

## ATTACHMENT 7-H

### GUIDE FOR VALUATION OF INTEREST CREDIT SUBSIDY

#### *Interest Credit Subsidy*

*Interest credit* is a form of federal assistance available to eligible borrowers that reduces the effective interest rate of a loan. The USDA Rural Housing Service (RHS) offers direct loans with very favorable terms for affordable housing in the Rural Rental Housing Program (Section 515) and the Farm Labor Housing Program (Section 514). Section 514 and 515 permanent loans for new construction and subsequent loans for rehabilitation include interest rates as low as 1 percent. These loans are made at a “note rate” of interest, but a “basic rate” of interest to the borrower is typically 1 percent. A monthly mortgage payment is calculated at the note rate of interest, and the loan is amortized at the note rate of interest, but the borrower's actual mortgage payment is based on the basic rate of 1 percent. The difference between the note rate payment and the basic rate payment is the *interest credit*. The borrower is effectively subsidized with an income stream represented by the monthly *interest credit* that is available for the term of the loan.

In appraisals of Section 514 and Section 515 Multi-Family Housing properties, valuation of the *interest credit subsidy* (favorable financing) is part of the assignment when the *market value, subject to restricted rents*, must be concluded. When *interest credit subsidy* is the only favorable financing involved, the security value, on which the loan is based, has two components: 1) the *market value, subject to restricted rents*, of the real estate, and 2) the value of the *interest credit subsidy*. The present value (PV) of the *interest credit subsidy* can be calculated with a financial calculator using a simple discounted cash flow if three variables are known: payment (PMT), discount rate (i), and period (n). Determination of each of these three variables is discussed below.

#### *Methodology for Valuation of Interest Credit Subsidy*

The first variable to consider, which is input as payment (PMT) in a financial calculator, is the income stream that accrues to the borrower from the savings in mortgage payments resulting from the *interest credit*. With the RHS direct loan, the borrower typically will make 360 monthly mortgage payments based on an interest rate of 1 percent. Without the RHS direct loan, the borrower would have to obtain alternative conventional financing at a significantly higher market interest rate, resulting in higher monthly mortgage payments. Therefore, the borrower's income stream is equal to the difference between the monthly mortgage payment that would have been required at the conventional rate of interest and the actual mortgage payment at the reduced rate. (It should be noted that the USDA note rate of interest cannot be used to calculate the higher conventional payment because this rate does not represent a mortgage interest rate available to the borrower at the time of the appraisal.)

The second variable used in the calculation is the discount rate (i). The discount rate to be applied to the income stream is simply the alternative conventional mortgage interest rate. This is the rate of interest at which the borrower would have had to pay if a conventional loan had

been obtained, so this is the rate at which the borrower saves with the favorable financing. The conventional mortgage interest rate is extracted from the subject's lending market.

The third variable to determine is the period (n) over which the income stream is to be discounted. The loan term, or remaining loan term, is known at the time of the appraisal. Although the borrower might hold the property for a holding period less than the loan term, the income stream from the favorable loan is available for the period of the loan. The *interest credit subsidy* should be valued according to the actual terms of the loan, so the appraiser should discount the income stream over the term of the loan. For new construction, the loan term is 30 years for a Section 515 loan and 33 years for a Section 514 loan. The appraiser should use these terms for the period of the loan. For an existing property, the remaining loan term, which should not exceed the estimated remaining economic life of the property, should be used for the period of the loan.

The value of the *interest credit subsidy* from RHS direct loans on most existing properties can be calculated by subtracting the monthly debt service at the below-market rate of interest from the monthly payment at the current rate offered for conventional loans and discounting the difference by the current conventional interest rate over the remaining loan term. For RHS direct loans on proposed new construction, an additional step is required if the amortization period is longer than the loan term. With conventional financing, a loan with a term of 30 years is amortized at the end of the 30-year term. However, with a RHS direct loan that has a loan term of 30 years and an amortization period of 50 years, a large balloon payment is due at the end of 30 years. The PV of the balance of the RHS direct loan at the end of the 30-year loan term (the PV of the balloon payment) must be subtracted from the present value of the 30-year income stream to derive the value of the *interest credit subsidy*.

