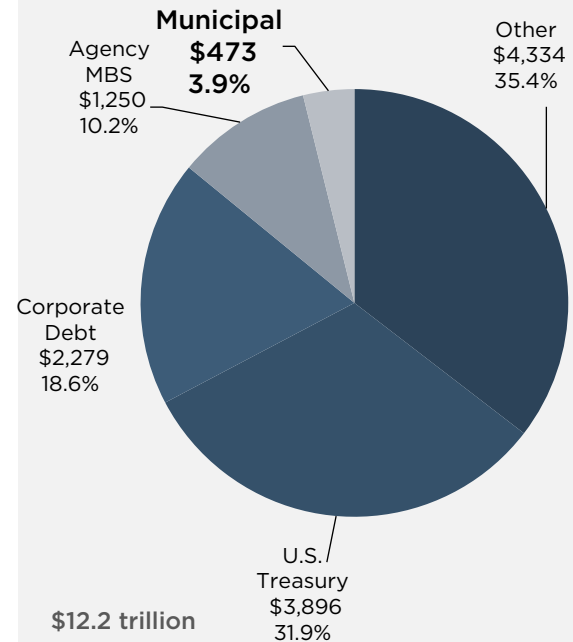
2020 SECURITIES OUTSTANDING*



2020 AVERAGE DAILY TRADING VOLUME



2020 ISSUANCE IN THE BOND MARKETS



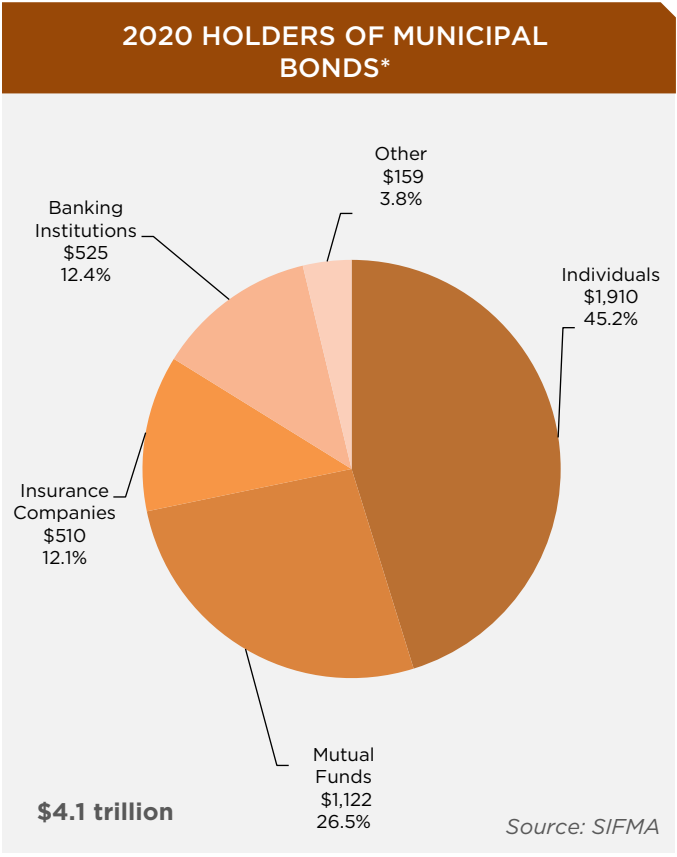
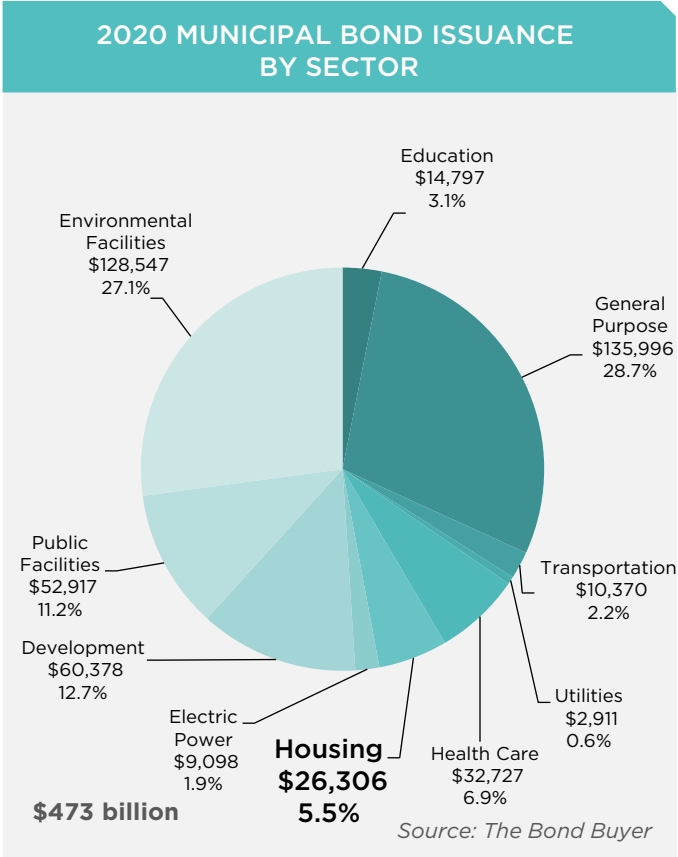
Munis are a small portion of the market...

*As of Q3

Source: SIFMA

MUNICIPAL BONDS SECTORS AND HOLDERS

(\$MILLION)



*As of Q3

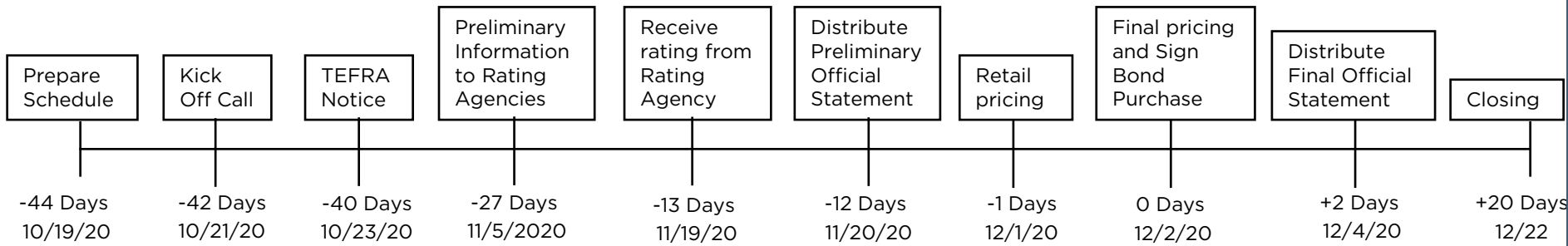
...and housing is a small portion of munis

BOND ISSUE TRANSACTION PARTICIPANTS

PARTY	DUTIES
Issuer / Housing Finance Agency	
Issuer's Counsel	Reviews / prepares documents
Bond Counsel	Prepares documents Provides opinions on validity of issuance and tax exemption
Municipal Advisor	Advises on all matters in relation to bond issuance Structures bond issue Prepares cash flow projections and yield calculations
Senior Managing Underwriter	Recommends bond structures Manages sale of bonds Sells bonds to investors
Co-Managing Underwriters	Recommends bond structures Sells bonds to investors
Selling Group	Sells bonds to investors
Underwriters' Counsel	Represents Underwriters Provides opinion on disclosure
Rating Agency	Provides credit rating for the bonds
Investors	Purchases Bonds
Auditor	Provides letters relating to the financial statements
Bond Trustee	Carries out duties under the bond indenture, including movement of funds

