Bond Basics

Presented by:
Special Products Team
Asset Management Department
Multifamily Division, Freddie Mac

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What is a Bond?

- Debt Security purchased by investors known as bondholders
- Pays interest to bondholders at a specific rate – often a fixed rate; however most of the Freddie Mac credit enhancements are on floating-rate bonds
- Repays principal at a specified time or times

What is a Bond? cont'd

- Liquid – Can be sold anytime up to maturity
- Risk is assessed and rated by rating agencies for the bonds that Freddie Mac credit enhances (many in the marketplace are unrated)
- Bonds credit enhanced by Freddie Mac are secured by mortgages

Private Activity Bonds

- State and Local government entities issue bonds to attract private investments for projects that have some public benefit, including multifamily rental housing
- Annual volume of private activity bonds is limited by federal law based on state population. States allocate “bond authority” to individual qualified properties

Private Activity Bonds cont'd

- Interest received by bondholders is exempt from federal and most state income tax
- Tax exemption allows a higher rate of return for bondholders while keeping the bond interest rate low
  - » Bondholders do not pay federal income tax on interest earned so they are willing to receive less interest compared to taxable investments and still get an acceptable tax adjusted return
  - » Interest is also exempt from most State Income Tax for a holder that pays income tax on interest in that state

Multifamily Housing Bonds

- Private activity bonds can be used to finance construction or rehabilitation of affordable privately-owned multifamily rental housing
- Internal Revenue Code imposes restrictions on the property which vary according to the date the bonds were issued and whether or not low-income housing tax credits are included

Multifamily Housing Bonds cont'd

- State and local government entities allocating or issuing bonds may impose additional restrictions on the property
- Sometimes additional restrictions are added based on subsidies provided by state or local governmental entities

Restrictions on Multifamily Housing Bonds

- Income eligibility restrictions apply to all properties
- For bonds issued prior to 1986, 20% of the units must be rented to families earning not more than 80% of Area Median Income (AMI)
- For bonds issued after 1986
  - » 20% of the units must be rented to families earning not more than 50% of AMI adjusted for family size, or
  - » 40% of the units must be rented to families earning not more than 60% of AMI adjusted for family size

Multifamily Housing Bonds with Low-Income Housing Tax Credits

- If applied for and project meets requirements contained in a State's Qualified Allocation Plan, Borrower may accept Low-Income Housing Tax Credits (LIHTC) with bonds issued after 1986
- Acceptance of LIHTC imposes rent restrictions in addition to already applicable income restrictions
- Gross rents are restricted to 30% of maximum allowable family income adjusted for family size
- Rent plus tenant paid utilities cannot exceed this restricted gross rent

9% vs 4% Tax Credits

- Demand for Tax Credit Allocations (9% LIHTC Deals)
- 9% LIHTC Used for conventional financing
- Limited “pool” of tax credits
- Developers Apply To State Allocating Agencies
- States Oversubscribed: 4-6 To 1

Types of Multifamily Housing Bond Transactions

- New issue bonds for new construction or substantial rehab
  - » Fund the development of new apartment properties or substantial rehabilitation of existing properties
  - » May include 4% tax credits at owner's option
  - » Require public hearing
  - » Requires bond allocation
  - » Subject to volume cap from State allocation authority

Types of Multifamily Housing Bond Transactions cont'd

- New issue bonds for acquisition/rehab financing
  - At least 15% of the bond proceeds must be used for property rehab
  - May include 4% tax credits if project meets the states minimum requirements (*Note: Owner also often eligible for a 4% tax credit based on acquisition cost of building being rehabilitated*)
  - Requires bond allocation
  - Requires public hearing
  - Subject to volume cap from state allocation authority

Types of Multifamily Housing Bond Transactions cont'd

- Refunding
  - Refinance of existing bonds through reissuance of bonds
  - No increase in amount of bonds
  - May include extension of bond maturity
  - Limitations on use of funds for acquisition of a property
  - No bond allocation required

Types of Multifamily Housing Bond Transactions cont’d

- Substitution
  - Freddie Mac replaces existing credit enhancer
  - Existing bonds remain outstanding
  - No increase in amount of bonds
  - May include extension of bond maturity
  - Often less expensive than refunding because of diminished issuer involvement, no new bond underwriting
  - Generally only provided for floating-rate deals
  - No new volume cap

Bond Interest Rate Types

- Variable-rate bonds
  - Interest rates are typically reset weekly
  - Interest rates are almost always lower than those for fixed-rate issues
  - Principal is normally held in a Principal Reserve Fund (an escrow held by the Trustee) pending bond maturity or a Principal Sinking fund pending the next redemption
  - Liquidity is provided by the bondholders' option to Tender bonds at any time for par purchase 7 days later

Bond Interest Rate Types cont’d

- Fixed-rate bonds
  - » Level interest rate and payments for borrower
  - » Interest rate may be reset at specified intervals – generally at the time of mandatory tenders
  - » Structure of principal repayments to bondholders can vary – there may be serials or sinking funds
  - » Liquidity is provided by the secondary market, not by Freddie Mac until the interest rate is reset, and then only on the actual reset dates

Freddie Mac Bond Credit Enhancement

- Freddie Mac credit enhancement provides a multifamily housing bond with a AAA rating
- Credit enhancement guarantees to the trustee the payment of principal and interest on the underlying mortgage
- Liquidity enhancement guarantees to the trustee the purchase of the bonds should remarketing attempts fail
- Freddie Mac does not fund a loan or purchase a mortgage

Bond Fees - Types

- Bond Fees are typically part of the “fee stack” in the mortgage payment
  - Credit Enhancement Fee
  - Swap Credit Enhancement Fee (variable rate only)
  - Liquidity Fee (variable rate only)
  - Trustee Fee
  - Remarketing Agent Fee (variable rate only)

Underwriting Interest Rate

Fee Stack

	Variable	Fixed
Bond Rate (52 week average with floor of 2.5%)	2.800 %	5.500%
Credit Enhancement Fee	1.000 %	1.000%
Swap Credit Enhancement Fee**	.130 %	-
Liquidity Fee**	.600 %	- %
Trustee Fee	.050 %	.050%
Remarketing Agent Fee**	.125 %	- %
Servicing Fee	.125 %	.125%
Fee Stack	**2.030%**	**1.175%**
Gross Mortgage Rate	4.830 %	6.675%
Underwriting Stress	2.000 %	- %
Underwriting Rate	6.830 %	6.675%

*** applies to variable-rate bonds only*

Freddie Mac®

Combination Financing

- Simultaneous placement of credit enhancement for tax-exempt bonds and taxable debt
- Taxable debt can be credit enhanced bonds or a conventional cash mortgage
- Total debt cannot exceed the allowable minimum debt coverage ratio or loan-to-value for the product type
- Principal from the tax-exempt bond credit enhanced component will usually be applied to accelerate amortization of the taxable component
- Secured by a single security instrument – taxable debt is not subordinate to tax-exempt bond credit enhancement

Bond Basics

- Payments of Principal and Interest
  - » Made by Trustee to Bondholders
  - » Using draw proceeds from Freddie Mac if Direct Pay Credit Enhancer
  - » Isolates Bondholders from Borrower Bankruptcy risk
- Improves Marketability
  - » Rated by National Credit Rating Agency
    - – Standard and Poors, Moody’s, or Fitch’s
    - – Freddie Mac Rated AAA/A1+

