Module A
Advanced Bond Yield Computation

Overview

Introduction

Computation of the correct bond yield is vital in determining compliance with yield restriction rules, arbitrage rebate rules and certain private activity tests. The bond yield for an issue must be entered on Forms 8038/8038G and can often be found in other documents, such as the Tax/Arbitrage Certificate. However, because the yield found in these documents is frequently incorrect, we must be able to independently compute the bond yield.

Yield on a bond issue is calculated in accordance with Treas. Reg. section 1.148-4. Module M in Phase I of this course discussed general principles of the computation of bond yield.

Module A continues this discussion by considering the computation of bond yield when special circumstances are present.

Objectives

At the end of this module the student will be able to:

- Compute the yield of certain bonds subject to optional early redemption.
- Compute the yield of certain bonds subject to mandatory early redemption.
- Compute the yield of an Issue with both Fixed and Variable Rate Bonds
- Compute the yield of a variable rate bond issue when it is converted to a fixed yield issue.
- Identify a qualified guarantee and incorporate related payments into the computation of bond yield.
- Identify a qualified hedging transaction and incorporate related payments into the computation of bond yield.

Overview, Continued

In this module This module contains the following topics:

Section 1
Fixed Yield Issues – Special Rules

Overview

Introduction This section discusses the computation of yield on a fixed yield issue under special circumstances.

In this section This section contains the following topics:

Bonds Subject to Optional Early Redemption

Review

Treas. Reg. section 1.148-4(b)(1) provides that the yield on a fixed rate issue is the discount rate that:
when used in computing the present value as of the issue date of all unconditionally payable payments of principal, interest and fees for qualified guarantee on the issue, produces an amount equal to the present value, using the same discount rate, of the aggregate issue price of the bonds as of the issue date.

Introduction

Bonds are sometimes sold at above-market interest rates. Investors will be willing to pay a premium for such bonds, as they hope to earn this above-market rate for the term of their bond. However, if an issuer has the resources, they would like to redeem these high-cost ("premium") bonds early.

According to the definition above, yield is computed as if bonds will be outstanding until their scheduled redemption date. There are special rules for callable, premium bonds in order to more accurately reflect the lower bond yield that would result if these bonds redeemed early and therefore outstanding for a shorter period of time.

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Bonds Subject to Optional Early Redemption, Continued

Special Rules for Callable, Premium Bonds

According to Treas. Reg. section 1.148-4(b)(3), if a fixed yield bond is subject to optional early redemption (callable) and meets any of the requirements below, then the yield on the issue containing the bond is computed by treating the bond as redeemed on the optional redemption date that would produce the lowest yield on the issue.

1. is subject to optional redemption within five years of the issue date, AND the yield on the issue computed by assuming that all bonds subject to the early redemption will be redeemed **on their maturity date** is more than 0.125 percent higher than the yield on the issue computed by assuming that all bonds subject to optional redemption are redeemed **at the earliest**
   - **call date, (see example 1)**

2. is issued at an issue price that exceeds its stated redemption price at maturity by more than 0.25 percent times the product of the stated redemption price at maturity and the number of complete years to the first optional redemption date, **(see example 2)** OR

3. bears interest at increasing interest rates.

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Bonds Subject to Optional Early Redemption, Continued

Example 1

On January 1, 1994, City A issues $30,000,000 principal amount of bonds. The issue contains three bonds, each having a principal amount of $10,000,000. Bond X bears interest at five percent per year and matures on January 1, 1999. Bond Y bears interest at six percent per year and matures on January 1, 2002. Bond Z bears interest at seven percent per year and matures on June 1, 2004. Bonds Y, and Z are callable by the issuer at par plus accrued interest after December 31, 1998.

First, compute the yield on the issue by assuming that each bond will remain outstanding to its stated maturity date. The yield is 6.0834 percent, compounded semiannually, computed as shown in Table B-1.

TABLE B-1: COMPUTATION OF YIELD (TO MATURITY DATE)

DATE	PAYMENTS	PRESENT VALUE (6.0834%)
1/1/95	1,800,000.00	$1,695,299.66
1/1/96	1,800,000.00	$1,596,689.41
1/1/97	1,800,000.00	$1,503,815.01
1/1/98	1,800,000.00	$1,416,342.82
1/1/99	11,800,000.00	$8,744,839.76
1/1/00	1,300,000.00	$907,375.75
1/1/01	1,300,000.00	$854,596.56
1/1/02	11,300,000.00	$6,996,328.64
1/1/03	700,000.00	$408,191.32
1/1/04	10,700,000.00	$5,876,564.06
TOTAL	44,300,000.00	$30,000,042.98

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Example 1 (continued)

Second, compute the yield on the issue by assuming that the bonds will be redeemed on their earliest redemption date. The yield computed as follows is 5.9126 percent, compounded semiannually, as shown in Table B-2:

TABLE B-2: COMPUTATION OF YIELD (TO EARLIEST REDEMPTION DATE)

DATE	PAYMENTS	PRESENT VALUE (5.9126%)
1/1/95	1,800,000.00	$1,698,113.25
1/1/96	1,800,000.00	$1,601,993.68
1/1/97	1,800,000.00	$1,511,314.83
1/1/98	1,800,000.00	$1,425,768.75
1/1/99	31,800,000.00	$23,762,813.15
TOTAL	39,000,000.00	$30,000,003.67

Analysis

The yield computed assuming no early redemption (6.0834 percent) exceeds the yield computed assuming bonds being redeemed at the earliest call date (5.9126 percent) by more than 0.125 percent.

Therefore, each bond is treated as redeemed on the date that would produce the lowest yield on the issue. The lowest yield on the issue would result from all the bonds being redeemed on the earliest redemption date, January 1, 1999.

The yield on the issue is 5.9126 percent, compounded semiannually.

See Treas. Reg. section 1.148-4(b)(6), Example 3.

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Bonds Subject to Optional Early Redemption, Continued

Example 2

On January 1, 1995, City issues bonds in the principal amount of $10,000,000. The stated maturity date of the bonds is January 1, 2015. The issue price of the bonds is $10,500,000. The bonds may be redeemed at the option of City on January 1, 2005.

Treas. Reg. section 1.148-4(b)(3)(ii)(B) provides that the "allowable" premium is:

stated redemption price **x** number of complete years to first optional redemption date **x** .25 percent or,

$10,000,000 **x** 10 **x** .25% = $250,000

The bonds were sold at a premium of $500,000, exceeding the allowable amount computed above. Therefore, the special rule requiring that the bond yield be computed as if the bonds are redeemed on the lowest yield date will apply.

Bonds Subject to Mandatory Early Redemption

Introduction

There are two types of interest bearing, fixed rate bonds – serial and term.

Serial bonds have a single maturity date, at which time all of the applicable bonds are redeemed. Term bonds also have a stated maturity date, but they will also have "mandatory redemption dates", which are prior to the stated redemption date. On these mandatory redemption dates, a portion of the bonds will be redeemed, according to the redemption schedule set forth in the bond documents. The trustee normally selects bonds for redemption by lottery and therefore, an investor of a term bond won't know if their bond will be outstanding until the stated redemption date or if it will be redeemed at some earlier date.

Term bonds are often sold at a discount to make them more attractive to investors. An investor will is less likely to mind if their bond is paid off early if the bond was purchased at a discount, as the discount will be amortized more quickly, increasing the yield to the investor.