Finance team works together to bring the bonds to market

SCHEDULE



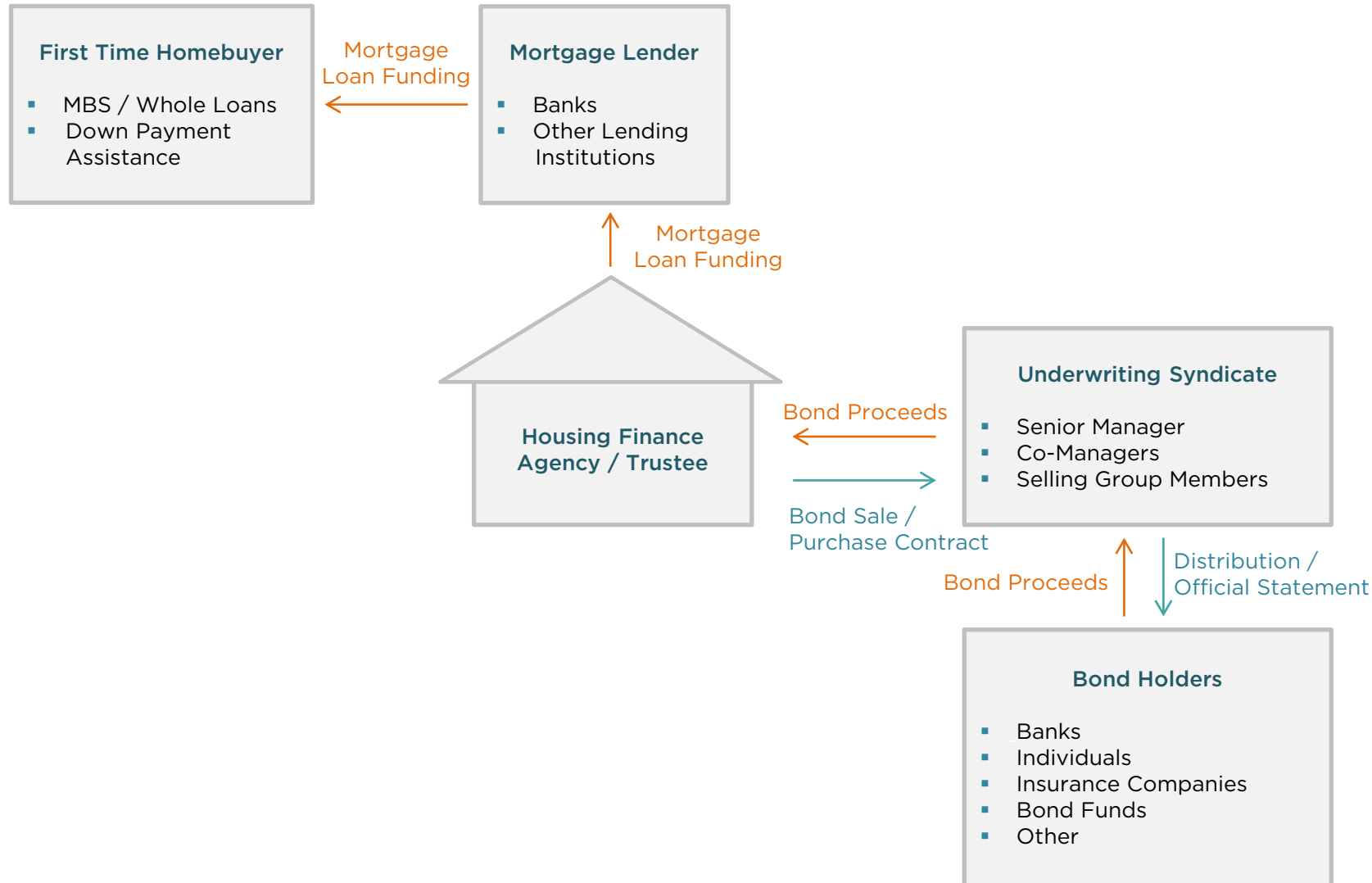
October 2020						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November 2020						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December 2020						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

MRB bond issues take 2-3 months

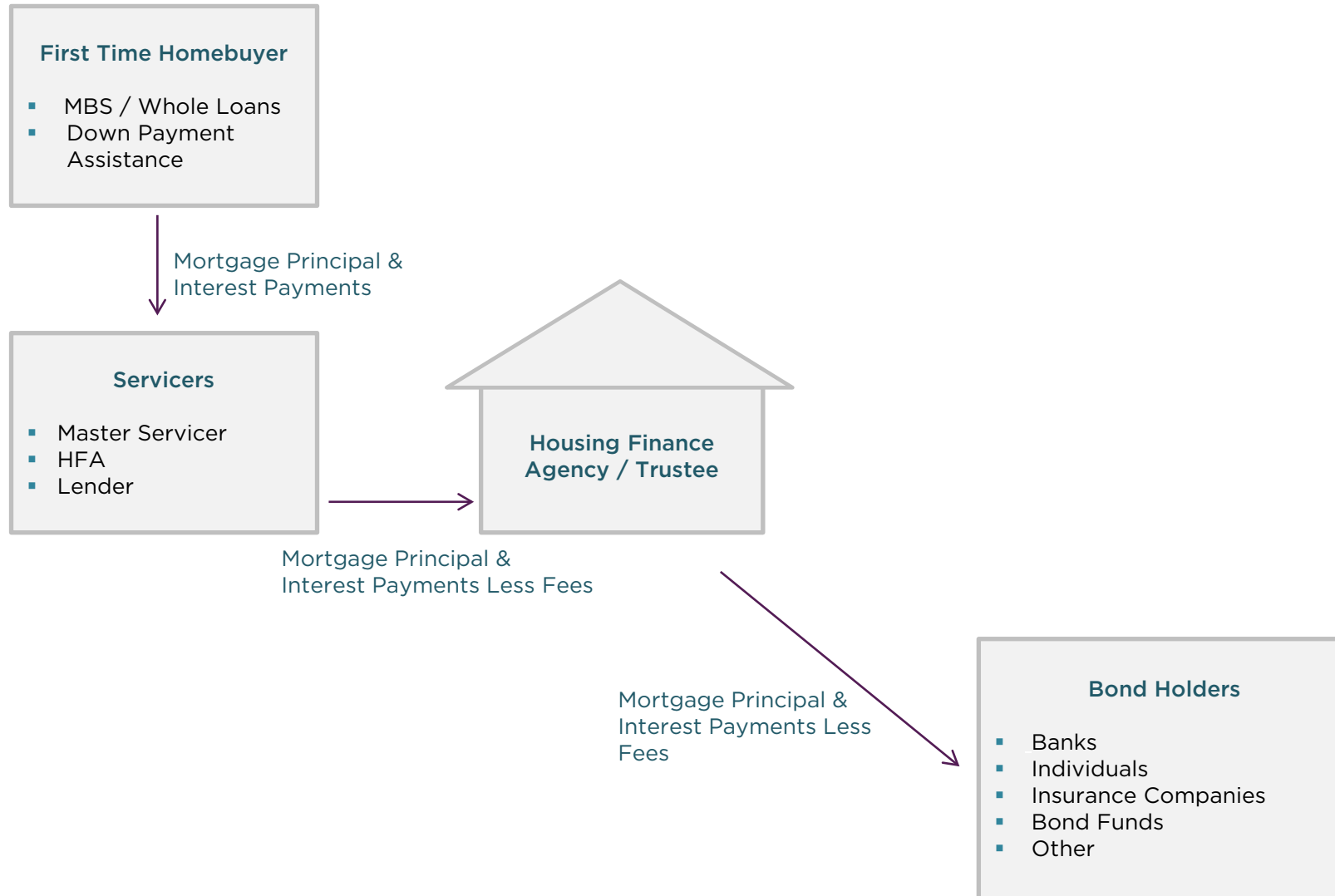
SINGLE FAMILY BOND ISSUE FLOW OF FUNDS – **FUNDING**