Bond Basics cont'd

- Key Transaction Fees Associated with Bonds

  (some fees are one-time up front & others are ongoing)

  - Underwriter/Investment Banker *(one-time)*
  - Legal Counsel to almost every party *(one-time)*
  - Rating Agency *(one-time)*
  - Seller/Servicer *(on-going)*
  - Issuer *(up-front and on-going)*
  - Remarketing Agent *(on-going)*
  - Credit Enhancement *(on-going)*
  - Liquidity Provider *(on-going)*
  - Interest Rate Cap Provider *(one-time per agreement)*
  - Misc. (public hearing notices, offering notice printing, etc.)
  - Trustee *(on-going)*

Floating-Rate Bond Basics

- Borrower must provide interest rate hedge
- Reimbursement Agreement with Freddie Mac includes hedge requirements and liquidity loan terms
- Trustee or remarketing agent notifies Servicer of weekly bond rate adjustments
- Servicer bills borrower for monthly payment

Floating-Rate Bond Basics cont'd

- Any bonds purchased with Freddie Mac funds as a result of the Liquidity guaranty are purchased by trustee *on behalf of the borrower*
- Freddie Mac funds are a loan to the borrower
  - » Interest at prime + 2 ("liquidity use fee")
  - » Due in 90 days or upon resale of purchased bonds

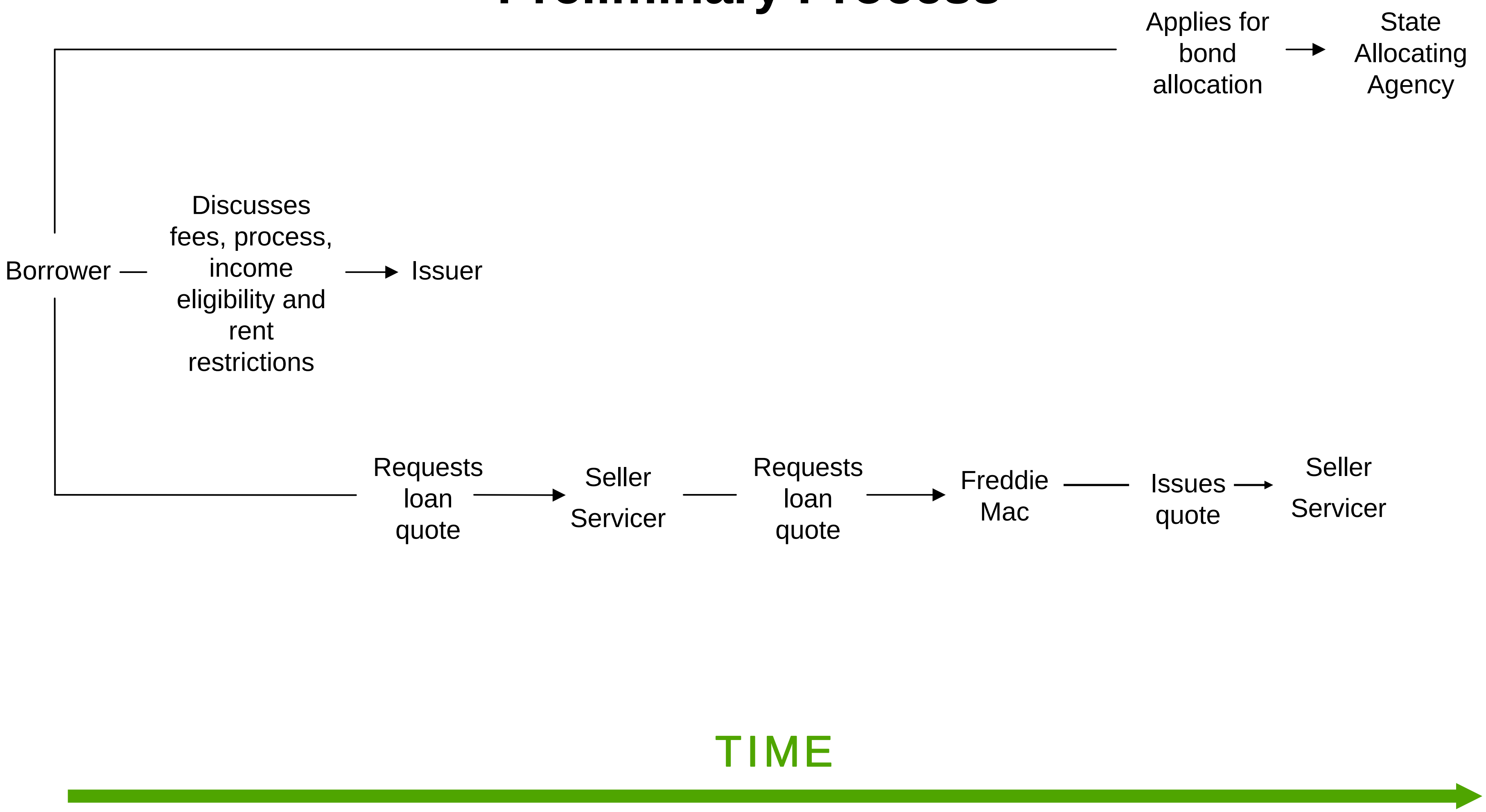
Principal Reserve Fund

- A substitute for amortization that maximizes future refunding proceeds by keeping bonds outstanding
- Borrower makes monthly deposits = to principal payments that would be made under an agreed amortization schedule
- Held by Trustee
  - Borrower receives investment income