### ***Example Problem and Solution***

The following example problem is used to illustrate the method for valuing the *interest credit subsidy*.

#### ***Problem:***

*A Section 515 direct loan of \$1,000,000 is offered by USDA Rural Development with a term of 30 years and an amortization period of 50 years. The loan is to be amortized at the USDA note rate of interest of 6.0%, but the base rate of interest to the borrower is 1.0%. At the end of the 30-year loan term, a balloon payment is due. Alternative conventional financing includes a 30-year loan term, completely amortized after 30 years, and an interest rate of 7.0%. What is the value of the "interest credit subsidy" or below-market financing?*

#### ***Solution:***

The loan amount in the example problem is \$1,000,000. With conventional financing, the monthly payment at 7.0% interest, amortized over 30 years, would have been \$6,653.02. This payment can be calculated on an HP-12C calculator using the following keystrokes:

1,000,000 PV  
7.0 g i  
30 g n  
Solve for PMT = -6,653.02

With the Section 515 direct loan and *interest credit*, the monthly payment, at 1.0% interest, amortized over 50 years, is \$2,118.59 (calculated in the same way), but a balloon payment of \$734,760 is due at the end of 30 years. The borrower makes a monthly payment based on a 1.0% interest rate. However, the loan is amortized at the note rate of interest at the time of the loan (6.0% in this example), as if the mortgage payment was the sum of the borrower's payment and the *interest credit* calculated by USDA. The balloon due at the end of 30 years on the RHS loan can be calculated on an HP-12C calculator using the following keystrokes:

1,000,000 PV  
6.0 g i  
50 g n  
Solve for PMT = -5,264.05  
30 g n  
Solve for FV = -734,760

The difference in the payments at the two different interest rates is \$4,534.43 (\$6,653.02 - \$2,118.59) per month. The borrower saves \$4,534.43 per month due to the below-market financing. Without the benefit of the favorable financing (*interest credit subsidy*), the owner would pay an additional \$4,534.43 per month, at an interest rate of 7.0%, over the projected holding period. The projected holding period for the subject property is the loan term, 30 years.

With the Section 515 direct loan, a large balloon payment is due at the end of the 30-year loan term, but a conventional loan would be fully amortized at the end of the 30-year loan term, and there would be no balloon. Therefore, to calculate the value of the *interest credit subsidy*, the present value (PV) of the balance of the RHS loan at the end of the 30-year loan term (the PV of the balloon payment) must be subtracted from the present value of the income stream resulting from the savings in the mortgage payments. The present value of the balloon payment is calculated by discounting the balloon payment (\$734,760) by the current mortgage interest rate (7.0%) over the term of the loan (30 years). In this example, the PV of the balloon payment can be calculated with an HP-12C calculator using the following keystrokes:

734,760 CHS FV  
7.0 g i  
30 g n  
Solve for PV = 90,527

The value of the *interest credit subsidy* is equal to the amount of the monthly debt service saved, discounted by the current conventional mortgage interest rate over the remaining loan term, minus the present value of the RHS direct or guaranteed loan balloon payment. The value of the

*interest credit subsidy* for the subject property can be calculated with an HP-12C calculator using the following keystrokes:

4,534.43 CHS PMT

7.0 g i

30 g n

Solve for PV = 681,559

90,527 -

Value of interest credit subsidy = \$591,032

*The Value of the Interest Credit Subsidy is \$591,000 (rounded)*

### **Conclusion**

When appraising existing properties, calculation of the value of the *interest credit subsidy* usually does not involve a balloon payment. Only valuation of the income stream is considered. The appraiser should obtain the current balance of the original loan from the Rural Development Office. The remaining loan balance and the remaining term of the loan are used to calculate the monthly mortgage payment at the current conventional interest rate. The appraiser should use the borrower's actual payment based on a below-market rate (usually 1%) that has been calculated by the Rural Development Office in this process. The difference in the payments at the two rates is then discounted at the current conventional mortgage interest rate over the remaining loan term to calculate the value of the *interest credit subsidy*.

The *interest credit subsidy* for a RHS original loan should be valued separately from the *interest credit subsidy* of any subsequent RHS loans. *Interest credit subsidy* should be valued separately from the *market value, subject to restricted rents*, of the real property.