Bond
proceeds
fund loans
for first time
homebuyers

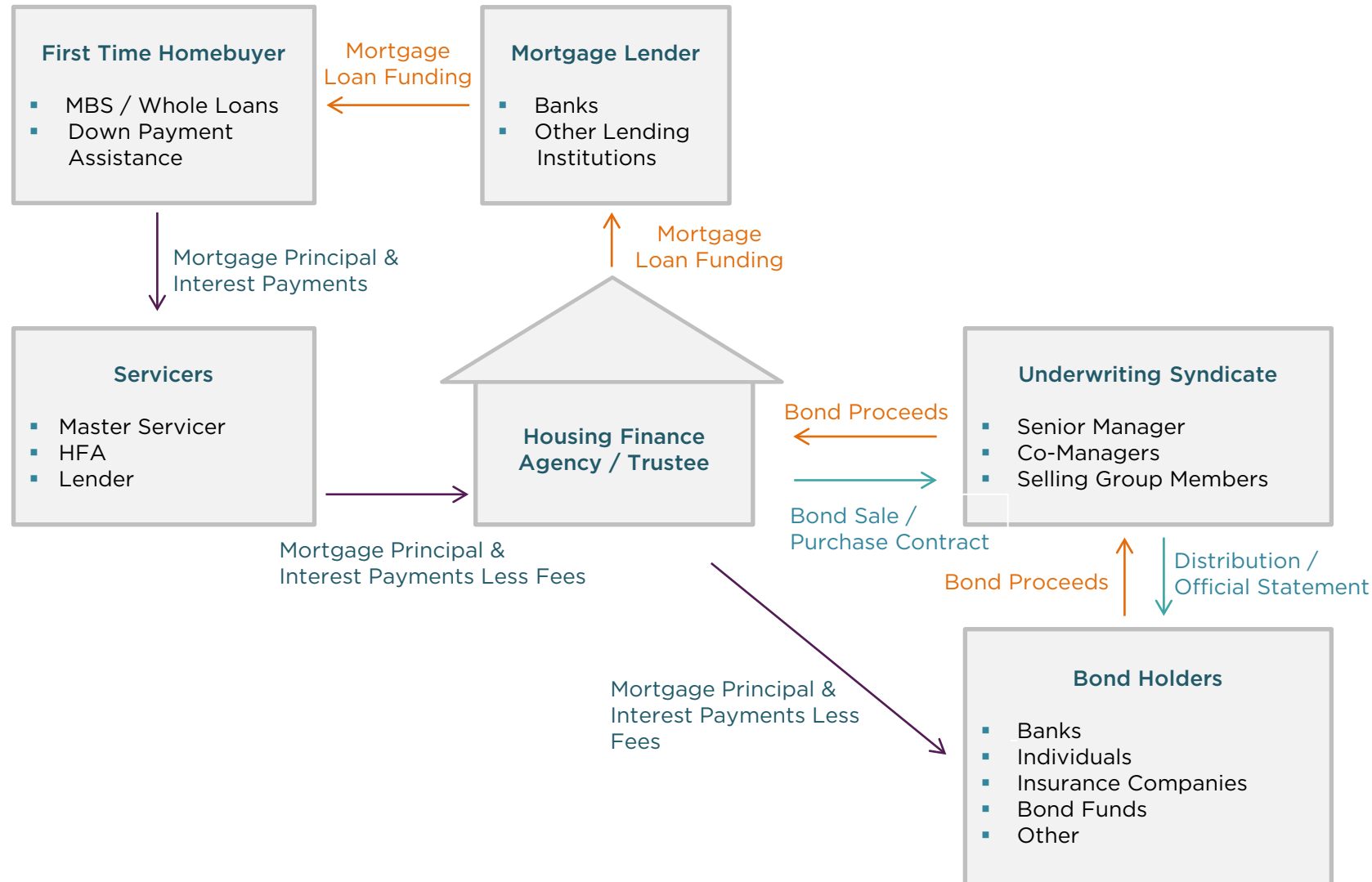
SINGLE FAMILY BOND ISSUE

FLOW OF FUNDS – **CASH FLOW**



...and payments from those loans are used to repay the bonds

SINGLE FAMILY BOND ISSUE FLOW OF FUNDS – **COMBINED**



Issuer earns a “spread” between loan receipts and bond payments

BOND OPTIONALITY

1

Mandatory Redemption

- Bond maturity
- Sinking fund redemption
- Mandatory tender

2

Optional Redemption

- Callable from any source of funds
- Typically 9 to 10 years from issuance

3

Special Redemptions (“Housing Calls”)

- Prepayment redemption
- Excess revenue redemption
- Excess reserve redemption
- Unexpended proceeds redemption

Mortgages can prepay at any time, so we need corresponding optionality on bonds

STRUCTURING CONSIDERATIONS

1 Bond Issue Size

- Frequency of Issuance vs. origination risk
- Costs of Issuance

2 Loan Origination Schedule

- Issue bonds and then set mortgage rate, or reserve loans first and then issue bonds?

3 Market Conditions

- How do current MRB rates compare to other means of financing loans?

4 Programmatic Needs

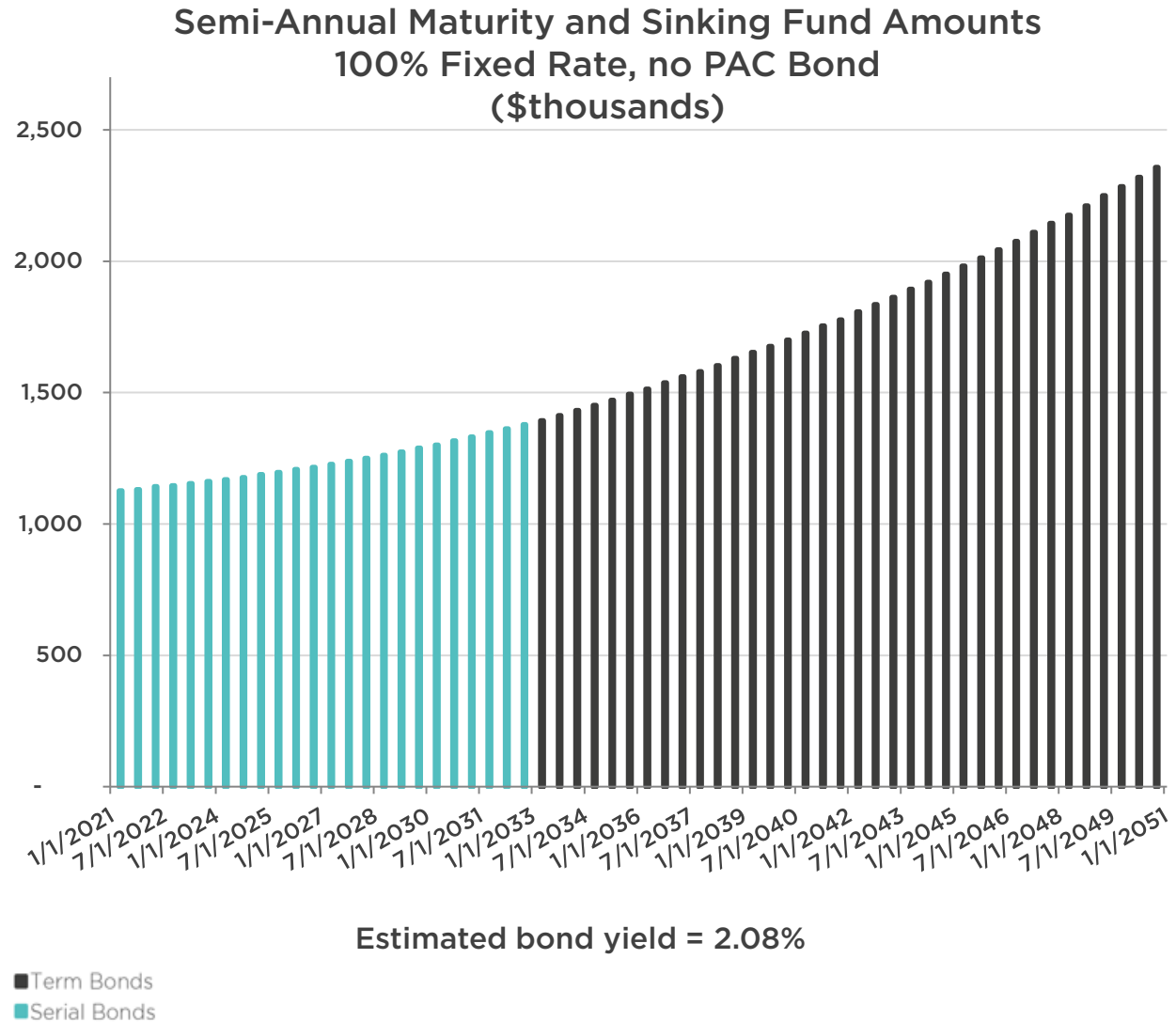
- Premium for down payment assistance
- Variable rate/swaps for low market rate

Bond issues are structured to maximize the benefit to the HFA based on current market conditions, while balancing risks