If bonds are sold at a discount as of the date of issue, it may be assumed that they will remain priced at a discount. If bonds are available on the open market at a discount on a mandatory redemption date, an issuer might buy such bonds and turn them in to the trustee. This would satisfy the mandatory redemptions for that date and the trustee would avoid holding the lottery. However, a distortion in the bond yield would result. If the bond yield has been computed assuming that the full principal amount will be paid on each redemption date, but instead, something less than that is actually paid, the bond yield will be overstated. For this reason, special rules exist for bonds subject to mandatory early redemption that are sold with more than a minor amount of discount. These bonds are commonly referred to as "deep discount bonds".

Special Rules for Mandatory Redemption, Discount Bonds

According to Treas. Reg. section 1.148-4(b)(2)(ii), if a fixed yield bond is subject to mandatory early redemption and the stated redemption price at maturity exceeds the issue price by more than .25 percent multiplied by the product of the stated redemption price at maturity and the number of years to the weighted average maturity date of the bonds, then the bonds must be treated as redeemed at present value. Weighted average maturity is determined by taking into account the mandatory redemption schedule.

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Maturity Date	Principal	Years O/S	Weighted Average Maturity
1/1/11	2,000,000	16.00	3.20
1/1/12	2,000,000	17.00	3.40
1/1/13	2,000,000	18.00	3.60
1/1/14	2,000,000	19.00	3.80
1/1/15	2,000,000	20.00	4.00
	10,000,000		**18.00**

Stated Redemption at Maturity	10,000,000.00
Issue Price	(9,500,000.00)
Actual Discount	**$500,000.00**
Stated Redemption at Maturity	10,000,000.00
Years to Wtd Avg Mat Date	18.00
Factor	.25%
Allowable Discount	**$450,000.00**

Example 3

On January 1, 1995, City issues term bonds in the principal amount of $10,000,000. The issue price of the bonds is $9,500,000. The stated maturity date of the bonds is January 1, 2015. $2,000,000 of bonds are subject to mandatory early redemption on each January 1 beginning on January 1, 2011.

Treas. Reg. section 1.148-4(b)(2)(ii) provides that the "allowable" discount is:

stated redemption price **x** number of years to weighted average maturity date of bonds **x** .25 percent, computed as follows:

The bonds were sold at a discount of $500,000, exceeding the allowable amount computed above. Therefore, the special rule requiring that the bonds be treated as redeemed at their present value will apply. Section 3 of this module will discuss computation of present value of bonds.

Transfer of Certain Rights Associated with the Bond

General Rule

According to Treas. Reg. section. 1.148-4(b)(4), if the issuer transfers, waives, or modifies any right associated with the bond, AND such transfer is separate from the original sale of the bond, then the issue is treated as if retired and reissued on the transfer date.

The redemption price of the retired issue and the issue price of the new issue equals the aggregate values of all of the bonds on the transfer date.

In computing yield on the new issue, all amounts received by the issuer in consideration of the transfer are taken into account.

Example 4

County X issues $10,000,000 principal amount of bonds on June 1, 1994. The bonds are subject to optional redemption on or after June 1, 2004. On August 1, 1998, County X sells it right to redeem the bonds to Corporation Y for an amount equal to $500,000. The yield on the issue is calculated as if the bonds were retired and reissued as new bonds on August 1, 1998. The redemption price of the issue and the issue price of the new issue will be the aggregate value of the bonds on August 1, 1998. The $500,000 is taken into account as a payment received by County X.

The value of the bonds is determined as described in Section 3 of this module.

Section 2

Special Rules for Variable Rate Issues

Overview

Introduction

This section discusses the computation of yield on a variable yield issue under special circumstances.

In this section

This section contains the following topics:

Calculating Yield on a Variable Yield Issue

Definition of a Variable Yield Issue

Treas. Reg. section 1.148-1(b) provides that a **variable yield issue** means any issue that is not a fixed yield issue. A **variable yield bond** means any bond that is not a fixed yield bond.

Introduction to Calculation of Yield

The yield on a variable rate issue cannot be calculated on the issue date because the interest rates are unknown on the issue date. Therefore, the yield has to be calculated on a "looking backward" basis. Treas. Reg. 1.148-4(c) provides that a yield on a variable yield issue is computed separately for each computation period.

Computation Date

Treas. Reg. section 1.148-3(e)(1) provides that the issuer may treat as the computation date:

- the last day of any bond year ending on or before the first required rebate payment date, AND
- thereafter, the end of each bond year or the end of each fifth bond year.

Once selected, the issuer may not change the computation dates after the first required rebate payment.

First Required Rebate Payment Date

According to Treas. Reg. section. 1.148-3(f)(1), the first required rebate payment date cannot be later than five years after the issue date.

Final Computation Date

Treas. Reg. section 1.148-3(e)(2) provides that the final computation date is the date that an issue is discharged.

If the issue is retired within three years of the issue date, the final computation date need not occur before the end of eight months after the issue date, or during the period in which the issuer reasonably expects that any of the spending exceptions under Treas. Reg. section 1.148-7 will apply to the issue.

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Calculating Yield on a Variable Yield Issue, Continued

Example 5

On June 1, 1995, County M issues an issue of ten-year identical plain par bonds in an aggregate principal amount of $55,000,000. The bonds pay interest at a variable rate on each December 1 throughout the term of the issue. Also on December 1, principal payments in the amount of $5,500,000 are made. June 1, 2000 is selected as the first computation date. The following interest payments are made throughout the term of the bonds:

12/1/1995	$2.2M	12/1/2000	$4.9M
12/1/1996	2.4M	12/1/2001	3.8M
12/1/1997	2.7M	12/1/2002	3.6M
12/1/1998	2.9M	12/1/2003	2.5M
12/1/1999	1.9M	12/1/2004	2.1M

The yield on the bonds for the first computation period equals 6.96889 %, compounded semiannually. The yield on the bonds for the second computation period equals 19.91857 %. (**See Figure A-2.)**

Explanation:
The first computation date is June 1, 2000. All of the debt service payments made between June 1, 1995 and June 1, 2000 will be included in the first computation period. In this problem the debt service payments are made each December 1.

The bond is treated as if it matured on June 1, 2000. The value of the bond on this date is entered into the calculation. The value of the bond is calculated as follows:

Issue Price	$55,000,000
Principal Payments Made	<27,500,000>
Accrued Interest from 12/1/99-6/1/00	2,450,000
Value of Bonds on 6/1/2000	$29,950,000

In order to determine the yield for the second computation period, the issue price used for the beginning of a computation period is the same amount used at the end of the prior computation period.

All of the debt service payments made during the second period will be included. Since the bond matures at the end of the second period, the maturity value is included, and there are no more computation periods.

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Calculating Yield on a Variable Yield Issue, Continued

Figure A-2: Calculating the Yield on a Variable Yield Issue

Computation Period 1:

Issue Date: 6-1-1995 Compounding Intervals per Year: 1 30/360

Issue Price: $55,000,000 Yield: 6.96889 percent

DATE	ISSUE PAYMENTS	PRESENT VALUE	DAYS BETWEEN DATES
12/1/1995	$ 7,700,000	$ 7,444,953.24	180
12/1/1996	7,900,000	7,140,700.85	540
12/1/1997	8,200,000	6,928,992.62	900
12/1/1998	8,400,000	6,635,566.89	1260
12/1/1999	7,400,000	5,464,783.53	1620
06/1/2000	29,950,000	21,385,003.21	1800
	$69,550,000	$55,000,000.33	

Computation Period 2:

Issue Date: 6-1-2000 Compounding Intervals per Year: 1 30/360

Issue Price: $29,950,000 Yield: 19.91857 percent

DATE	ISSUE PAYMENTS	PRESENT VALUE	DAYS BETWEEN DATES
12/1/2000	$10,400,000	$ 9,497,080.45	180
12/1/2001	9,300,000	7,081,956.93	540
12/1/2002	9,100,000	5,778,635.21	900
12/1/2003	8,000,000	4,236,307.04	1260
12/1/2004	7,600,000	3,356,020.38	1620
	$44,400,000	$29,950,000.00	

Calculating the Yield on an Issue with Fixed and Variable Rate Bonds

What is an Issue?