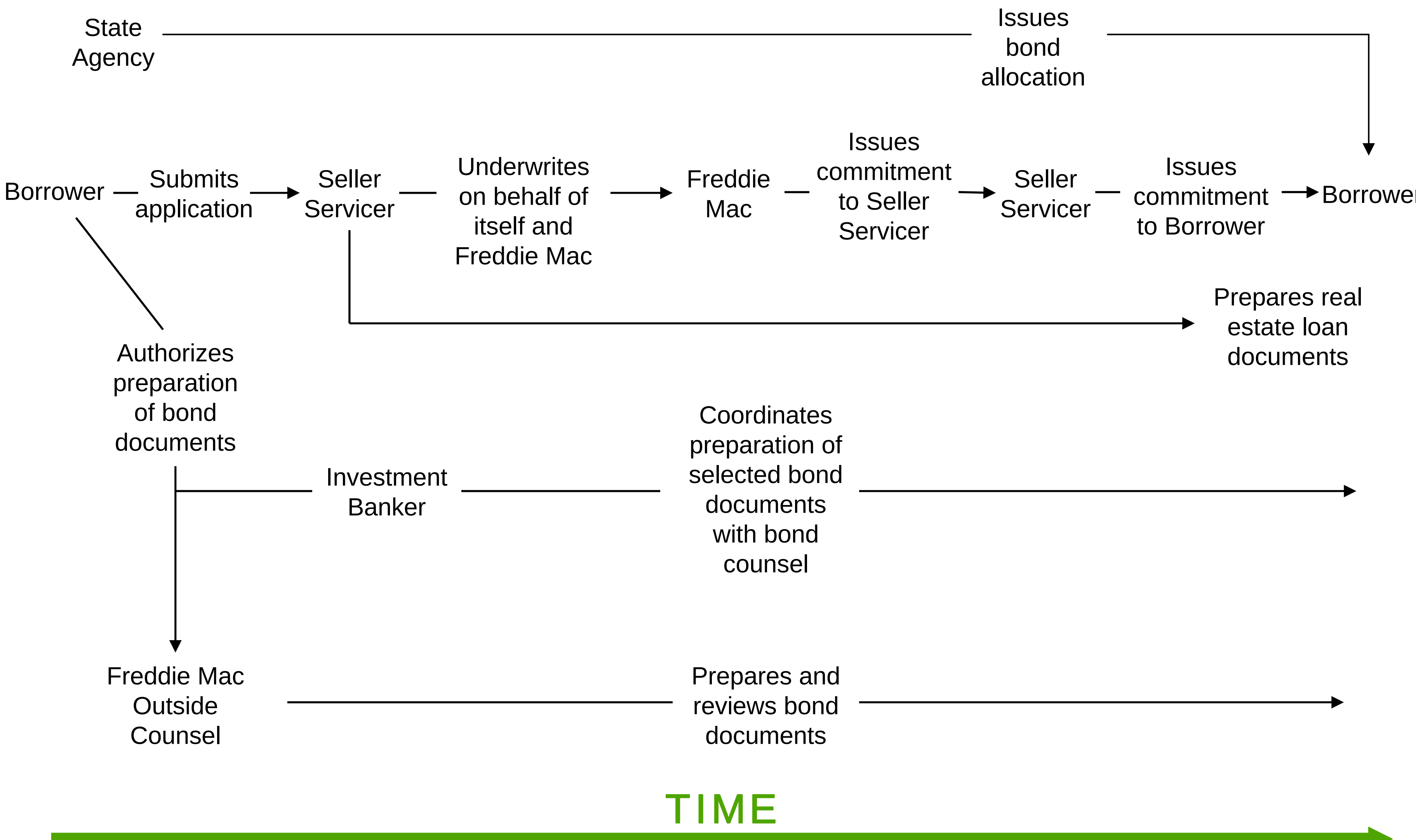
Principal Reserve Fund Basics

- May be used (at Freddie Mac's direction) to
  - Cover missed mortgage interest payments
  - Purchase tendered bonds
  - Redeem bonds
  - Reimburse Freddie Mac for guarantee payments
  - Other

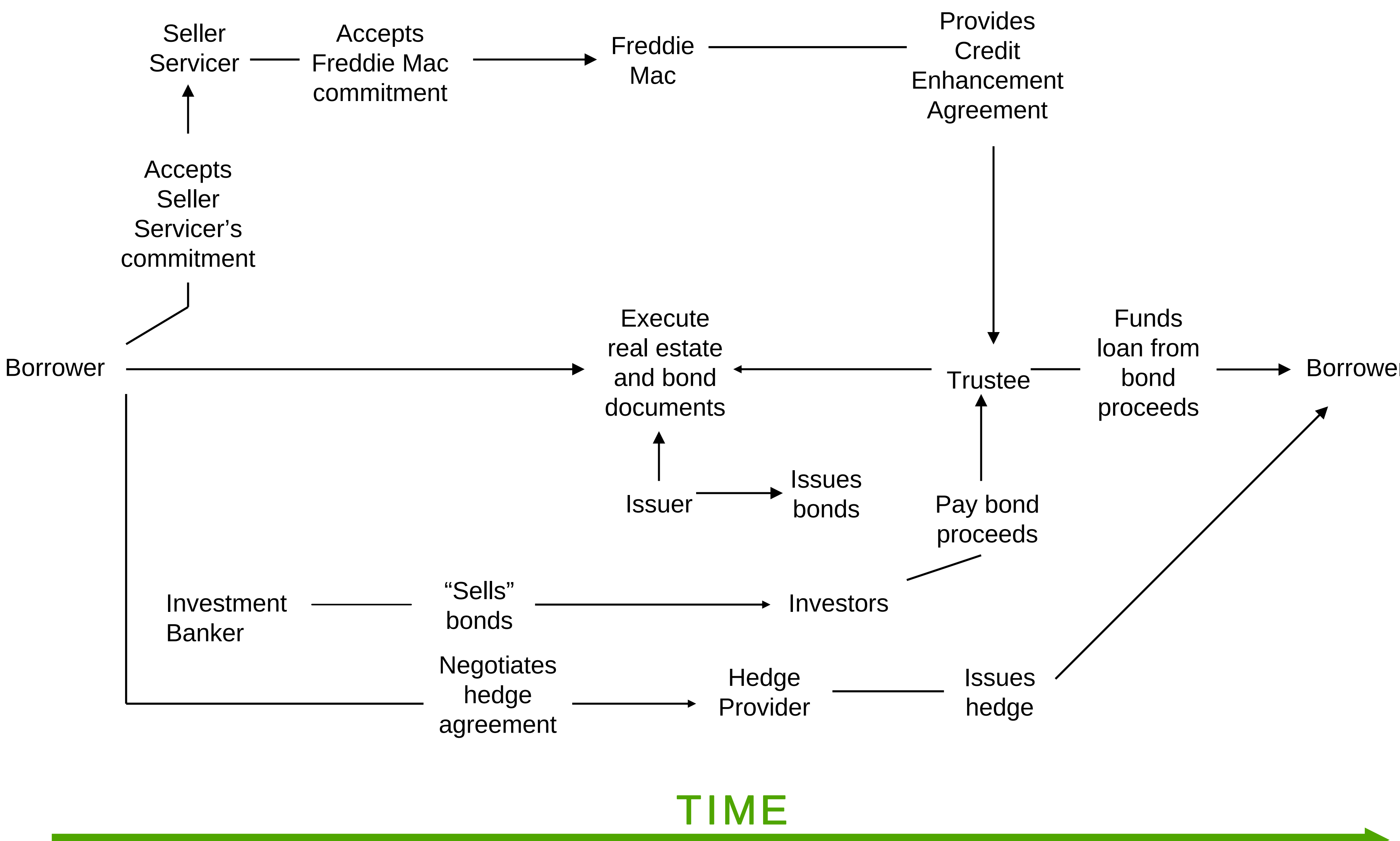
Preliminary Process



Underwriting and Commitment



Closing


Seller Servicer
Accepts Freddie Mac commitment
Freddie Mac
Provides Credit Enhancement Agreement
Accepts Seller Servicer's commitment
Borrower
Execute real estate and bond documents
Trustee
Funds loan from bond proceeds
Borrower
Issuer
Issues bonds
Pay bond proceeds
Investment Banker
"Sells" bonds
Investors
Negotiates hedge agreement
Hedge Provider
Issues hedge
TIME

Roles & Responsibilities

Borrower

- Eligible Borrowers include
  - Partnerships (general or limited)
  - Corporations
  - Trusts
  - Joint Ventures
  - Limited Liability Companies
  - For profit and certain qualified nonprofit entities are eligible

*Note: Properties with tax credits are owned by for-profit entities. A non-profit may be a partner.