MRB STRUCTURE - **PLAIN VANILLA**

Housing Bond Types

- Serial Bonds
- Term Bonds

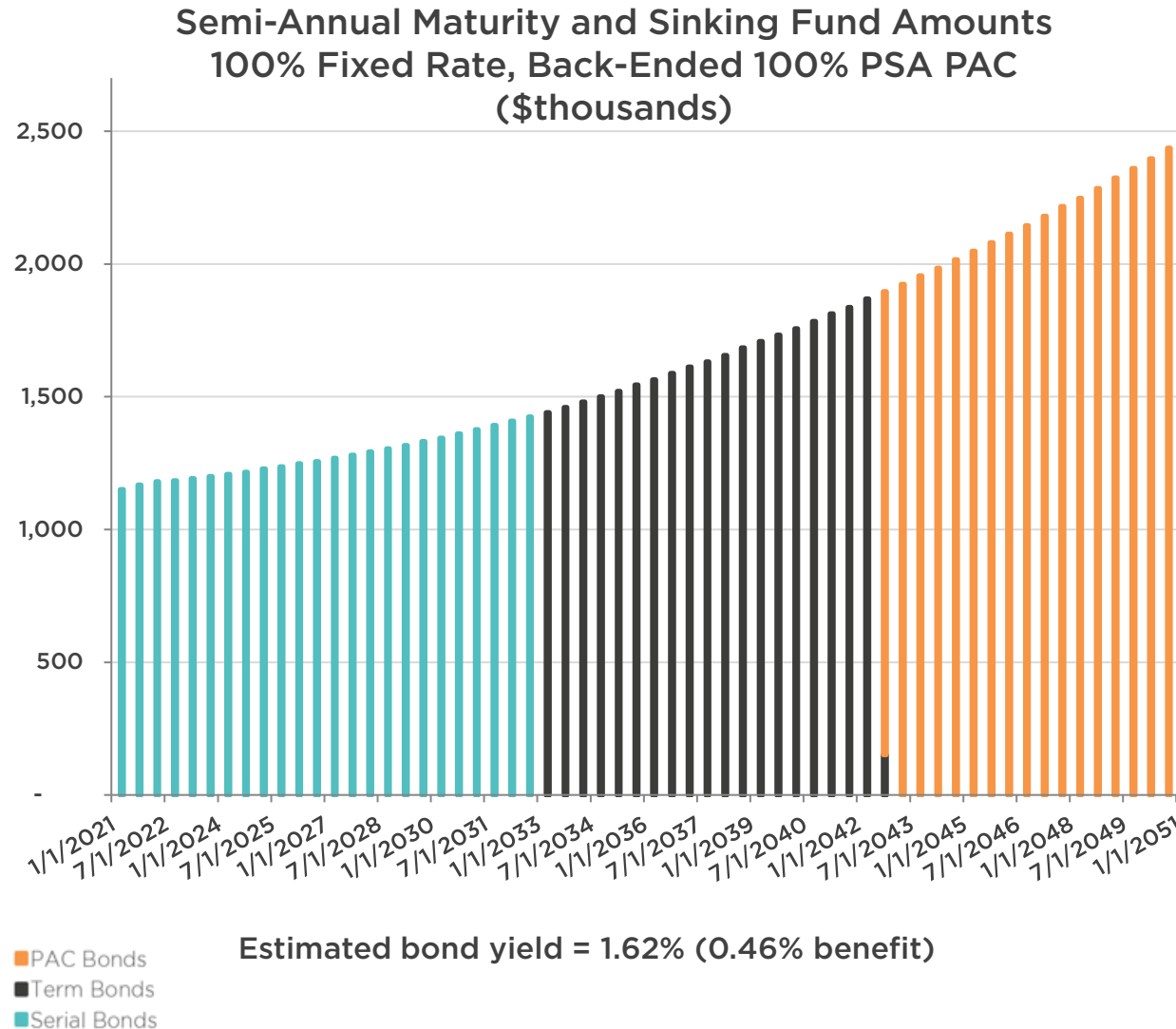


Bonds are structured at level debt to match mortgages

MRB STRUCTURE - **FIXED RATE w/ PAC**

Housing Bond Types

- Serial Bonds
- Term Bonds
- Planned Amortization Class (“PAC”) Bonds
 - Average Life
 - Prepayment Bands

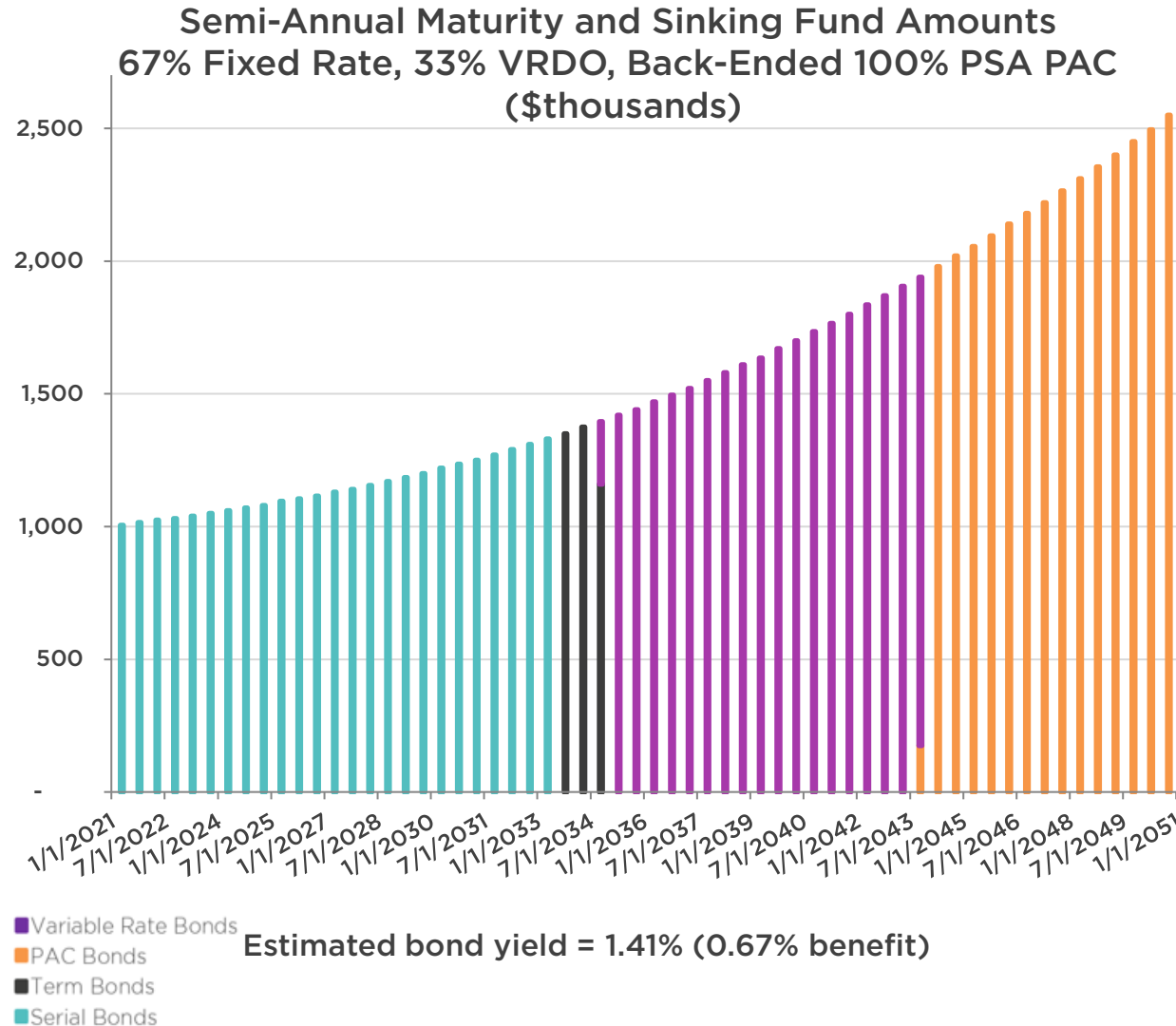


PAC Bonds can lower borrowing costs significantly, but introduce additional prepayment risk