Treas. Reg. section 1.150-1(c)(1) provides that the term **issue** means two or more bonds that meet all of the following requirements:

- sold at substantially the same time,
- sold pursuant to the same plan of financing, and
- payable from the same source of funds.

This definition allows fixed yield and variable yield bonds to be in the same issue. Therefore, before the yield for an issue is calculated, the bonds which comprise the issue must be identified.

Example 6

Facts:

City Y sold two series of bonds on January 1, 1994. Series A is a fixed yield issue at 10 percent for $10M maturing in five years. Interest is paid each January and July 1st. All principal is paid at maturity. This series was used to make road improvements around a new courthouse complex.

Series B is a five-year variable rate issue sold for $10M. Interest is adjusted weekly and paid each January and July 1st. All principal is paid at maturity. The proceeds were used to build the courthouse.

Both series were general obligation (G.O.) bonds to be paid from general revenues.

These bonds meet all three of the requirements of Treas. Reg. section 1.150-1(c)(1) as follows:

- both bonds are sold less than fifteen days apart,
- both bonds are for the same project - the courthouse facility, AND
- both bonds will be paid from general revenues.

Since the bonds meet all of the requirements, they should be treated as one issue, and only one yield calculation should be performed. Further, because the yield on the issue is not fixed and determinable on the date of issue, this bond issue is a variable rate issue.

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Calculating the Yield on an Issue with Fixed and Variable Rate Bonds, Continued

Example 6 (continued)

Note: In this example the fixed rate bonds mature on the first computation date. If the bonds matured at a later date, the value of the bonds as of the computation date must be computed. Calculation of the value of bonds is discussed in the next section of this module.

Debt service for Series A consists of semiannual payments of $500,000 with a final payment of $10,000,000 plus interest.

Debt service for Series B is as follows:

7/1/1994 = $400,000	1/1/1997 = $ 420,000
1/1/1995 = 450,000	7/1/1997 = 480,000
7/1/1995 = 475,000	1/1/1998 = 460,000
1/1/1996 = 425,000	7/1/1998 = 450,000
7/1/1996 = 420,000	1/1/1999 = 10,420,000

The yield on the issue is equal to 9.393219. **(See Figure A-3.)**

Figure A-3: Calculating the Yield on an Issue with Fixed and Variable Bonds

Issue Date: 1-1-1994 Compounding Intervals per Year: 2 30/360

Issue Price: $20,000,000 Yield: 9.393219 percent

DATE	ISSUE PAYMENTS	PRESENT VALUE	DAYS BETWEEN DATES
7-1-1994	$900,000	$859,626.69	180
1-1-1995	950,000	866,679.19	360
7-1-1995	975,000	849,584.86	540
1-1-1996	925,000	769,859.13	720
7-1-1996	920,000	731,349.11	900
1-1-1997	920,000	698,541.35	1080
7-1-1997	980,000	710,718.72	1260
1-1-1998	960,000	664,982.62	1440
7-1-1998	950,000	628,535.84	1620
1-1-1999	20,920,000	13,220,123.23	1800
	$29,400,000	$20,000,000.73	

Conversion from Variable to Fixed Rate Issue

Introduction

An issuer of variable yield bonds may convert the interest rate on the bonds to a fixed interest rate. An issuer may do this because it thinks interest rates will rise and it wants to lock into current interest rates. A conversion causes a change in the yield of the issue.

Recalculation of Yield

The date the variable rate is converted to fixed is known as the "conversion date". The issue is treated as reissued on this date, meaning that the variable rate bonds are treated as redeemed and the fixed rate bonds are treated as newly issued.

The redemption price of the variable rate issue and the issue price of the fixed rate issue equal the aggregate value of all the bonds on the conversion date. Thus, for example, for plain par bonds, the deemed issue price would be the outstanding principal amount plus accrued interest.

Special Rule for Conversions Within Computation Periods

If the conversion takes place on a date other than a computation date, the issuer may continue to treat the issue as a variable yield issue until the next computation date, at which time it must be treated as converted to a fixed yield issue.

Special Aggregation Rules

General Rule

According to Treas. Reg. section 1.148-4(b)(5), two variable rate bonds of an issue are treated as a single fixed yield bond if:

- the aggregate treatment would result in a fixed yield bond, AND
- the terms of the bonds do not contain any features that would distort the aggregate yield from what it would be if a fixed yield bond were issued.

Example 7

County Y issues bonds in the aggregate principal amount of $50,000,000. $25,000,000 principal amount of the bonds are issued as variable rate bonds ("floaters") for which the interest rate is determined every 30 days. The other $25,000,000 principal amount of the bonds ("inverse floaters") bear interest at a fixed rate minus the interest rate on the floaters. In addition, if County decides to redeem a portion of the floaters, it must also redeem the same principal amount of the inverse floaters.

The yield on the issue is determined by treating both of the variable rate issues as a single fixed yield issue.

Section 3

Value of Bonds

Overview

Introduction

Various situation s require determination of the "value" of bonds, for example, the deep discount bonds discussed earlier, transfer of certain rights associated with the bond, calculation of yield for variable rate issues and calculation of the universal cap.

Treas. Reg. section 1.148-4(e) discusses how bonds are valued for such purposes.

Plain Par Bonds

The value of a plain par bond is its outstanding principal amount, plus accrued, unpaid interest.

The value of a plain par bond that is actually redeemed, or treated as redeemed, is its stated redemption price, plus accrued, unpaid interest. **(Treas. Reg. section 1.148-4(e)(1).)**

Definition of Plain Par Bonds

According to Treas. Reg. section 1.148-1(b), a plain par bond means a bond:

- issued with no more than a de minimis amount of original issue discount or premium;
- issued for a price that does NOT include accrued interest other than pre-issuance accrued interest;
- that bears interest at a fixed rate determinable on the issue date, or at a variable rate, in which case interest is payable least annually; AND
- that has a lowest redemption price which is NOT less than the outstanding stated principal amount.

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Other Bonds

According to Treas. Reg. section 1.148-4(e)(2), the value of a bond other than a plain par bond on any date is its present value on such date.

In general, the present value of a bond is calculated under the economic accrual method using the yield on the bond as the discount rate and taking into account all unconditionally payable payments of principal, interest and qualified guarantee fees. Note that the definition includes qualified guarantee fees – this means that in computing the present value of a bond, the portion of a qualified guarantee fee allocable to that bond must be taken into account. Allocation of qualified guarantee fees will be discussed in the next section of this module

In general, the yield used in computing present value is the yield on the bond, with two commonly used exceptions:

1. For the universal cap, bonds may be present valued at the yield on the issue, rather than each bond being valued at its individual yield.

2. For deep-discount bonds, the bonds are present valued using the yield to the final maturity date (i.e., not taking into account the sinking fund redemptions).

Section 4

Qualified Guarantees

Overview

Introduction

Many issuers pay a third party to guarantee the payment of principal and interest on their bonds, making their bonds more attractive to investors. If the guarantee meets certain requirements, making it a "qualified guarantee", then the issuer can treat payments for the guarantee as additional interest on the issue. This treatment will increase the yield on the issue and therefore, reduce an issuers arbitrage liability.

Module A of Phase I of this course described various types of credit enhancements that may qualify as a qualified guarantee under Treas. Reg. section 1.148-4(f). This section will discuss the requirements and treatment of a qualified guarantee.