Issuer (Allocation Agency)

- State, political subdivision, agency or authority
- Authorized under state law to issue tax exempt bonds and to lend the proceeds of those bonds to a borrower for specific purpose
- Monitors compliance with tax regulatory agreement
- Generally charges a fee for its role in issuing the bonds and an annual monitoring fee
  - Fee negotiated between issuer and borrower
  - Typically a % of the bonds issued and outstanding

Seller/Servicer

As of September 30, 2008 eligible Seller/Servicers must be Freddie Mac approved Delegated Lenders; prior to that date all Program Plus® Seller/Servicers could originate bond credit enhancements

- Responsibilities include
  - Underwriting the mortgage without Freddie Mac intervention (unless there are exceptions)
  - Assuming a first loss position (generally first 8%)
  - Prepare the loan commitment
  - Subject to post-purchase underwriting review
  - Subject to annual audit

Seller/Servicer cont'd

- Responsible for calculating and billing borrower for each monthly payment (see example at end of section)
- Responsible for passing P&I and fee payments through to the Trustee and Freddie Mac, as appropriate
- Responsible for servicing bond credit enhancement loans per the Freddie Mac guide
- Responsible for understanding requirements under Reimbursement Agreement, Servicing Agreement (where applicable) and other bond documents as they apply.

November 1 Payment

October Interest

Bond Payment Calculation Example

Payment Calc		**Bal/Rate**	**Calculated Fee**	**Formula**
Bond Beg UPB:	**(a)**	10,500,000		
Prin Res Fund:	**(b)**	250,000		
Swap Notional Bal	**(c)**	10,500,000		
CF Fee:	**(d)**	0.65%	5,552.08	=(a-b)*c/12
LF Fee:	**(e)**	0.15%	1,312.50	=a*e/12
Swap CE Fee	**(f)**	0.08%	700.00	=c*f/12
Trustee Fee**	**(g)**	$1,000	83.33	1/12 of (g)
Issuer Fee	**(h)**	0.125%	1,093.75	=a*h/12
Remarketing Fee	**(i)**	0.07%	612.50	=a*i/12
Servicing Fee	**(j)**	0.23%	1,964.58	=(a-b)*j/12
Interest Due	**(k)**		12,899.18	
PRF Payment***			15,000.00	
Total Payment			**39,217.92**	

Interest Calc:				
Reset Date:	Int Rate	Int Rate Period	#days app	Int Amount
24-Sep	1.25%	9/24 - 10/1	1	359.59
1-Oct	1.75%	10/2 - 10/8	7	3,523.97
8-Oct	1.00%	10/9 - 10/15	7	2,013.70
15-Oct	1.62%	10/16 - 10/22	7	3,262.19
22-Oct	1.50%	10/23 - 10/29	7	3,020.55
29-Oct	1.25%	10/30 - 11/5	2	719.18
Tot Interest				12,899.18

**generally stated in whole dollars, example assumes monthly collection

***according to PRF schedule

Rate Reset Day

Sunday	Monday	Tuesday	**Wednesday**	Thursday	Friday	Saturday
			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	

Credit Enhancer (Freddie Mac)

- Credit enhancement increases salability of bonds by improving the bond's credit rating to the same rating as that of credit enhancer
- Higher rating results in a lower interest rate on the bonds (less risk, lower return)
- Borrower pays specified fee to credit enhancer to effectively assign the credit enhancer's credit rating to the bonds
- Assumes obligation for repayment of principal and interest due on the loan made with bond proceeds

Liquidity Provider (Freddie Mac)

- Freddie Mac agrees to pay the purchase price of bonds tendered by bondholders in variable-rate bond transactions
  - » Only done in the event no new investors buy the bonds upon their remarketing by the remarketing agent (essentially creating a loan to the borrower)
- Borrower pays a liquidity fee for this guarantee

Bond Underwriter/Investment Banker

- Primary manager of the tax-exempt bond transaction
- As a securities dealer, may also purchase a new issue of bonds for resale
- Responsibilities
  - Coordinates most aspects of transaction among the various participants to ensure that the transaction closes in a timely fashion
  - Prices (i.e., sets interest rate on bonds) and sells the bonds in the investor market
  - Obtains bond credit rating from the designated rating agency

Bond Underwriter/Investment Banker cont'd

- Responsibilities (continued)
  - Works with all parties in developing the bond documents
  - Circulates any preliminary and final offering documents describing the bonds and the bond transaction
  - May also function as the remarketing agent in a floating rate transaction

Trustee

- A financial institution, with trust powers
- Acts in a fiduciary capacity for the benefit of the bondholders in enforcing the terms of the bond contract
- Takes its instruction from the trust indenture
- Forwards principal and interest payments made with respect to the bonds to the bondholders
- Pursues collection on behalf of the bondholders in the event of default
- Approves any modifications to underlying loan
- In non-Freddie and Fannie deals, the Trustee services the loan

Tender Agent

- Typically the trustee
- Appears only in variable rate bond transactions in which bondholders have the right to tender bonds for purchase
- Responsibilities
  - » Entity to which bondholders tender their bonds

Rating Agency

- Responsibilities
  - »Determines the creditworthiness and default risk of a bond issue and assigns an industry standard rating to the bond (AAA, AA, etc.)
  - »For credit enhanced transactions, this rating is typically based on the rating of the credit enhancer (Freddie Mac enhanced bonds carry a AAA rating)
- Primary rating agencies
  - » Standard & Poor’s
  - » Moody’s
  - » Fitch’s

Bondholders

- Either institutional investors or private investors
- Lower-floater bonds owned predominantly by institutional investors, typically money market funds

Interest Rate Hedge Provider

- Appears only in variable-rate bond transactions
- Hedge limits borrower's risk, and thereby Freddie Mac's risk, if interest rates rise
- Hedge provider is typically a large financial intermediary
- Freddie Mac, as the Credit Enhancer, requires the hedge and must approve the hedge provider
- Two types of hedges in Freddie Mac transactions
  - Cap
  - Swap

Remarketing Agent

- Remarketing defined as the sale of tendered bonds to new bondholders
- Instances when bonds are tendered
  - Upon changes in interest rate
  - At substitution
  - Weekly floater tender rights
- Remarketing agent may be the bond underwriter/investment banker

Remarketing Agent cont'd

- Responsibilities
  - In multi-modal bond deals, determines bond interest rate when the interest rate needs to be determined
  - Remarkets bonds tendered by existing bondholders to new bond purchasers
  - Charges an ongoing fee for its services in the transaction

Bond Counsel

- Responsibilities
  - Retained by issuer to render legal opinions on the following
    - Issuer authorized to issue bonds
    - Issuer has met all legal requirements necessary for issuance of the bonds
    - Interest on proposed bonds will be exempt from federal (and where applicable, state and local) income taxation

Bond Counsel cont'd

- Responsibilities (continued)
  - » Operates as counsel to the deal, not to any specific party
  - » Prepares trust indenture, financing agreement, regulatory agreement, etc.