MRB STRUCTURE - PAC & VARIABLE RATE

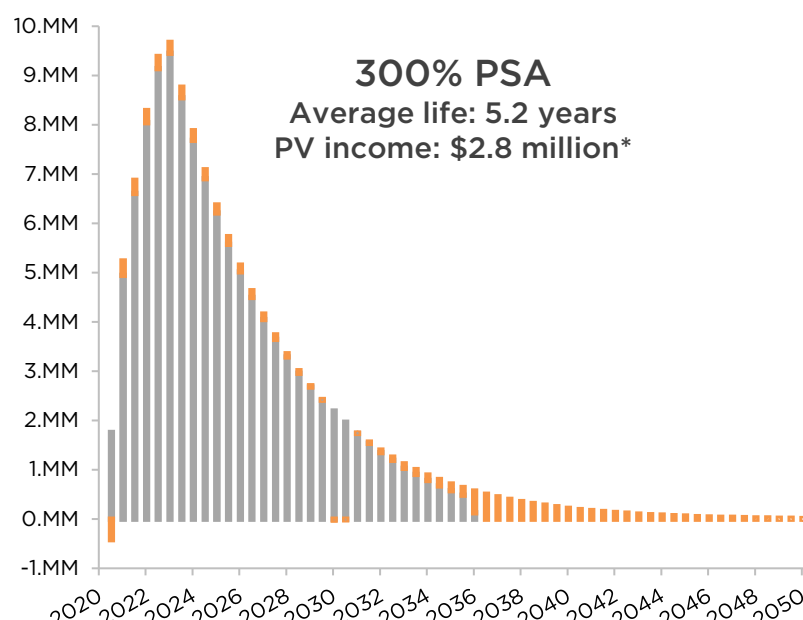
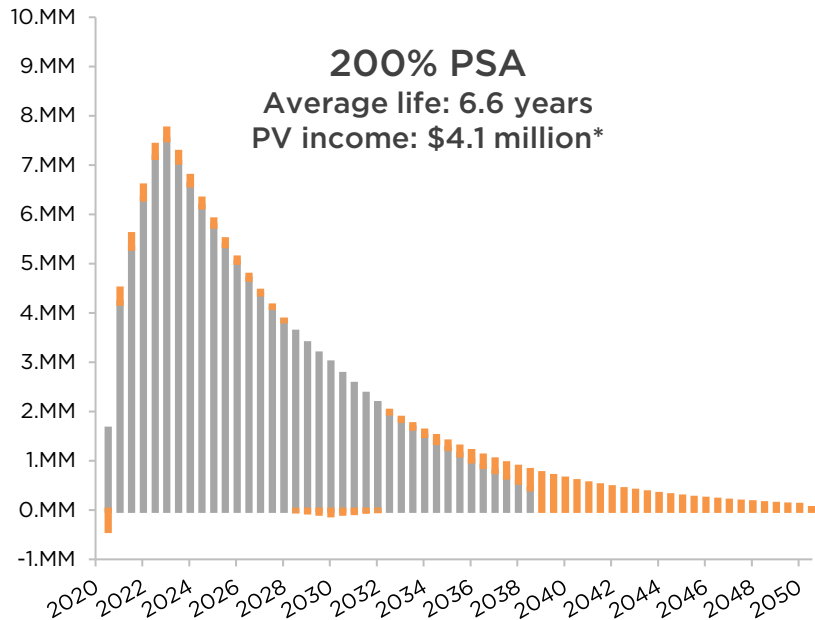
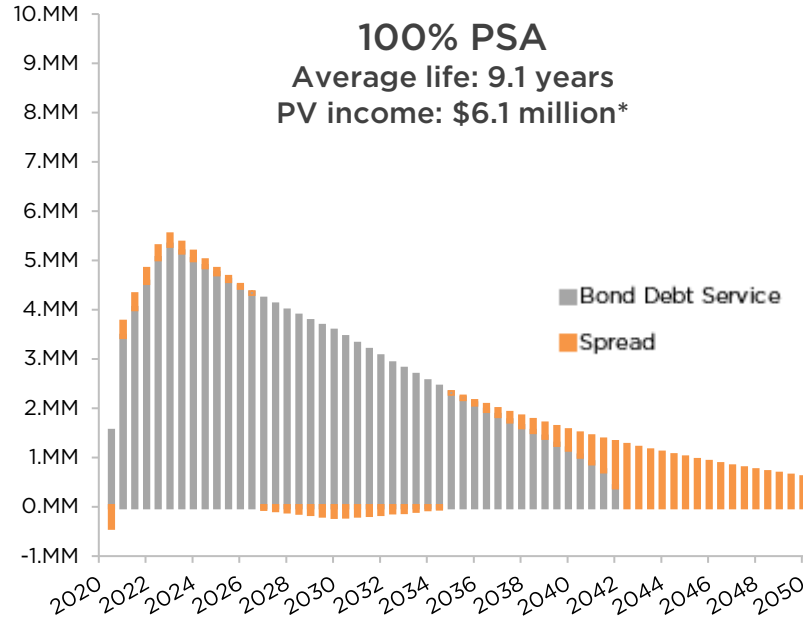
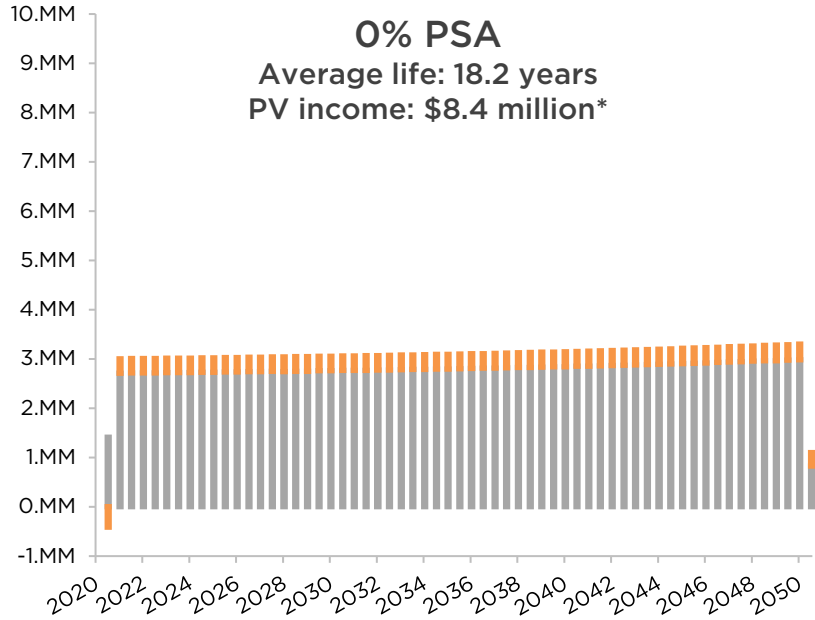
Housing Bond Types

- Serial Bonds
- Term Bonds
- Planned Amortization Class (“PAC”) Bonds
 - Average Life
 - Prepayment Bands
- Floating Rate Bonds
 - VRDO
 - FRN
- Other
 - Passthrough Bonds
 - Convertible Option Bonds (“COBs”)
 - Premium Bonds



Variable rate debt can significantly lower borrowing costs, but introduces additional risks

FIXED RATE w/ PAC **SPREAD INCOME**



MRBs
generate
spread
income over
time, but
income
depends on
prepayment
speed

*For \$100 million bond issue

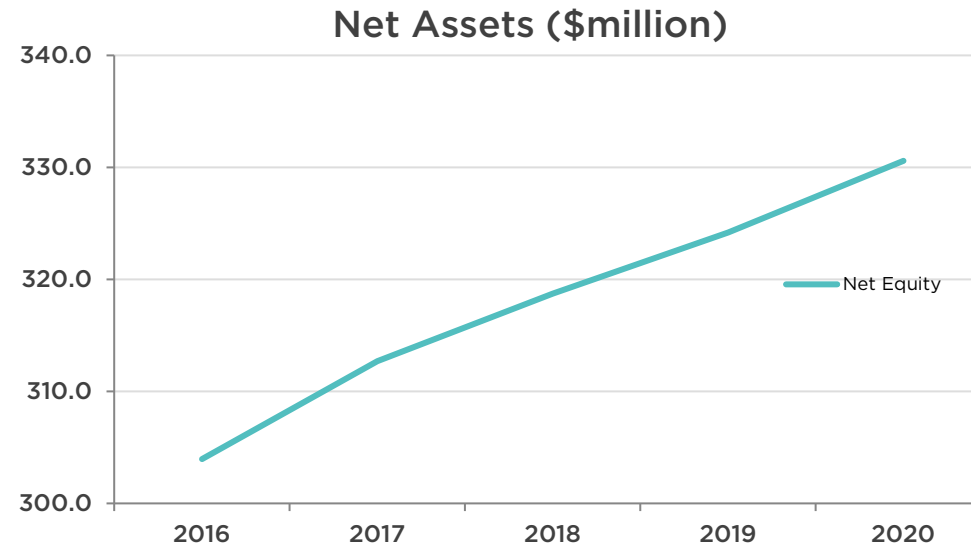
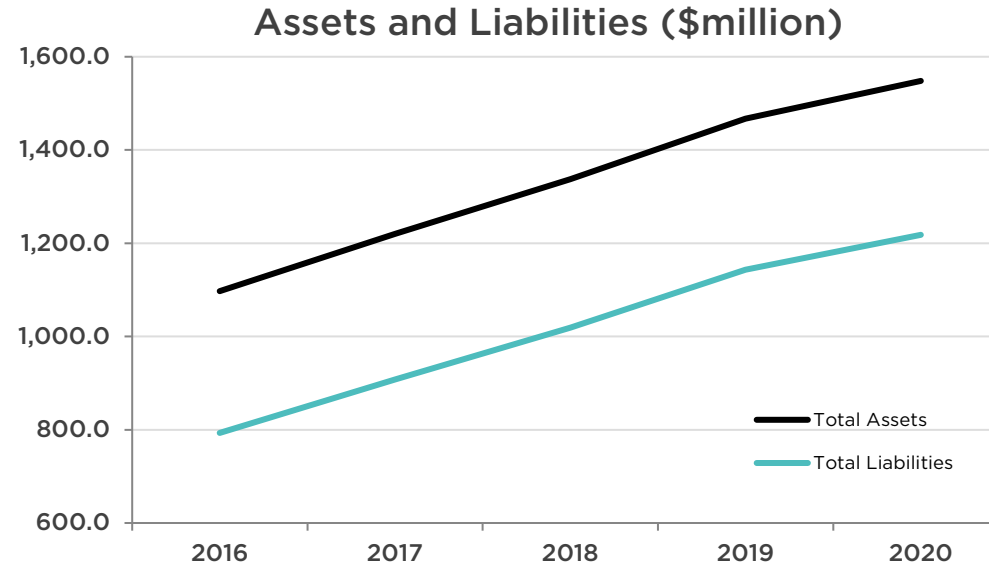
PARITY INDENTURES

Under a parity indenture, revenues from all mortgages provide security for all bonds under the indenture

Increases credit quality

Enhances structuring flexibility

Accumulates wealth by building balance sheet



Parity indentures offer HFAs flexibility while accumulating wealth

THANK YOU

Ben Killion

Caine Mitter & Associates Incorporated

bkillion@cainemitter.com | t 212-686-8820 | c 202-744-7846

www.cainemitter.com

2021 NCSHA HFA Institute

Annual Meeting

February 2021

Notice to Recipient

Confidential

“Bank of America” and “BofA Securities” are the marketing names used by the Global Banking and Global Markets divisions of Bank of America Corporation. Lending, other commercial banking activities, and trading in certain financial instruments are performed globally by banking affiliates of Bank of America Corporation, including Bank of America, N.A., Member FDIC. Equal Housing Lender. Trading in securities and financial instruments, and strategic advisory, and other investment banking activities, are performed globally by investment banking affiliates of Bank of America Corporation (“Investment Banking Affiliates”), including, in the United States, BofA Securities, Inc. and Merrill Lynch Professional Clearing Corp., both of which are registered broker-dealers and Members of [SIPC](#), and, in other jurisdictions, by locally registered entities. BofA Securities, Inc. and Merrill Lynch Professional Clearing Corp. are registered as futures commission merchants with the CFTC and are members of the NFA.