In this Section

This section contains the following topics:

Elements of a Qualified Guarantee

Introduction

Treas. Reg. section 1.148-4(f) contains requirements that must be met for a guarantee to be considered a qualified guarantee. These requirements are discussed below.

Interest Savings

The issuer must reasonably expect that the present value of the fees for the guarantee will be less than the present value of the expected interest savings on the issue as a result of the guarantee. For this purpose, present value is calculated using the yield on the issue determined with regard to the qualified guarantee. **(Treas. Reg. section 1.148-4(f)(2).)**

Guarantee in Substance

Treas. Reg. section 1.148-4(f)(3) provides that the guarantee must impose a secondary liability that unconditionally shifts substantially all of the credit risk for all or part of the payments on the bonds. Reasonable procedural and administrative requirements do not cause the guarantee to be conditional.

On the date of issuance, the issuer must reasonably expect to be able to pay debt service on the guaranteed bonds. The guarantor must not be a co-obligor and must not expect to make any payments on the bonds (unless under a direct pay letter of credit or similar arrangement where the guarantor is reimbursed immediately.) **(See Rev. Rul. 72-134, 1972-1 C.B. 29, Rev. Rul. 72-575, 1972-2 C.B. 74, and Rev. Rul. 76-78, 1976-1 C.B. 25.)**

However, in Rev. Rul. 94-42, 1994-2 C.B. 15, the Service held that amounts paid by the guarantor on a guarantee agreement are not excludable from gross income under IRC section 103 if, at the time the guarantee is purchased, the amount paid is not reasonable or customary, or it is not reasonably expected that the issuer of the bonds, rather than the guarantor, will pay debt service on the bonds. Such an agreement is not incidental and in substance is a separate debt instrument when purchased. The result is the same regardless of whether the issuer or the holders of the bonds purchase the guarantee.

In Rev. Rul. 94-42, one year after the issuance date, the holder of the bonds entered into an agreement with a third-party to insure the payment of the debt service. At that time there was significant risk that revenues from the bond-financed facility would be insufficient to pay debt service. The third-party insurer purchased Treasury securities, placing them in a trust to secure its obligation under the agreement. The holder then sold the bonds.

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Elements of a Qualified Guarantee, Continued

Limit on Use of Proceeds

The guarantor and any related parties together must not use more than 10 percent of the proceeds of the bond issue in its trade or business.

Reasonable

Treas. Reg. section 1.148-4(f)(4) requires that the fee must not exceed a reasonable, arm's-length charge. The issuer may not rely upon the representations of the guarantor regarding the reasonableness of the fees.

The amounts included as guarantee fees in the yield computation must not include fees for services other than for the transfer of credit risk. Examples of fees which include payment for services other than transfer of credit risk are:

- underwriting and remarketing costs,
- cost of casualty insurance for the bond-financed facility,
- the fee is refundable upon early redemption of the bonds and the amount of refund would exceed the unearned portion of the fee, OR
- the three-year temporary period rules are not met and the guarantor is not reasonably assured that the bonds will be repaid if the project is not completed.

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Elements of a Qualified Guarantee, Continued

Purpose Investments

According to Treas. Reg. section 1.148-4(f)(5), a guarantee for purpose investments, such as payment by the conduit borrower on the loan, may be a qualified guarantee if:

- all payments on the purpose investments reasonably coincide with the payments on the underlying bonds,
- payments on the purpose investments must be unconditionally payable not more than six months before the corresponding interest payment and twelve months before the corresponding principal payment, AND
- the guarantee is, in substance, a guarantee on the bonds allocable to the purpose investments and no other bonds.

A guarantee on purpose investments for qualified mortgage loans and qualified student loans is not a qualified guarantee.

Example 8

Industrial Development Authority of City A issues bonds and loans the proceeds to Corporation X. Corporation X uses the proceeds to build a low-income multifamily project. As security for the payments to be made by Corporation X, City A will have a mortgage on the project. City A will use the payments made by Corporation X to pay debt service on the bonds. Because Corporation X has no financial history, the bonds are a risky investment and will be difficult to sell. The Federal Housing Administration (FHA) insures the mortgage payments to be made by Corporation X to City A – but does NOT insure the debt service payments. As long as the mortgage payments coincide with the debt service payments, the mortgage insurance is a qualified guarantee and premium payments made by Corporation X to FHA may be taken into account in the yield calculation.

Allocation of Qualified Guarantee Payments

Introduction

If bonds are secured by a guarantee that is a qualified guarantee, fees paid for the guarantee are included in computing the yield on the bonds.

In computing the yield, guarantee fees must be allocated to bonds and computation periods in a manner that properly reflects the credit risk. **(Treas. Reg. section 1.148-4(f)(6)(i).)**

Reasonable Methods of Allocations

Proportionate credit risk for the bonds that are not substantially identical may be determined using any reasonable, consistently-applied method.

For example, a reasonable method for allocating risk may be based on the ratio of total principal and interest on the guaranteed bond to the total principal and interest paid on all bonds of the guaranteed issue.

An allocation method which allocates a substantial amount of the fee to the construction period and an insubstantial amount to the later years covered by the guarantee is **NOT** reasonable.

Letter of Credit Fees

Up-front letter of credit fees may be allocated ratably during the initial term of the letter of credit.

Early Redemption

If variable yield bonds are redeemed early, fees, which were allocated to the period after the redemption, are allocated to the remaining outstanding bonds.

If no bonds remain outstanding, then the fees are allocated to the period before the redemption.

Safe Harbor for Variable Yield Issues

Introduction

For variable rate issues, bond yield is computed separately for each computation period, which can be no greater than five years. Therefore, an upfront letter of credit fee that spans two or more computation period must be allocated among those periods. For example, a letter of credit fee paid on the date of issuance covering the first eight years of the issue would overstate the yield for the first five-year period and understate the yield in the second five-year period if it were not allocated in some fashion between the two periods. Treas. Reg. section 1.148-6(ii) provides a safe harbor method for performing such an allocation.

General Rule

An allocation of non-level payments for a qualified guarantee of a variable yield bond is proper if, for each bond year the guarantee is in effect, an equal amount is treated as paid as of the beginning of the bond year. **(Treas. Reg. section 1.148-4(f)(6)(ii).)**

Note: This method is provided as a safe-harbor under the 1993 Regulations, meaning that other allocation methods might also be acceptable. The 1992 Regulations provide this method as a requirement, not as a safe-harbor. **(1992 Treas. Reg. section 1.148-3(b)(13)(ii)(B).)**

Calculation of Present Value

The present value of the annual amounts must equal the fee for the guarantee allocated to that bond, with present value computed as of the first day the guarantee is in effect.

Present value is calculated by using as the discount rate the yield on the bonds covered by the guarantee, determined without regard to the up-front fee.

Continued on next page

Example 9

On January 1, 1999, City Y pays a LOC fee of $100,000. The bonds are ten-year bonds. When City Y calculates the yield on the bonds, in order to meet Treas. Reg. section 1.148-4(f)(6)(ii), City Y includes $12,363.87 along with required principal and interest payments for each of ten years. $12,363.87 (rather than a straight-line amortization of $10,000 per year) is included each year because the present value of the payments using the bond yield (without the LOC fees) must equal $100,000.

Remember, though, that only $100,000 is actually paid, AND it is paid on the issuance date. The allocated annual payments of $12,363.87 are not actually paid by City Y.