Freddie Mac Counsel

- Team of in-house and outside counsel
  - Review the existing bond documents
  - Review regulatory agreement
  - Prepares credit enhancement agreement and other Freddie Mac bond-related documents and works with bond counsel and issuer on bond issuance documentation

Other Counsel

- Everyone has one!
  - Issuer
  - Bond Underwriter/Investment Banker/ Remarketing Agent
  - Trustee
  - Borrower
  - Seller/Servicer
  - Hedge provider

Summary of Parties to the Bond Transaction

Borrower	Rating Agency
Issuer (State Allocation Agency)	Bondholder
Seller/Servicer	Interest Rate Hedge Provider
Freddie Mac (Credit Enhancer & Liquidity Provider)	Remarketing Agent
Bond Underwriter (Investment Banker)	Bond Counsel
Trustee/Tender Agent	Freddie Mac Counsel
	Other Counsel

Basic Tax Exempt Bond Transaction Documentation

Documentation - General

- Bond transactions require significant additional documentation over and above that required for conventional cash transactions
- Additional documents relate to the securities and federal income tax aspect of the transaction

Basic Bond Documents

- Trust Indenture
  - Between Issuer and Bond Trustee
  - Sets forth the terms of the bonds
    - Including interest rate and principal maturities
    - Circumstances for redemption or purchase
      - Optional or mandatory tender
    - Terms of the Principal Reserve Fund (PRF) or Principal Sinking Fund

Basic Bond Documents cont'd

- Financing Agreement
  - » Formalizes loan of Bond proceeds from Issuer to Borrower and repayment terms
- Land Use Restriction Agreement (LURA)
  - » Regulatory Agreement (Note: LIHTCs will have a separate regulatory agreement as may subordinate debt.)
  - » Sets forth Project occupancy and use restrictions
  - » Compliance is required to maintain tax exemption

Basic Bond Documents cont'd

- Intercreditor Agreement
  - Primary purpose to subordinate First Mortgage to Reimbursement Mortgage in favor of Freddie Mac

Basic Bond Documents cont'd

- Official Statement, Bond Purchase Agreement and Remarketing Agreement
  - » All relate to initial sale and remarketing of bonds
  - » Official Statement is disclosure to bondholders
  - » Bond Purchase Agreement documents initial purchase by Bond Underwriter
  - » Remarketing Agreement documents Remarketing Agent's agreement to use best efforts to remarket any bonds tendered for purchase

Basic Bond Documents cont'd

- Credit Enhancement Agreement (CEA)
  - From Freddie Mac to Trustee
  - Secures payment of principal & interest on Bonds
    - Trustee draws all principal & interest due Bondholders
    - Unconditional
    - For floating rate transactions, includes liquidity guaranty
  - Upon borrower default Freddie Mac
    - Keeps making payment
    - Directs Trustee to either redeem or repurchase bonds or pursue other remedies

Basic Bond Documents cont'd

- Reimbursement and Security Agreement
  - Between borrower and Freddie Mac
  - Equivalent to Note in importance
  - Every draw under CEA is a loan
    - Spells out the terms of the loan
    - Details almost all terms related to Bond
      - Includes fees payable
      - Hedge requirements
      - Liquidity terms

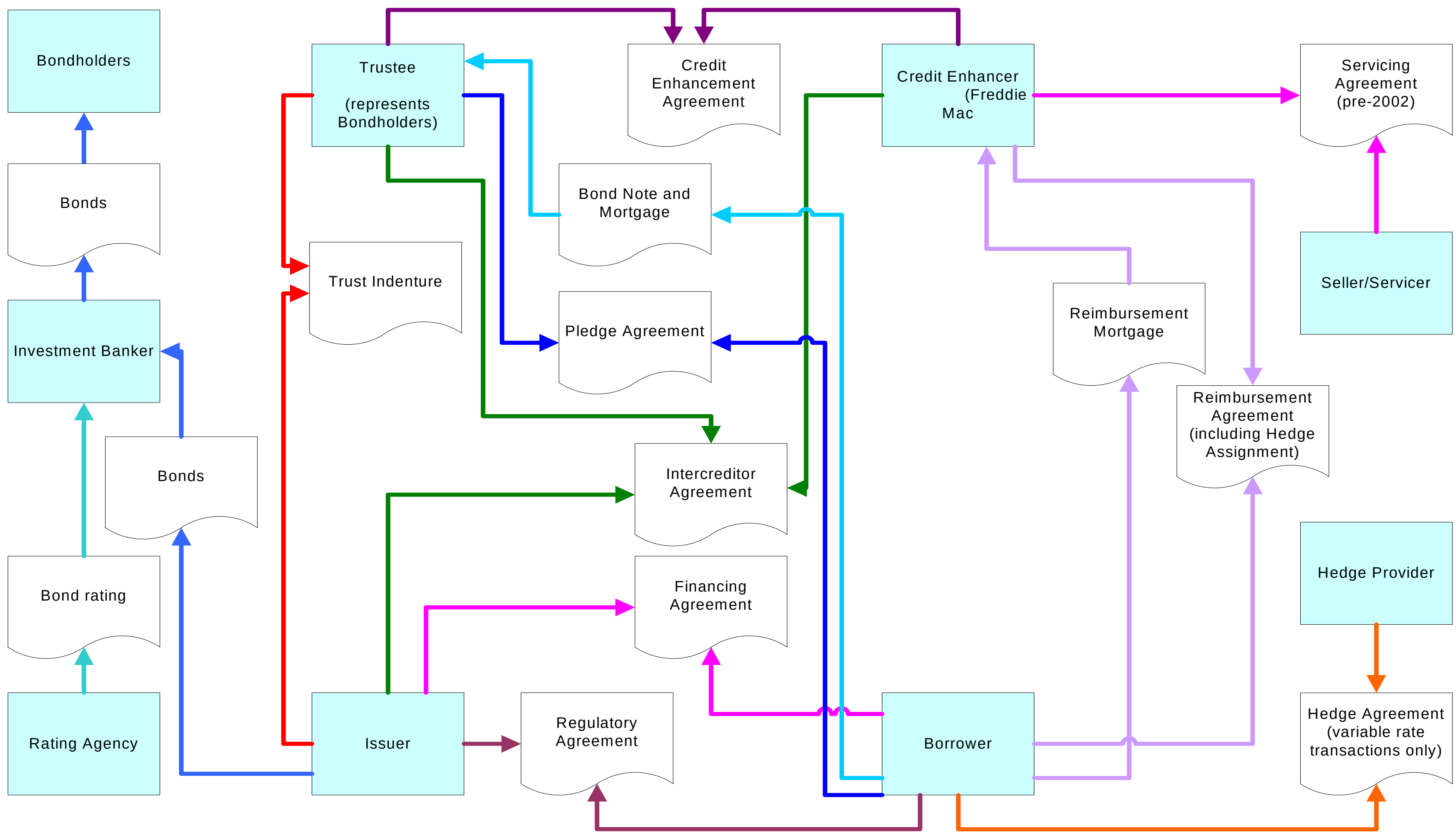
Basic Bond Documents cont'd

- Swap Credit Enhancement Agreement
  - » Between Freddie and swap counterparty
  - » Guaranty of borrower's obligations to make fixed-rate payments and payments upon early termination
  - » Utilizes Freddie Mac's rating