Investment products offered by Investment Banking Affiliates: Are Not FDIC Insured * May Lose Value * Are Not Bank Guaranteed.

These materials have been prepared by one or more subsidiaries of Bank of America Corporation for the client or potential client to whom such materials are directly addressed and delivered (the “Company”) in connection with an actual or potential mandate or engagement and may not be used or relied upon for any purpose other than as specifically contemplated by a written agreement with us. These materials are based on information provided by or on behalf of the Company and/or other potential transaction participants, from public sources or otherwise reviewed by us. We assume no responsibility for independent investigation or verification of such information (including, without limitation, data from third party suppliers) and have relied on such information being complete and accurate in all material respects. To the extent such information includes estimates and forecasts of future financial performance prepared by or reviewed with the managements of the Company and/or other potential transaction participants or obtained from public sources, we have assumed that such estimates and forecasts have been reasonably prepared on bases reflecting the best currently available estimates and judgments of such managements (or, with respect to estimates and forecasts obtained from public sources, represent reasonable estimates). No representation or warranty, express or implied, is made as to the accuracy or completeness of such information and nothing contained herein is, or shall be relied upon as, a representation, whether as to the past, the present or the future. These materials were designed for use by specific persons familiar with the business and affairs of the Company and are being furnished and should be considered only in connection with other information, oral or written, being provided by us in connection herewith. These materials are not intended to provide the sole basis for evaluating, and should not be considered a recommendation with respect to, any transaction or other matter. These materials do not constitute an offer or solicitation to sell or purchase any securities and are not a commitment by Bank of America Corporation or any of its affiliates to provide or arrange any financing for any transaction or to purchase any security in connection therewith. These materials are for discussion purposes only and are subject to our review and assessment from a legal, compliance, accounting policy and risk perspective, as appropriate, following our discussion with the Company. We assume no obligation to update or otherwise revise these materials. These materials have not been prepared with a view toward public disclosure under applicable securities laws or otherwise, are intended for the benefit and use of the Company, and may not be reproduced, disseminated, quoted or referred to, in whole or in part, without our prior written consent. These materials may not reflect information known to other professionals in other business areas of Bank of America Corporation and its affiliates.

Bank of America Corporation and its affiliates (collectively, the “BAC Group”) comprise a full service securities firm and commercial bank engaged in securities, commodities and derivatives trading, foreign exchange and other brokerage activities, and principal investing as well as providing investment, corporate and private banking, asset and investment management, financing and strategic advisory services and other commercial services and products to a wide range of corporations, governments and individuals, domestically and offshore, from which conflicting interests or duties, or a perception thereof, may arise. In the ordinary course of these activities, parts of the BAC Group at any time may invest on a principal basis or manage funds that invest, make or hold long or short positions, finance positions or trade or otherwise effect transactions, for their own accounts or the accounts of customers, in debt, equity or other securities or financial instruments (including derivatives, bank loans or other obligations) of the Company, potential counterparties or any other company that may be involved in a transaction. Products and services that may be referenced in the accompanying materials may be provided through one or more affiliates of Bank of America Corporation. We have adopted policies and guidelines designed to preserve the independence of our research analysts. These policies prohibit employees from offering research coverage, a favorable research rating or a specific price target or offering to change a research rating or price target as consideration for or an inducement to obtain business or other compensation. We are required to obtain, verify and record certain information that identifies the Company, which information includes the name and address of the Company and other information that will allow us to identify the Company in accordance, as applicable, with the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) and such other laws, rules and regulations as applicable within and outside the United States.

We do not provide legal, compliance, tax or accounting advice. If any person uses or refers to any such tax statement in promoting, marketing or recommending a partnership or other entity, investment plan or arrangement to any taxpayer, then the statement expressed herein is being delivered to support the promotion or marketing of the transaction or matter addressed and the recipient should seek advice based on its particular circumstances from an independent tax advisor. Notwithstanding anything that may appear herein or in other materials to the contrary, the Company shall be permitted to disclose the tax treatment and tax structure of a transaction (including any materials, opinions or analyses relating to such tax treatment or tax structure, but without disclosure of identifying information or any nonpublic commercial or financial information (except to the extent any such information relates to the tax structure or tax treatment)) on and after the earliest to occur of the date of (i) public announcement of discussions relating to such transaction, (ii) public announcement of such transaction or (iii) execution of a definitive agreement (with or without conditions) to enter into such transaction; provided, however, that if such transaction is not consummated for any reason, the provisions of this sentence shall cease to apply.



Notice to Recipient

SEC Municipal Advisor Rule Disclaimer

WE ARE NOT YOUR MUNICIPAL ADVISOR OR FIDUCIARY. BofA Securities, Inc. (“BofA Securities”) is providing the information contained herein for discussion purposes only either as an underwriter or in anticipation of being engaged to serve as an underwriter. By providing the information contained herein pursuant to the participation by an independent registered municipal advisor exemption provided under SEC Rule 15Ba1-1(d)(3)(vi), BofA Securities is not acting as your “municipal advisor” within the meaning of Section 15B of the Securities Exchange Act of 1934, as amended (the “Act”), and does not owe a fiduciary duty to you pursuant to the Act with respect to the information and material contained in this communication. BofA Securities is either serving as an underwriter or is seeking to serve as an underwriter on a future transaction and not as a financial advisor or municipal advisor. The primary role of BofA Securities, as an underwriter, is to purchase securities with a view to distribution in an arm’s-length commercial transaction between you and BofA Securities and BofA Securities has financial and other interests that differ from yours. BofA Securities is acting for its own interests. You should discuss any information and material contained in this communication with any and all of your own internal or external municipal and/or financial, legal, accounting, tax and other advisors and experts, as applicable, to the extent you deem appropriate before acting on this information or material.

Contact Information

Bill Veronda

Work: 980.387.0061 Cell: 704.281.3912

william.w.veronda@bofa.com

Director

BofA Securities, Inc.

Bank of America, N.A.