Example - Allocation of Upfront Letter of Credit Fee

Upfront LOC Payment:	$100,000
Payment Date:	1/1/99
Yield w/o regard to upfront payment:	5%

Date	Payment	PV at 1/1/99
1/1/99	12,363.87	12,363.87
1/1/00	12,363.87	11,768.11
1/1/01	12,363.87	11,201.06
1/1/02	12,363.87	10,661.33
1/1/03	12,363.87	10,147.61
1/1/04	12,363.87	9,658.64
1/1/05	12,363.87	9,193.23
1/1/06	12,363.87	8,750.25
1/1/07	12,363.87	8,328.61
1/1/08	12,363.87	7,927.29
	123,638.73	100,000.00

Refund or Reduction of Guarantee Payments

General Rule

If as a result of a refunding, the issuer receives a refund of a portion of a qualified guarantee payment for the refunded bonds, the issuer must treat such refund as a reduction in payments on the refunding bonds. **(Treas. Reg. section 1.148-4(f)(7).)**

Example 10

In 1990, City pays $100,000 for an insurance premium for bonds maturing in 20 years. In 1997, the issue is advance refunded and the issuer receives a partial refund of its insurance premium in the amount of $60,000. The issuer does not have to recalculate the yield on its 1990 issue, taking into account the reduced insurance premium. However, it does have to take into account the refund in computing the yield on the refunding issue, thereby reducing the permitted yield on the refunding escrow and any other amounts subject to rebate and/or yield restriction.

Section 5

Qualified Hedging Transactions

Overview

Introduction

An issuer may enter into a hedge to reduce its exposure to interest rate changes. A hedge can also be useful for an issuer to better match its mix of fixed and variable assets to its fixed and variable liabilities.

If a hedge relating to a bond issue is considered a "qualified hedge", then payments made or received by an issuer related to the hedge are taken into account in computing the yield on the issue.

In general, bonds to which a qualified hedge relates are treated as variable yield bonds from the issue date.

Note: When there is a qualified hedge relating to a bond issue, the bonds are often referred to as "hedged bonds." Do not confuse this reference with "hedge bonds" described in IRC section 149(g). They have nothing to do with each other.

In this Section

This section contains the following topics:

Types of Hedges

Introduction

There are various types of qualified hedges. Some of the most common types are:

- swaps,
- caps,
- floors,
- collars,
- forwards, and
- options.

These are discussed below.

Interest Rate Swap

In an interest rate swap, one party makes a periodic payment based on a fixed rate of interest times a notional principal amount. In return, the other party makes periodic payments based on a variable rate of interest times the same notional principal amount.

Example 11 Issuer issues $100,000,000 principal amount of bonds bearing interest at a variable rate. The issuer does this because variable rates are lower than fixed rates. However, the issuer wants to know in advance the amount of debt service it owes so it can match its revenues. The variable rate on the bonds is based on the J.J. Kenny index.

The issuer enters into a five-year interest rate swap with the bank. Under the swap contract, the bank will, on a monthly basis, pay the issuer an amount equal to the interest rate based on the J.J. Kenny index times $100,000,000. The issuer will pay the bank an amount equal to five percent times $100,000,000. Instead of the bank paying the issuer and the issuer paying the bank, the parties agree to exchange only the net cash flows. Accordingly, if the J.J. Kenny index variable rate is more than five percent, the bank will pay the issuer. If it is less than five percent, the issuer will pay the bank.

The $100,000,000 is not exchanged. It is called the notional principal amount.

The payments from the bank to the issuer or the issuer to the bank are the periodic payments. There is no up-front payment made when the swap is first entered.

If the swap meets all of the requirements of a qualified hedge, then payments made by or to the issuer will be taken into account in computing the bond yield.

Continued on next page

Types of Hedges, Continued

Types of Swaps

Variable-to-fixed rate swaps: The issuer agrees to make fixed rate swap payments and to receive variable rate payments based on a variable rate index, similar to the example above.

Fixed-to-variable rate swaps: The issuer agrees to make payments based on a variable rate index and to receive fixed rate payments from the swap party.

Variable-to-variable rate swaps: The issuer agrees to make payments based on one variable rate index and to receive payments from the swap party based on another variable rate index.

In each case, the payments are based on a notional principal amount and the payments are netted. The issuer's decision to issue fixed or floating rate bonds, and to enter into a swap is generally based on economic objectives.

Cap

In a cap, a party pays a premium and in return receives payments based on a notional principal amount only if a specified index exceeds a certain level, known as a cap.

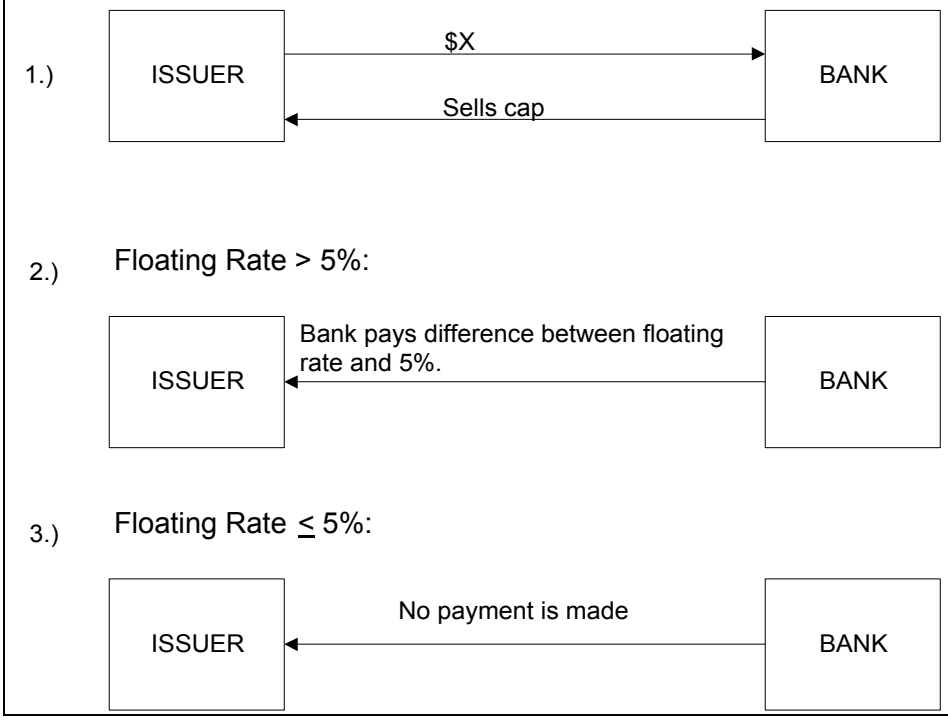
An issuer of floating rate bonds can purchase a cap under which the issuer would be protected if the interest rates increased beyond a certain rate. The issuer would pay a premium to the cap provider.

Continued on next page

Types of Hedges, Continued

Example 12 The issuer issues bonds bearing interest at a floating rate determined weekly and based on the J.J. Kenny Index. The issuer does not want to pay a floating rate which is greater than five percent. The issuer enters into an agreement with Bank under which Bank receives $X and Bank agrees that if the weekly J.J. Kenny Index goes above five percent, it will pay to the issuer the difference between the then floating interest rate and five percent. Five percent is referred to as the "strike rate." The issuer has purchased a cap from Bank.