Basic Documents – Fixed- vs. Variable-Rate Transactions

Document	Fixed	Variable
Trust Indenture	X	X
Financing (or Loan) Agreement	X	X
Regulatory Agreement	X	X
Bond Note and Mortgage	X	X
Official Statement, Bond Purchase Agreement and Remarketing Agreement*	X	X*
Credit Enhancement Agreement	X	X
Reimbursement Agreement	X	X
Reimbursement Mortgage	X	X
Intercreditor Agreement	X	X
Bond Pledge Agreement		X
Hedge Agreement (Cap or Swap)		X
Hedge Assignment (now included in Reimbursement Agreement)		X
Swap Credit Enhancement Agreement (if hedge is swap)		X

The Players and the Documents - Tax-exempt Bond with Freddie Mac Credit Enhancement- Variable Rate Transaction



Common Locations of Bond Fees

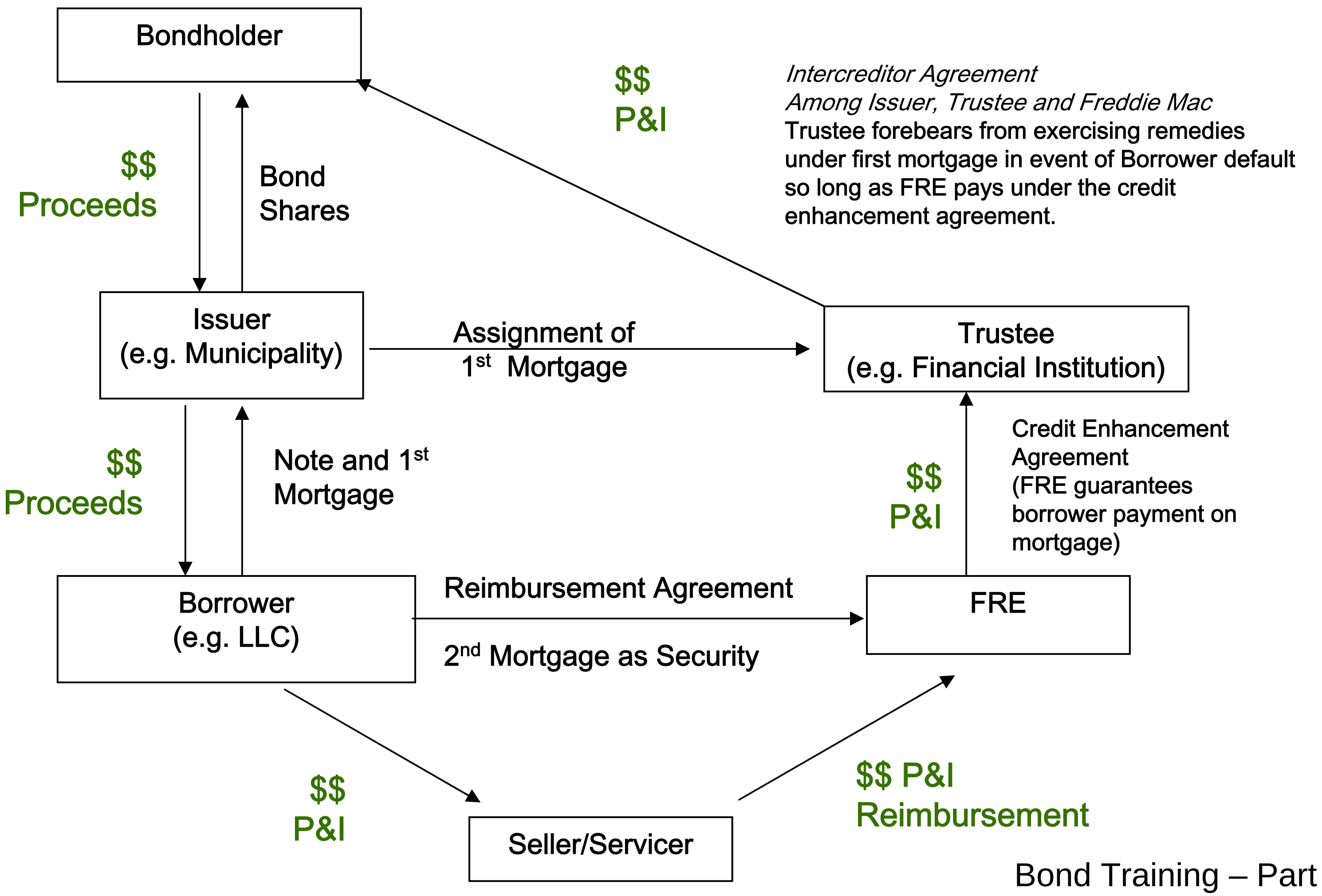
	Bond Note	Commitment	Reimb. Agr.	C.E. A.	Trust. Indenture	Financing Agr	Rmrkt Agr
PRF Payments	Schedule	Calculation	**Schedule**			Schedule	
Interest Payments	P&I Pmt	X			Definition		
FHLMC C.E. Fee	P&I Pmt	X	**Definitions**	Definitions			
FHLMC Liquidity (1)	P&I Pmt	X	**Definitions**	Definitions			
Servicing Fee	P&I Pmt	X			Definitions	Definitions	
Trustee Fee	P&I Pmt				**Definitions**	Definitions	
Issuer Fee	P&I Pmt				**Definitions**	Definitions	
Remarketing (1)	P&I Pmt						**X**
Rebate Analyst Fee	P&I Pmt				**Definitions**	Definitions	
Other Fees	P&I Pmt						
Cap Esc. Pmts (1)	Re-priced annually or quarterly per Reimbursement Agreement						
Swap C.E. Pmts (1)			**Definitions**				
Swap Esc. Pmts (1)	Typically estimated based on cap 5 years prior to expiration of Swap						
(1) N/A for fixed rate							