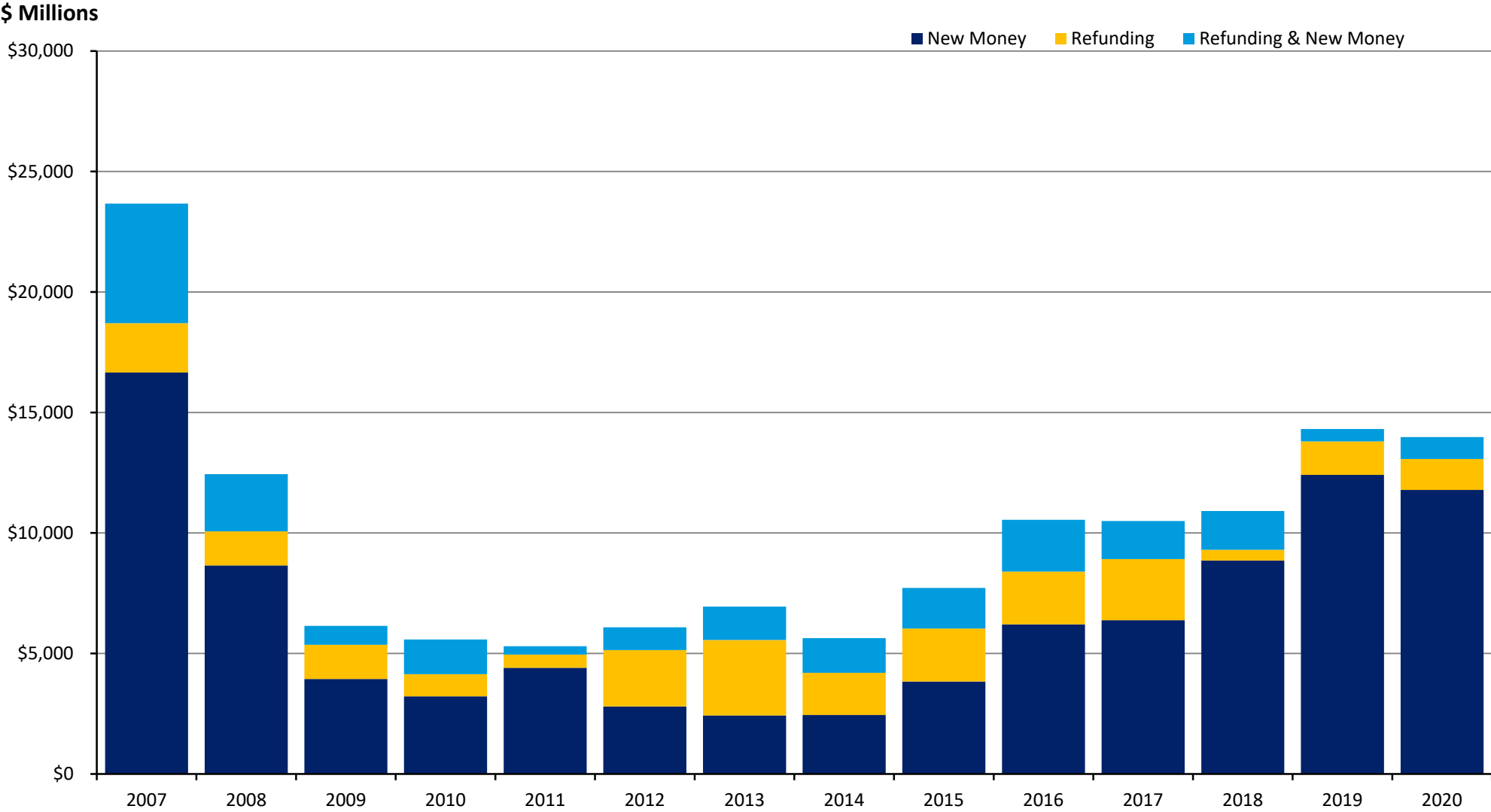


Market Overview



Size of the MRB Single Family Market

Annual Single Family Issuance



Tax Exempt Pricing Advantage

Tax Equivalent Yield



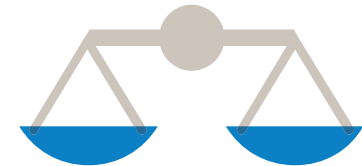
Tax Exempt

The main appeal of municipal securities issued by HFAs is that their interest income is federally tax-exempt. Most states do not tax interest on their own bonds



Investor Perspective

Tax Equivalent Yield (TEY) is what a taxable security would need to yield in order to provide the same after-tax yield as a municipal security.



Point of Indifference

TEY is the municipal yield divided by 1 minus the investor's marginal tax rate.

$$TEY = \frac{Yield}{(1 - Marginal\ Tax\ Rate)}$$

Ex: If a municipal security yields 5%, its taxable equivalent for somebody in the 35% federal tax bracket is 7.69% ($5\% / (1 - 35\%)$).



Factors Affecting the Pricing of the Bonds

1 Ratings

2 History of Issuer and its financial strength

3 Reputation in marketplace, frequency of issuance

4 “Specialty state status” or high tax rate states will achieve more aggressive pricing

5 Maturity, redemption provisions and history of unexpended proceeds redemption calls

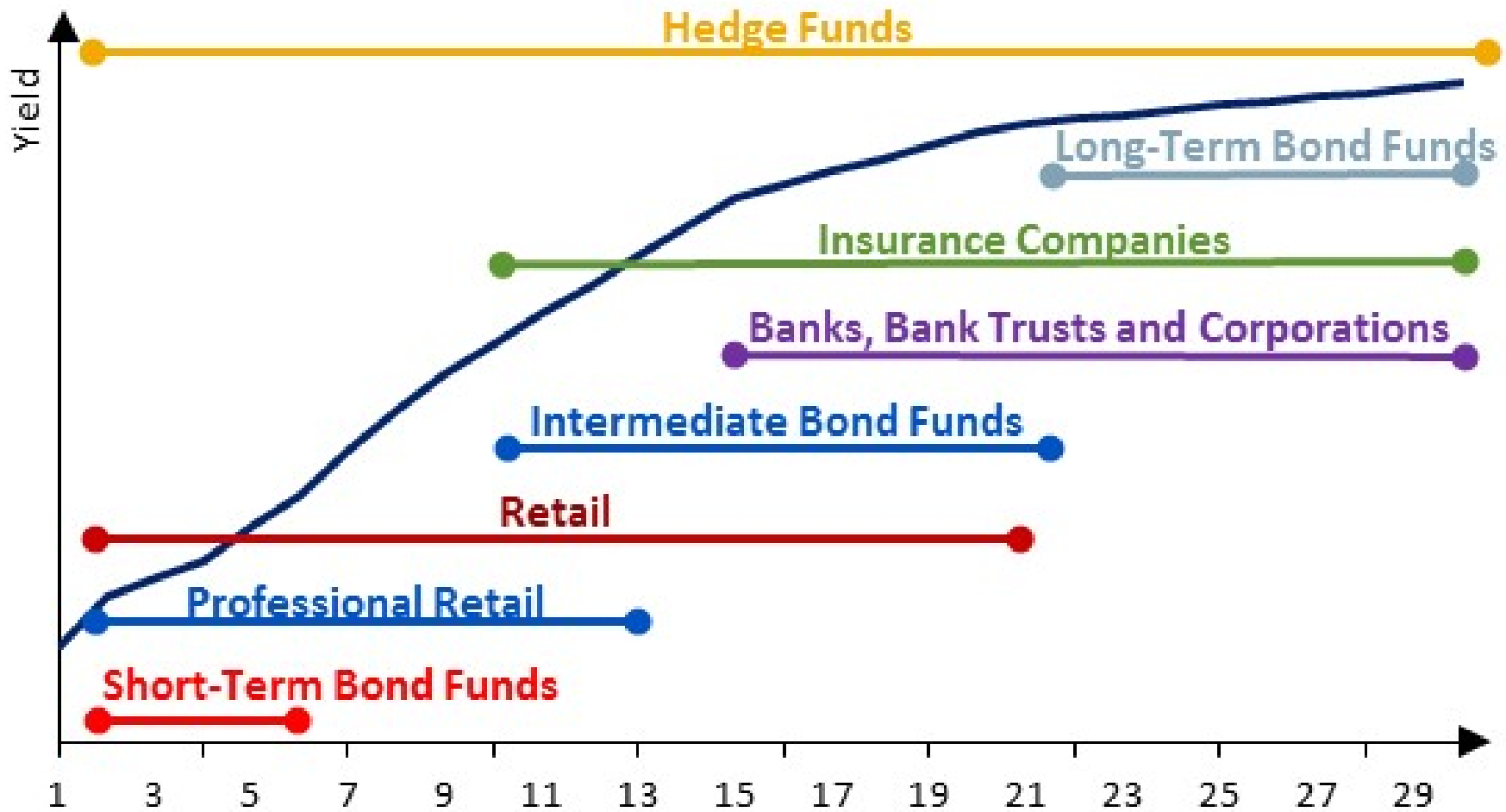
6 Quality of disclosure document (availability of financial information)

7 Competing comparable transactions and investments



Buyers Across the Yield Curve

Expected Investor Types by Maturity



Underwriter Role



Services provided by UW or Banks

Array of Services Provided to Housing Finance Clients



**Pricing and Distribution
of Municipal Securities**



**Credit Products
(Lines of Credit,
Liquidity Facilities, etc.)**



**Mortgage Secondary
Sales**



**Direct Purchases of
Securities
(including Draw-Down
Structures)**



**Investment Securities
Sales and Purchases for
HFA accounts**



Interest Rate Swaps



**Global, National and
Municipal Economic
Research**



**General Banking
Products
(Credit Cards,
Investment Accounts)**



**Construction Financing
and Equity Investment**



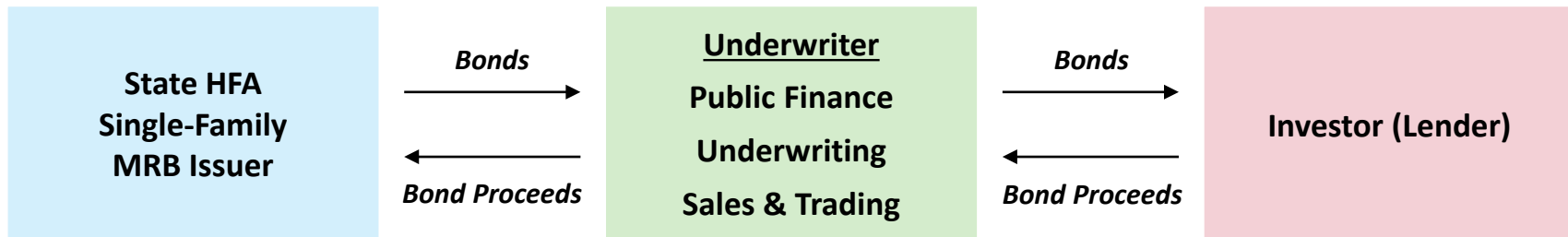
Role of the Underwriter

- **Primary Service Provided by the Underwriter During a Deal**

- Works with issuer to understand the financing needs (regular market update)
- Works with attorneys to comply with all legal matters, including tax status (AMT vs. Non-AMT vs. Taxable); refunding; programmatic
- Works with financial advisor to structure single family bonds
- Helps to prepare bond and offering documents (including the Preliminary Official Statement)
- Interfaces with rating agencies
- Surveys bond investors to determine market demand
- Sets appropriate interest rates on the bonds on pricing date
- Sell the bonds
- Coordinates with the financing team to confirm final documents, cashflows, and terms
- Handles settlement with investors and Trustee