Diagram of a Cap:



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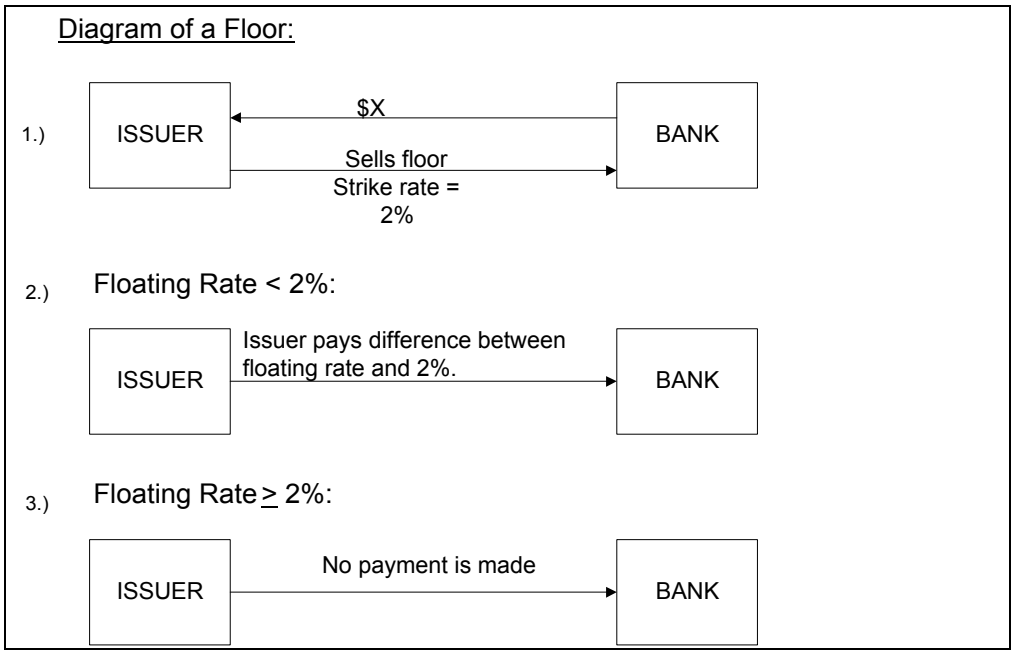
Types of Hedges, Continued

Floor

A floor is the opposite of a cap. In a floor, the issuer receives a premium from the floor provider, and has the obligation to make payments based on a notional principal amount if a specified index falls below a certain level, known as a floor. The floor rate is the strike rate, and the issuer pays the difference between the then floating rate and the strike rate.

Example 13

The issuer issues bonds bearing interest at a floating rate determined weekly and based on the J.J. Kenny Index. The issuer enters into an agreement with Bank under which the issuer receives $X from the Bank and agrees that if the weekly J.J. Kenny Index goes below two percent (strike rate), it will pay to Bank the difference between two percent and the then floating interest rate. The issuer has sold a floor to Bank.



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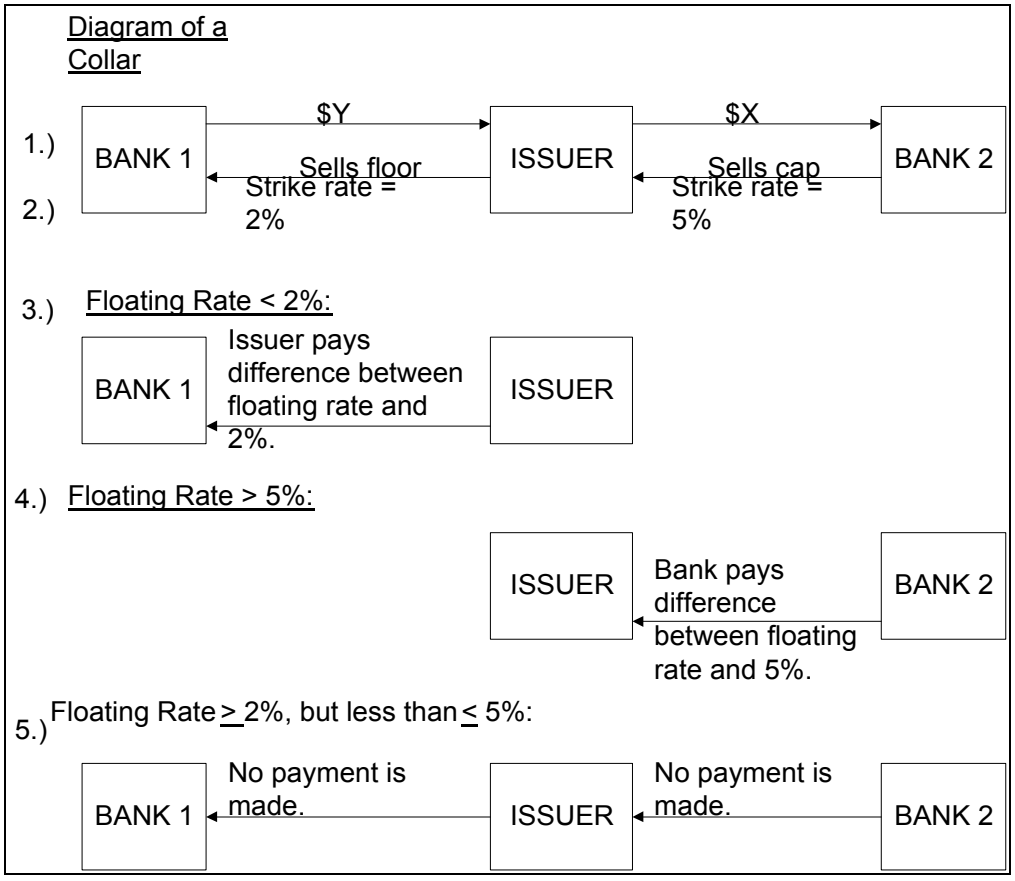
Types of Hedges, Continued

Collar

A collar is an agreement where a party buys a cap and sells a floor, or sells a cap and buys a floor. By selling one contract, a party can partially or fully offset the cost of the other contract.

Example 14

By combining the transactions in the above two examples the issuer can participate in a transaction called a **collar**. The issuer buys a cap from Bank at a strike rate of five percent and pays a premium of $X, and sells a floor to Bank at a strike rate of two percent and receives a premium of $Y. The issuer has protected itself from floating interest rates going above five percent and, for $Y received up front, sold the potential benefit of floating interest rates going below two percent to Bank. Issuer may purchase the cap from one entity and sell the floor to another entity. The premiums, $X and $Y, may be the same amount in certain cases, and thus no money is exchanged up front.



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Types of Hedges, Continued

Forward

A forward is a contract between two parties for delivery of specified property at a fixed price at a future delivery date.

Issuer will enter into a forward contract in order to take advantage of current low interest rates in anticipation that interest rates may rise in the future.

Example 15

City has private activity bonds outstanding first callable on May 1, 2000. In 1995, fixed interest rates are lower than the rate on the bonds. Because the bonds are private activity bonds, City cannot advance refund the bonds but would like to take advantage of lower interest rates in 1995. City agrees with Company, an underwriting firm, that within 90 days prior to May 1, 2000, the City will issue fixed rate bonds bearing interest at X percent and deliver the bonds to Company. The City has entered into a forward contract with Company.

Option

An option is a contract that conveys to its holder the right, but not the obligation, to buy or sell the underlying security at a specified price on or before a given date.

Example 16

City has private activity bonds outstanding which are first callable on May 1, 2000, and have a yield of Y percent. In 1995, fixed interest rates are lower than the rate on the bonds. Because the bonds are private activity bonds, City cannot advance refund the bonds but would like to take advantage of lower interest rates in 1995. For an up-front premium, City sells Company, an underwriting firm, an option to require the City to issue bonds within 90 days prior to May 1, 2000, having a yield of X percent. X percent is less than Y percent. The City and Company agree to the time period when Company may exercise its option. If anytime during that time period the fixed yield on long term debt is below X percent, Company may exercise its option and require the City to issue fixed rate bonds with a yield of X percent and deliver the bonds to Company. The City has entered into an option contract with Company.

