

## Multifamily MBS Update: Yield Maintenance Using the Constant Maturity Treasury Rate

Each Fannie Mae multifamily loan may have a voluntary prepayment protection provision. The most common form of prepayment protection is yield maintenance<sup>1</sup>, which allows for full prepayment along with a yield maintenance prepayment premium payable by the borrower. For all new multifamily DUS loans committed on or after September 1, 2009, the formula to calculate the dollar amount of the yield maintenance prepayment premium will now use the applicable Constant Maturity Treasury (CMT) Rate rather than a specific U.S. Treasury security designated at origination, which had been the convention for loans committed prior to September 1, 2009. ***Yield maintenance calculations for multifamily loans committed prior to September 1, 2009 will not be affected by this change.***

### Investor Benefits:

- Conforms with the industry standard for yield maintenance calculations
- Provides greater transparency to the borrower, lender, and investor
- Eliminates potential errors in the identification, selection and disclosure of specific US Treasury securities

### Constant Maturity Treasury Rate

- The yield input for the yield maintenance calculation will be the CMT Rate effective on the 25<sup>th</sup> business day **prior** to the intended prepayment date. For Fannie Mae multifamily loans, the notes provide that prepayments are to be made on the last day of the month. Nevertheless, if a borrower should prepay on a day other than the last day of the month, Fannie Mae will calculate interest and prepayment premium due as if the prepayment were made on the last day of the month.
  - For example, a loan has an intended prepayment date of June 15, 2009. Using the 25-day lookback period, the CMT Rate effective on May 8, 2009 is used to calculate the amount of prepayment premium that will be due for the remaining yield maintenance term (the period beginning the first day of July 2009 and continuing through the yield maintenance end date).
- The CMT Rate will then be selected from the applicable weekly release of the U.S. Treasury Statistical Release H.15 (Selected Interest Rates)<sup>2</sup> (the CMT Index) for the 25<sup>th</sup> business day prior to the payoff date. The U.S. Treasury Statistical Release H.15 is published on Monday with daily updates posted Tuesday through Friday. If Monday is a holiday, the weekly release will be posted on Tuesday after the holiday and the daily update will not be posted on that Tuesday. **See Exhibit 1: U.S. Treasury Statistical Release H.15**

<sup>1</sup> The Multifamily Schedule of Loan Information shows “Yield Maintenance” as the “Prepayment Premium Option.”

<sup>2</sup> <http://www.federalreserve.gov/releases/h15/update/> If publication of the Fed Release is discontinued by the Federal Reserve Board, the lender will determine the yield rate from another source selected by the lender.

- The CMT Rate will be calculated as follows:
  - If the remaining yield maintenance term is ***equal*** to the term of a U.S. government security reported under the 'Treasury Constant Maturity' subheading of the CMT Index, that published rate will be the CMT Rate.
  - If the remaining yield maintenance term is ***not equal*** to the term of a U.S. government security reported under the 'Treasury Constant Maturity' subheading of the CMT Index, the CMT Rate must be determined by interpolating the published yield rates for the immediately shorter and longer term U.S. government securities. **See Exhibit 2: Interpolation Equation and Example**

## **Additional Resources**

On Fannie Mae's web site, the Yield Maintenance Factor File<sup>3</sup> provides monthly factor information for use in calculating the amount of yield maintenance prepayment premium that will be passed through to investors in the current month.

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<sup>3</sup> <http://www.fanniemae.com/mbs/data/multifamily/yieldmaintenance.jhtml>