Bond Cash Flows

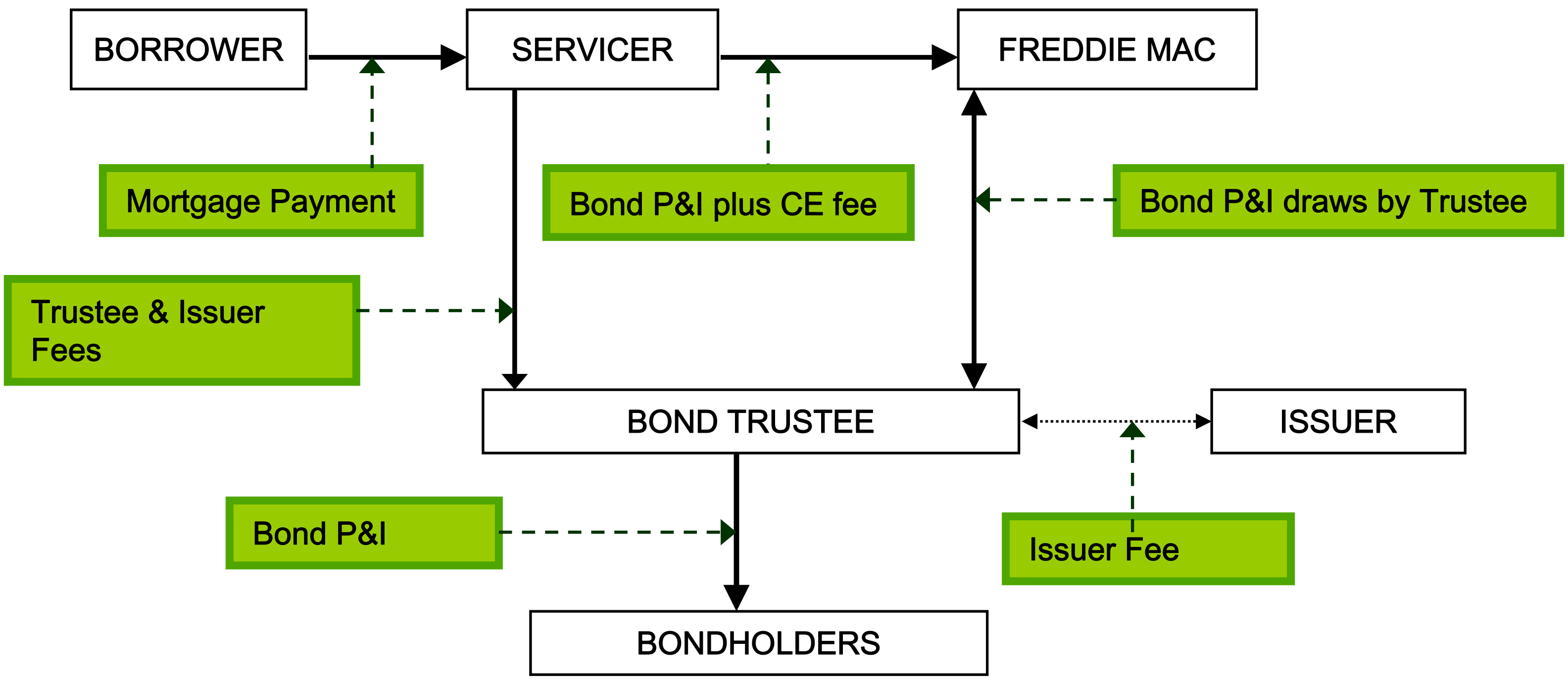
Freddie Mac Bond Credit Enhancement

- Freddie Mac provides two different types of credit enhancements
- Direct Pay and Stand-by
  - With Direct Pay, Freddie Mac advances all payments upon request by Trustee and is reimbursed by the borrower
  - With Stand-by, Freddie Mac only advances payments when the borrower fails to pay as required and the Trustee requests a draw
- All one-off Freddie Mac credit enhancements post 2000 are Direct Pay
  - Some limited Stand-by credit enhancements in structured transactions

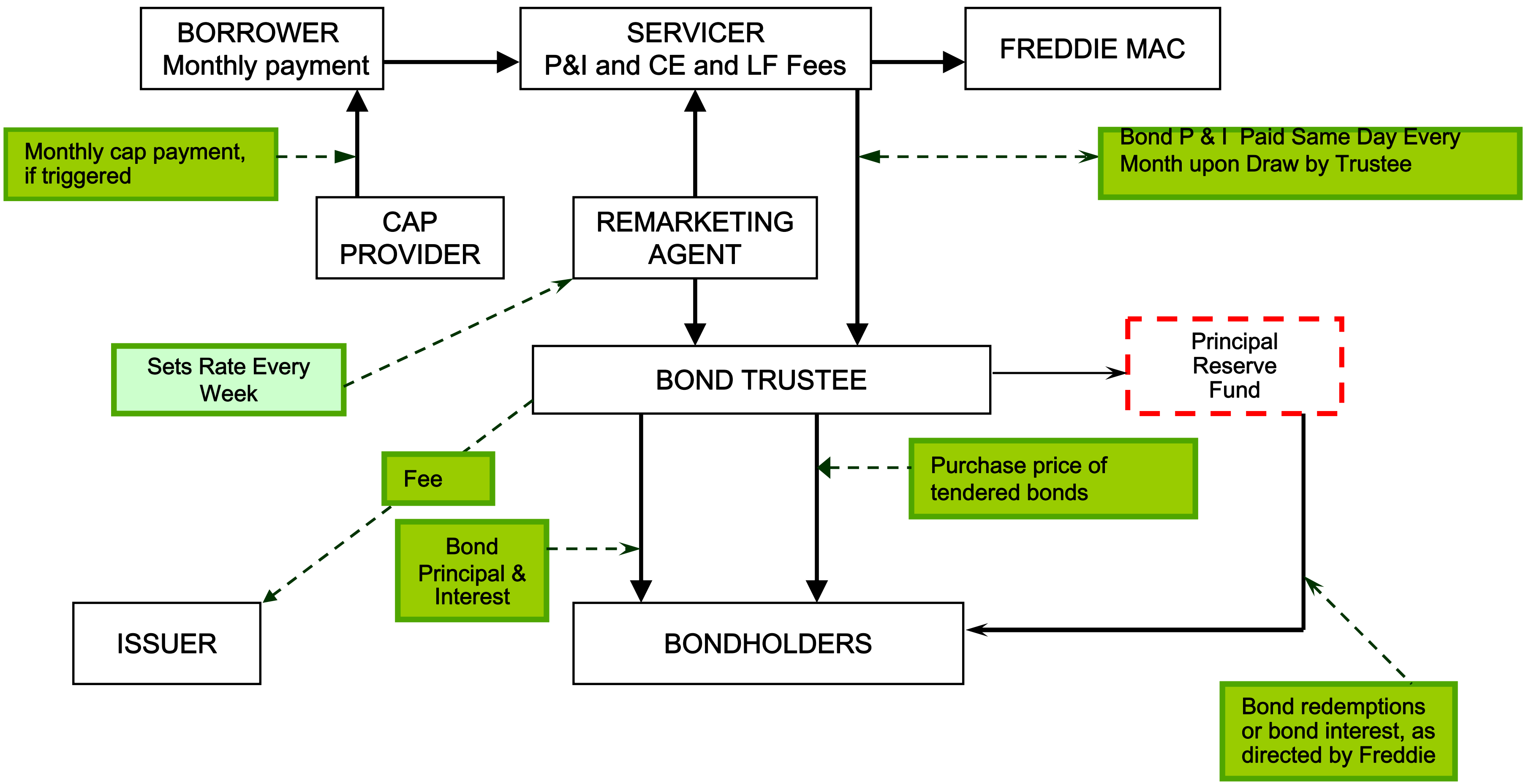
Tax-Exempt Bond Credit Enhancement
Standard Credit Enhancement