Requirements of a Qualified Hedge

Introduction

Except as otherwise provided below, a qualified hedge is a contract that satisfies each of the requirements stated in this section.

Risk Reduction

To be a qualified hedge, a contract must be entered into primarily to modify the issuer's risk of interest rate changes with respect to the bond. **(Treas. Reg. section 1.148-4(h)(2)(i)(A).)**

Special Rule for Fixed Rate Issues

Under Treas. Reg. section 1.148-4(h)(2)(i)(B), if the bond is part of a fixed rate issue, the contract must be entered into:

- no later than 15 days after the issue date of the issue, OR
- no later than the expiration of another qualified hedge with respect to the bonds of that issue.

No Significant Investment Element

Treas. Reg. section 1.148-4(h)(2)(ii)(A) provides that the hedge must not contain a significant investment element. The hedge must be "on-market." If the contract for an interest rate swap requires an up-front payment, it contains a significant investment element.

If the premium to be paid for a cap is less than on-market rate, the contract contains a significant investment element.

An interest rate cap does not contain a significant investment element if all payments to the issuer by the hedge provider are periodic payments. The issuer's payments to the hedge provider must not be significantly front-loaded or back-loaded.
See Treas. Reg. section 1.148-4(h)(ii)(B).

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Requirements of a Qualified Hedge, Continued

Contracts with Off-market Payments

According to Treas. Reg. section 1.148-4(h)(2)(i)(C), if the hedge provider makes a single payment to the issuer in connection with the acquisition of the contract, the issuer may receive such a payment and treat a portion of the contract as a qualified hedge if:

- the hedge provider's payment and the issuer's excess payments made above those it would have made had the contract been on-market are separately identified in a certification of the hedge provider, AND
- the excess payments are NOT included in calculating the yield on the hedged bonds.

On-Market and Off0Market

Various terms describe hedges depending on the relationship between the price and the current market price of the hedge, as follows:

If the price of the hedge is…	Then the hedge is …
Equal to the current market price	an "on-market" or "at-the-money" hedge.
Less than current market price	an "in-the-money", "off-market" hedge.
More than current market price	an "out-of-the-money", "off-market" hedge.

Parties to the Contract

Treas. Reg. section 1.148-4(h)(2)(iii) requires that the parties to the contract must be unrelated.

Hedged Bonds

Treas. Reg. section 1.148-4(h)(2)(iv) requires that the contract must cover a discrete group of substantially identical bonds. For example, all bonds having the same interest rate, maturity, and terms. The contract may hedge for all or a pro rata portion of each interest payment of each bond in the issue.

Continued on next page

Requirements of a Qualified Hedge, Continued

Interest bases Contract

Treas. Reg. section 1.148-4(h)(2)(v) requires that the contract must be interest based.

Payments Closely Correspond

Under Treas. Reg. section 1.148-4(h)(2)(vi), the payments received by the issuer must closely correspond in time to the payments being hedged on the hedged bonds or specific payments required to be made under the bond documents.

Identification

Treas. Reg. section 1.148-4(h)(2)(ix) requires the issuer to identify the contract on its books and records not later than three days after the date on which the issuer and the hedge provider enter into the contract.

The identification must specify the hedge provider, the terms of the contract, and the hedged bonds.

Also, the hedge must be noted on the first form relating to the hedged bonds that is filed with the Service. (Form 8038, 8038-T, etc.)

Example of Qualified hedge

City issues fixed rate bonds. Within 15 days of issuance, City believes that interest rates will decline and enters into a contract with Bank whereby Bank will pay City the same amounts that City is paying to bondholders and City will pay Bank interest at a variable rate, based on the Bond Market Association index. The payments will be netted and the owing party will pay the other on each semi-annual date that debt service is due on the bonds. Neither party makes an upfront payment related to the contract. City makes debt service payments out of their general fund and then reimburses the fund from any payments received from Bank. If any payments are owed by City to Bank, those payments are also be made from City's general fund. City's bond counsel prepares a detailed document describing the terms of the contract, including all the information listed above and City keeps this document with the transcript for the issue. City files it's 8038-G approximately one month after the bonds are issued and marks the box on the form identifying a hedge.

This contract is a qualified hedge. As such, the bonds are treated as a variable yield issue and any payments made or received by City are taken into account in computing the yield on the bonds.

Accounting Rules for Qualified Hedges

General

Under Treas. Reg. section 1.148-4(h)(3)(i), payments made or received by the issuer under a qualified hedge are treated as payments made or received, as appropriate, on the hedged bonds. Accordingly, such payments are taken into account in calculating the yield on the hedged bonds.

The payments are reasonably allocated to the period to which the payments relate.

The only payments that may be included as payments made or received under the hedge are those that are reasonably allocable to:
- the modification of risk of interest rate changes and
- the hedge provider's overhead

Payments made or received by the issuer include payments deemed made or received when a contract is terminated or deemed terminated.

Termination of Hedge

Treas. Reg. section. Reg. section 1.148-4(h)(3)(iv)(A) provides that a termination of a qualified hedge includes any sale or other disposition of the hedge by the issuer. If the issuer acquires an offsetting hedge, then the original hedge is terminated.

A deemed termination occurs if the hedged bonds are redeemed or when the hedge ceases to be a qualified hedge.

An assignment by the hedge provider of its remaining rights and obligations under the hedge to a third party, or a modification of the contract, is treated as a termination with respect to the issuer only if results in a deemed exchange and realization event under IRC section 1001.

Termination of Payments

Treas. Reg. section. Reg. section 1.148-4(h)(3)(iv)(B) provides that a payment made or received by an issuer to terminate a qualified hedge is treated as a payment made or received on the hedged bonds. Payments include loss or gain realized or deemed realized.

The payment is reasonably allocated to the remaining periods originally covered by the terminated hedge in a manner that reflects economic substance of the hedge.

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Special Rule when Bonds are Redeemed

Treas. Reg. section 1.148-4(h)(3)(iv)(C) provides that when the contract is deemed terminated due to redemption of the hedged bonds, the fair market value of the qualified hedge on the redemption date is treated as a termination payment.

Any payment or deemed payment received upon redemption reduces, but not below zero, the interest payments made by the issuer on the hedged bonds in the computation period ending on the termination date.

The remainder of the payment, if any, is allocated over the bond years in the immediately preceding computation period or periods to the extent necessary to eliminate the excess.

Example 17

County W issues $100M principal amount of fixed rate bonds on January 1, 1999. The term of the bonds is 20 years. The interest rate on the bonds is six percent. County W enters into a 20-year swap agreement with Broker X on the issuance date. Under the swap agreement, County W agrees to pay Broker X a variable rate, based on the Bond Buyer index, on $100M notional principal amount. Broker X agrees to pay County W six percent on the notional principal amount.

On June 1, 2002, the long-term fixed rates for comparable obligations have dropped to five percent. Broker X wants to terminate the swap agreement. County W and Broker X agree to do so if Broker X pays County W a termination payment. The termination payment is taken into account in computing the yield on the bonds.

Continued on next page

Accounting Rules for Qualified Hedges, Continued

Special Rules for Refundings

Treas. Reg. section 1.148-4(h)(3)(iv)(D) provides that if the hedged bonds are redeemed using refunding bond proceeds, the termination payment is accounted for by treating it as a payment on the refunding issue, rather than the hedged bonds.