# Exhibit 1:

## U.S. Treasury Statistical Release H.15 (Selected Interest Rates)

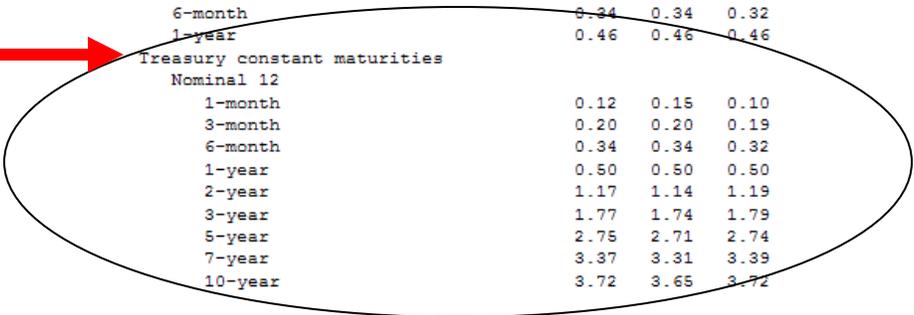
FEDERAL RESERVE STATISTICAL RELEASE

H.15 DAILY UPDATE: WEB RELEASE ONLY

SELECTED INTEREST RATES

For use at 4:15 p.m. Eastern Time

Yields in percent per annum	June 25, 2009		
	2009 Jun	2009 Jun	2009 Jun
Instruments			
Federal funds (effective) 1 2 3	0.24	0.24	0.21
Commercial Paper 3 4 5 6			
Nonfinancial			
1-month	0.19	0.17	0.14
2-month	0.23	0.23	0.24
3-month	0.26	0.26	0.26
Financial			
1-month	0.30	0.30	0.28
2-month	0.46	0.31	0.31
3-month	0.63	0.37	0.34
3-month nonfinancial or financial posted by CPFF 7			
Without surcharge	1.23	1.24	1.24
With surcharge	2.23	2.24	2.24
CDs (secondary market) 3 8			
1-month	0.30	0.30	0.30
3-month	0.40	0.38	0.38
6-month	0.68	0.68	0.67
Eurodollar deposits (London) 3 9			
1-month	0.65	0.65	0.65
3-month	1.05	1.05	1.05
6-month	1.40	1.40	1.40
Bank prime loan 2 3 10	3.25	3.25	3.25
Discount window primary credit 2 11	0.50	0.50	0.50
U.S. government securities			
Treasury bills (secondary market) 3 4			
4-week	0.11	0.15	0.10
3-month	0.20	0.20	0.19
6-month	0.34	0.34	0.32
1-year	0.46	0.46	0.46
Treasury constant maturities			
Nominal 12			
1-month	0.12	0.15	0.10
3-month	0.20	0.20	0.19
6-month	0.34	0.34	0.32
1-year	0.50	0.50	0.50
2-year	1.17	1.14	1.19
3-year	1.77	1.74	1.79
5-year	2.75	2.71	2.74
7-year	3.37	3.31	3.39
10-year	3.72	3.65	3.72



# Exhibit 2:

## Interpolation Equation and Example

### Interpolation Equation

$$\left[ \left( \frac{a-b}{x-y} \right) * (z-y) \right] + b$$

Where:

a = the yield for the longer U.S. Treasury constant maturity

b = the yield for the shorter U.S. Treasury constant maturity

x = the term for the longer U.S. Treasury constant maturity

y = the term for the shorter U.S. Treasury constant maturity

z = the number of years remaining until the Yield Maintenance End Date (months divided by 12)

### Interpolation Calculation Example

Assume a Fannie Mae multifamily Mortgage Loan, with a note rate of 5.610% and an MBS pass-through rate of 4.750%, is prepaid in the amount of the outstanding unpaid principal balance of \$1,118,222.29 on July 28, 2009, which leaves 54 months (or 4.5 years) remaining until the end of the yield maintenance term. The CMT Rate date is June 22, 2009, which is the 25<sup>th</sup> business day prior to the payoff date of July 28, 2009. Using the CMT rates from **Exhibit 1**, the Yield Rate is interpolated as follows:

a = 2.75%, the yield for the longer U.S. Treasury constant maturity

b = 1.77%, the yield for the shorter U.S. Treasury constant maturity

x = 5, the term for the longer U.S. Treasury constant maturity

y = 3, the term for the shorter U.S. Treasury constant maturity

z = 4.5 (or 54/12), the number of years remaining until the Yield Maintenance End Date (months divided by 12)

$$\text{CMT Rate} = \left( \frac{2.75-1.77}{5-3} \right) * (4.5-3) + 1.77 = \underline{\underline{2.505}}$$

### Yield Maintenance Example Using Interpolated CMT Rate

Since the borrower voluntarily prepays during the yield maintenance period, the yield maintenance prepayment premium equals the greater of:

(a) 1% of the amount of principal being prepaid (1% X \$1,118,222.29 = \$11,118.22) OR

(b) the product obtained by multiplying

(1) the amount of principal being repaid (\$1,118,222.29) *by*

(2) the difference between (i) the interest rate on the loan (5.610%) and (ii) the CMT Rate (2.505% - - the interpolated CMT) (5.610% - 2.505% => 3.105%) *by*

(3) the present value factor calculated by using the present value formula

$$= \frac{1-(1+r)^{-n/12}}{r}$$

where  $r$  = the interpolated CMT Rate and

where  $n$  = number of months remaining between (A) the date of prepayment and

(B) the prepayment end date

$$\frac{1-(1+2.505\%)^{-54/12}}{2.505\%} \Rightarrow 4.2060733$$

$$\text{Total (b)} = \$1,118,222.29 \times 3.105\% \times 4.2060733 = \$146,038.24$$

The total yield maintenance prepayment premium paid by the borrower is **\$146,038.24**.

# Exhibit 3:

## Investor Portion of Yield Maintenance

Using the same values that were used in **Exhibit 2**, the investor's share of the yield maintenance prepayment premium equals the product obtained by multiplying

- (1) the amount of principal being repaid (**\$1,118,222.29**) *by*
- (2) the difference between (A) the MBS pass-through rate (**4.75%**) and (B) the CMT Rate (**2.505%** - - as calculated in **Exhibit 2** above) (**4.675% - 2.505% =>2.170**) *by*
- (3) the present value factor (**4.2060733** - - as calculated in **Exhibit 2** above)

$$\text{Total} = \$1,118,222.29 \times (2.170\%) \times 4.2060733 = \mathbf{\$105,589.64}$$

The total investor share of the yield maintenance prepayment premium is **\$105,589.64**.

It is important to note that Fannie Mae separately calculates the share of the prepayment premium to be retained by Fannie Mae and the share of prepayment premium to be passed on to the investor. Fannie Mae will pass the investor's portion of the yield maintenance prepayment premium after Fannie Mae has deducted its portion of the prepayment premium in full, and then only to the extent of the prepayment premium actually collected. Fannie Mae does not guarantee the payment of any prepayment premiums. If a borrower prepays a mortgage loan after the yield maintenance end date, Fannie Mae will not pay any portion of the prepayment premium to the investor.