Post-Transaction

- Provides secondary market for investors
- Remarketing Agent for variable rate bonds



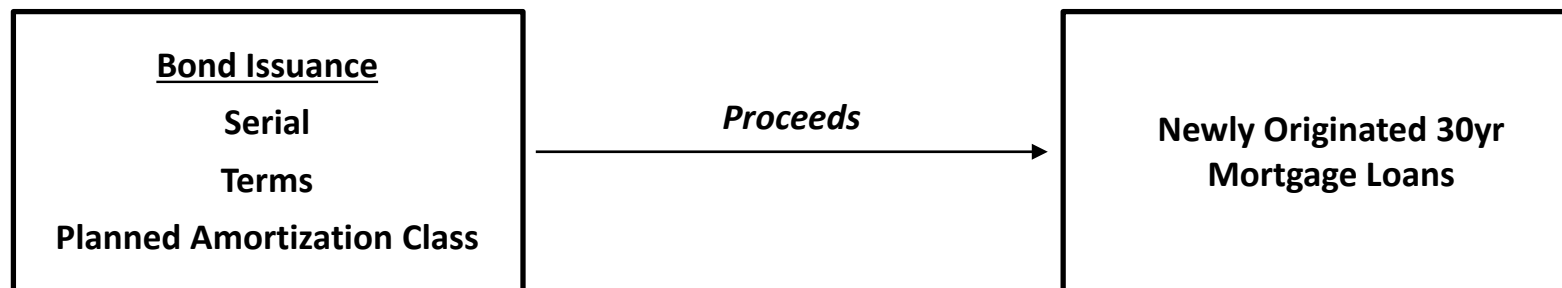
Financing Team (for Mortgage Revenue Bonds)

Team works together to issue bonds to finance mortgages made to moderate-income first time home buyers. Program must be legally compliant, with accurate bond and marketing documents, cashflows completed, rated, along with other logistical items and co-ordination.

- Issuer
- Issuer Counsel
- Bond Counsel
- IRMA/Financial Advisor

- Underwriters
- Underwriters' Counsel

- Trustee
- Auditors
- Rating Agencies



What To Expect During the Pricing



Pre-Pricing and Pricing Call



Pre-Pricing Timeline

Time to Final Pricing	Event	Comments
7 to 10 days	Release POS	<ul style="list-style-type: none"> Electronically release POS to street
One Week	Pre-Marketing	<ul style="list-style-type: none"> Sales desk promotes the sale to key buyers
One Week	Pricing Analysis	<ul style="list-style-type: none"> Senior manager compiles list of comparable sales Monitor market for comparable sales, major announcements
Two or Three Days	Solicit Price-Views	<ul style="list-style-type: none"> Senior manager solicits price views from syndicate
One or Two Days (Afternoon)	Pre-Pricing	<ul style="list-style-type: none"> Senior manager reviews syndicate price views & proposes interest rates Issuer and IRMA analyze and respond Agree to “going-out” scale

Content of the Pre-Pricing Call

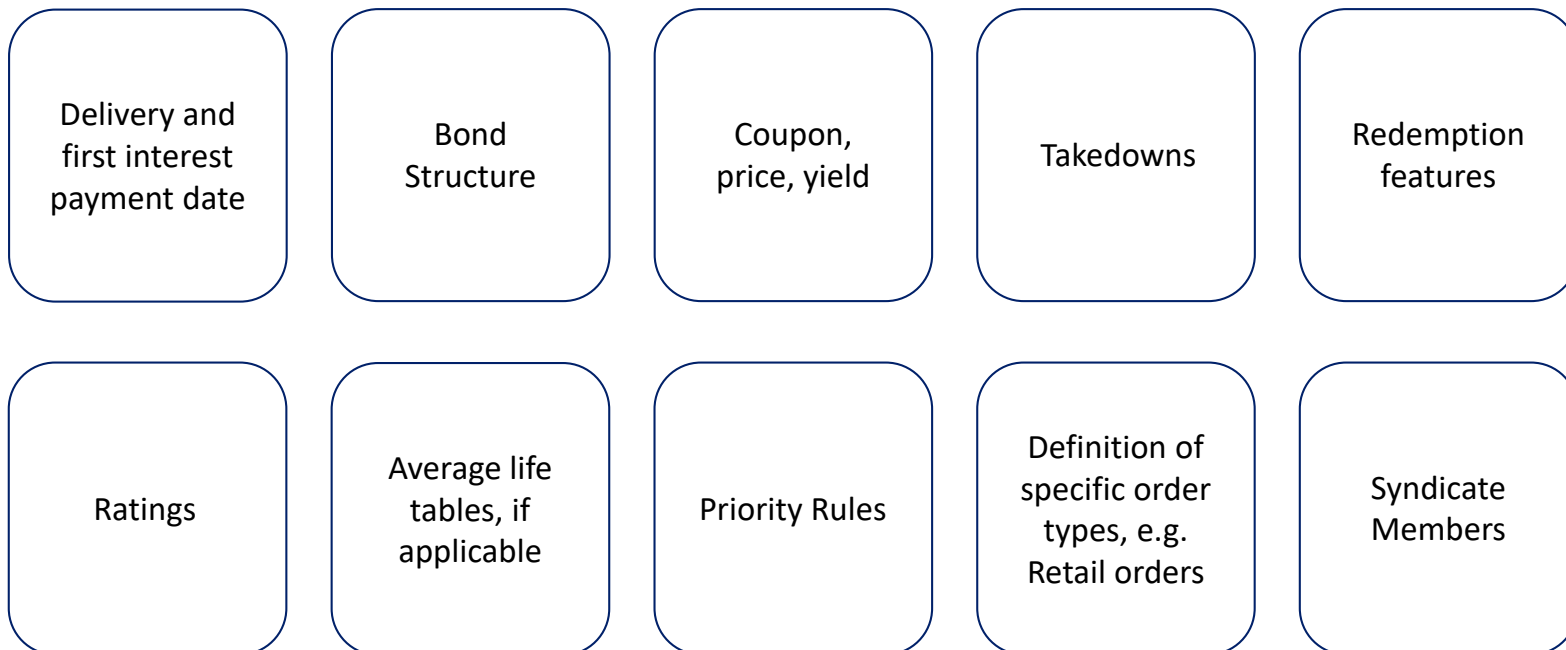
- General market summary and MMD
- Comparable issues
- Syndicate price views
- Proposed scale and review of wire
- Client approval to release



Syndicate Communications: Pricing Wires



Typical Information on Pricing Wires



Order Period



Order Period Breakdown

- Pricing touch base call in the morning to discuss any required changes and/or confirmation to proceed and initiate the order period at agreed upon interest rates and bond structure

Retail Order Period (“ROP”) – Typically 2 hours to 1 day

- Order book open only to retail investors – individual or Separately Managed Accounts (“SMAs”)

Retail Order Period Wrap-Up Call / Institutional Launch Call

- Call to discuss results of the ROP and any adjustments to scale if necessary prior to Institutional

Institutional Order Period (“IOP”) – Typically 1 to 5 hours

- Order book open to institutional investors as well

Institutional Wrap-Up Call

- Call to discuss final results of order period and any adjustments if necessary

- All communications with syndicate achieved through I-Deal bookrunning new issue system – electronic order system
- Electronic acceptance of AAU
- Confirmation of orders and bonds allocated to each syndicate member
- Timing changes communicated
- Balance wires
- Order flow can be monitored real-time for a fee through I-Preo GameDay Issuer Monitor



Verbal and Written Award



Pricing Update

- Underwriter will review market and order flow with issuer and financial advisor
- Underwriter will suggest alternative prices and structures if there are unsold balances
- Underwriter commits to underwriting of issue
- **Issuer and underwriter agree to terms - “the verbal award” – THIS IS FINAL**
 - At that time, a final pricing wire is sent to the syndicate and final pricing information is disseminated to the market through electronic and print media

Sign Bond Purchase Agreement

- BPA is signed by issuer and underwriter, usually within a day of final pricing – “the written award”
- Final Official Statement is posted within seven business days after the written award

Bond Allotment Process

- Senior managing underwriter is charged with allocating securities among the members of the syndicate according to the terms of the agreement among underwriters and the orders received
- Proposed bond allotments can be sent to issuer and financial advisor for review and approval



Delivery/Closing



Pre-closing

- Execute financing documents and certificates
- Prepare/review final cashflows and arbitrage analysis
- Delivery of rating letters and legal opinions

Closing

- HFA delivers the securities (book-entry) in exchange for the purchase price
- Underwriter wires bond proceeds to issuer through the trustee
- Deliver bonds to DTC >> DTC will redelivery the securities to the participants >> participants will in turn credit investor accounts