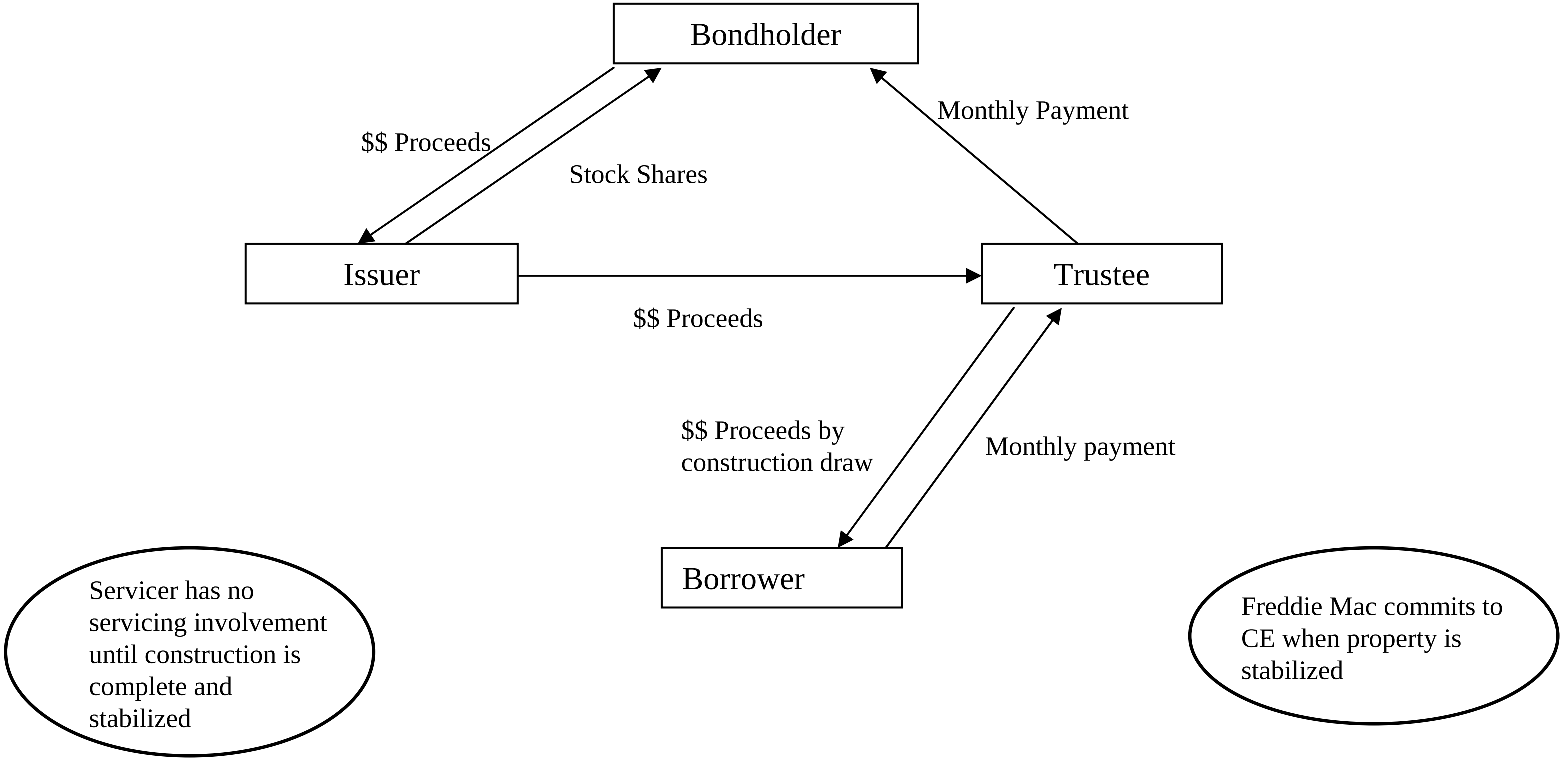
Fixed-Rate Credit Enhancement Direct Payment Cash Flows



Floating-Rate Credit Enhancement Direct Payment Cash Flows



Flow of Funds for Unfunded Forward



Interest Rate Hedges

Basic Bond Hedges

- Freddie Mac requires an interest rate hedge to limit exposure to interest rate volatility in variable rate transactions
- Two types of interest rate hedges
  - Interest Rate Cap
  - Swap Agreement
- Interest rate hedges are bid at auction several days before closing and prior to hedge expiration
- Hedge provider must be approved by Freddie Mac

CAPs – How They Work

If a Cap, the provider makes monthly payments of interest calculated on notional balance at the index rate, in excess of the strike rate

- The borrower will pay no more than a “capped” rate (a/k/a strike rate) so long as the cap provider performs
- The cap provider will only pay the difference between SIFMA (or Index) if it is in excess of the capped (strike) rate
- A one-time payment is made to the cap provider at the purchase of the Cap Agreement
- Escrows are collected over the term of the cap to fund the cost of the next cap

Example 1 reflects environment when SIFMA spiked in late September 2008

Caps Example 1

<u>Example 1:</u>

SIFMA = 8.00

Bond Rate = 8.50

Cap = 6.00

Cap Provider Pays 2.0% (difference between cap and SIFMA)

Borrower is paying 8.5% (Borrower is responsible for full bond interest due)

Bond interest of 8.5% is received. (Borrower has net payment after receipt from Cap equal to 6.5%)

CAPs Example 2

In our historic environment the payments have been typically as follows

<u>Example 2:</u>
SIFMA = 2.5%
Bond rate = 2.2%
Cap = 6.0%

Cap Provider pays nothing since SIFMA rate has not exceeded Cap Rate

Bond Interest of 2.2% is paid by Borrower, no reimbursement to Borrower from CAP provider is required

Borrower always responsible for payment at Bond Rate. Receives nothing from Cap since INDEX rate (not bond rate) has not reached cap strike rate of 6.0%

Swaps – How They Work

- If a Swap, provider makes monthly payments of interest to borrower calculated on notional balance at the SIFMA (or index) rate
- Borrower makes monthly payments to swap provider at the "fixed" strike rate on the notional balance
- Swap Provider makes money when SIFMA (or other index) is lower than fixed rate (a/k/a Strike rate) borrower has agreed to pay the Swap Provider monthly, assuming SIFMA will typically be less than the fixed rate

Swaps – How They Work cont'd

- Swap payments are always "netted." The SIFMA (or index) rate is subtracted from the fixed rate
  - » If the result is positive (Fixed is greater than SIFMA rate) swap counterparty receives net difference,
  - » If negative (Fixed is less than SIFMA rate) Borrower receives net difference
- Notional amount should = bonds outstanding – PRF (per schedule attached to swap agreement)
- No fee is paid when the swap is negotiated

Swap Example 1

To reflect our recent environment, in example 1 the SIFMA rate is higher than the Bond rate the borrower is responsible for paying.

<u>Example 1:</u>
SIFMA = 8.0%
Borrower "fixed" rate = 4%
Bond Rate = 7.0**%**

Swap Provider – pays Borrower at SIFMA Rate (8%) minus Fixed Rate (4%)

4%

Borrower – does not pay Swap Provider because SIFMA exceeds fixed rate

Borrower pays Bond rate = 7.0%

Net Borrower Result:

Borrower pays 7%

Borrower receives 4%

Net Borrower payment = 3%

Swap Example 2

To reflect our historical environment, in the example below SIFMA is actually less than the bond rate the borrower is responsible for paying.

Example 2:

SIFMA = 2.5%

Borrower fixed rate = 4.0%

Bond rate = 3.0%

Swap Provider – does not pay Borrower because Sifma Rate (2.5%) is less than fixed rate

Bond rate = 3%

Borrower Pays Swap Provider at fixed rate of 4% less SIFMA of 2.5%

Borrower – Pays Bonds at 3.0%

Net Borrower Result:

Bond Rate 3%

Swap Payment 1.5%

Net Borrower payment = 4.5%

Thank you for attending this training!