Safe Harbor for Certain Terminations

According to Treas. Reg. section 1.148-4(h)(3)(iv)(E), a payment to terminate a qualified hedge does not result in the hedge failing to satisfy the general allocation rules for termination payments if:

- For a variable yield issue, a termination payment is taken into account as if it were a series of payments allocated to each date on which the hedge provider's payments would have been made. The sum of the present values of the deemed payments must equal the present value of the termination payment. The discount rate used to calculate the present values is the yield on the bonds determined without regard to the termination payment.

- For a fixed yield issue, a payment is taken into account as a single payment when made.

Certain Variable Bonds Treated as Fixed Yield Bonds ("Superintegration")

Introduction

If the issuer of variable yield bonds enters into a qualified hedge, the hedged bonds are treated as fixed yield bonds if the requirements in the following sections are met.

Maturity

- the term of the hedge is equal to the entire period during which the hedged bonds are variable rate, AND
- the issuer does NOT reasonably expect that the hedge will be terminated before the end of that period.

(**Treas. Reg. section 1.148-4(h)(4)(i)(A).)**

Payments Closely Correspond

Payments to be received under the hedge must correspond closely in time to the hedged portion of payments on the hedged bonds.

Hedge payments received within 15 days of the related payments on the hedged bonds generally so correspond.
(Treas. Reg. section 1.148-4(h)(i)(B).)

Aggregate Payments Fixed

After netting all payments made on the hedge, the issuer's aggregate payments are fixed and determinable within 15 days of the issue date of the hedged bonds.
(Treas. Reg. section 1.148-4(h)(i)(C).),

Continued on next page

Certain Variable Bonds Treated as Fixed Yield Bonds ("Superintegration"), Continued

Accounting

In determining the yield on the hedged bonds, all of the issuer's payments on the hedged bonds and all payments made and received on the hedge are taken into account.

If payments on the bonds and payments on the hedge are based on variable interest rates that are substantially the same, the issuer may treat the variable interest rates as identical when calculating yield on the issue.

Example 18

Assume that bonds bear interest at a variable rate determined weekly to permit the bonds to be remarketed at par. The issuer hedges the bonds wherein the issuer receives payments based on a short-term floating rate index which is substantially the same as, but not identical to, the weekly rate on the bonds. For purposes of calculating the yield on the bonds, the interest payments on the bonds are treated as equal to the payments received by the issuer under the swap.
(Treas. Reg. section 1.148-4(h)(4)(ii).)

Termination

According to Treas. Reg. section 1.148-4(h)(3)(iv), the issue of which the hedged bonds are a part is treated as if it were reissued as of the termination date of the qualified hedge for purposes of calculating yield on the hedged bonds.

The redemption price of the retired issue and the issue price of the new issue equal the aggregate values of all of the bonds of the issue on the termination date.

In computing the yield on the new issue, the termination payment is treated as if made and received on the new issue. Such payment is accounted for under Treas. Reg. section 1.148-4(h)(3)(iv).

Continued on next page

Certain Variable Bonds Treated as Fixed Yield Bonds ("Superintegration"), Continued

Early Termination

Treas. Reg. section 1.148-4(h)(4)(iii)(B) provides that the general rules of paragraph (h)(4)(i) do not apply if the hedge is terminated or deemed terminated within five years after the issue date of the issue of which the hedged bonds are a part. However, this rule only applies for rebate purposes under Treas. Reg. section 1.148-3, and NOT for yield restriction purposes.

Therefore, for rebate purposes, the bonds are treated as variable yield bonds from the issue date.

Certain Terminations Disregarded

According to Treas. Reg. section 1.148-4(h)(4)(iii)(C), the issuer may disregard the termination, if based on the facts and circumstances (taking into account both the termination and any qualified hedge that immediately replaces the qualified hedge) there is no change in yield on the hedged bonds.

Example 19

City issues variable rate bonds on March 30, 2000. Interest on the bonds is computed weekly at a rate at which the bonds can be remarketed at par. Interest is payable on the first business day of each month. At the same time as issuing the Bonds, City enters into a contract with Bank. The contract requires Bank to pay City a payment (also on the first business day of the month), computed weekly at the 6 month Treasury Bill rate. The contract requires City to pay Bank monthly a fixed payment based on the amount of bonds outstanding. The contract covers the life of the bonds and City does not expect to terminate the contract. In addition, the contract qualifies as a "qualified hedge".

Should the hedge be "superintegrated", meaning that the variable yield issue is treated as a fixed yield issue?

No. While the regulations don't require the payments on the bonds and the payments on the hedge to be identical, the payments must be "substantially the same". A weekly municipal rate and a 6-month Treasury Bill rate are not substantially the same.

Continued on next page

Certain Variable Bonds Treated as Fixed Yield Bonds ("Superintegration"), Continued

Example 20

Assume the same facts as in Example 1, except that the rates on both the bonds and on the hedge are substantially the same. Also, assume that City terminates the hedge on December 28, 2002.

Now are the bonds treated as a fixed yield issue?

Partially. For purposes of yield restriction, the issue is treated as a fixed yield issue. However, because of the early termination, the issue is treated as a variable rate issue for purposes of computing rebate.

Example 21

Assume the same facts as Example 2, but that upon termination of the contract with Bank, City enters into a substantially identical contract with Bank 2.

Does the termination cause the bonds to fail the superintegration requirements?

No. If there is no change in the yield on the issue when taking into account both the termination of the hedge and any qualified hedge that immediately replaces the terminated hedge, then the termination may be disregarded. Therefore, the issue can be treated as a fixed rate issue for both yield restriction and rebate.

Anticipatory Hedges

General

A contract that is entered into before the issue date of the hedged bond can still qualify as a qualified hedge. In order to do so, the contract must meet one of the two categories described below.
(Treas. Reg. section 1.148-4(h)(5)(i).)

Hedges Expected to Close Near the Issuance Date

Under Treas. Reg. section 1.148-4(h)(5)(ii), the issuer must reasonably expect to terminate the contract substantially contemporaneously with the issue date of the hedged bonds.

The amount paid or received by the issuer to terminate the contract is treated as an adjustment to the issue price of the hedged bonds. It is also treated as an adjustment to the sale proceeds of the hedged bonds.

The amounts paid or received, or deemed paid or received, before the issue date are treated as paid or received on the issue date. Such amounts are equal to the future value of the payment or receipt on that date.

Hedges Expected to Terminate Near the Issuance Date

Treas. Reg. section 1.148-4(h)(5)(iii) applies if the issuer does not expect to terminate the hedge in connection with the issuance of the bonds.

If the contract is terminated in connection with the issuance of the hedged bonds, the amounts paid or received, or deemed to be paid or received, is treated as an adjustment to the issue price of the hedged bonds. It is also treated as an adjustment to the sale proceeds of the hedged bonds.

If the contract is in fact not terminated substantially contemporaneously with the issue date of the hedged bonds, no payments made by the issuer before the issue date are taken into account. The payments and receipts under the hedge are, however, taken into account under the general rules.

Continued on next page

Anticipatory Hedges, Continued

Identification

In addition to the general identification requirements under paragraph (h)(2)(viii), anticipatory hedges must also identify the following items related to the hedged bonds:

- reasonably expected governmental purpose,
- issue price,
- maturity, and
- issue date.

It must also identify the manner in which interest is reasonably expected to be computed and which of the two categories described above apply to the bonds. **(Treas. Reg. section 1.148-4(h)(5)(iv).)**

Example 22

Issuer is preparing to issue fixed rate bonds. While all is progressing smoothly, the documents and other analysis will take several more weeks to complete and Issuer is concerned about interest rates rising during that time.

Issuer enters into a contract with Bank that provides that if as of the issue date, an objective index representing bonds similar to Issuer's bonds goes above a certain rate (the "strike rate"), then Bank will pay Issuer an amount based on that difference. If rates stay below the strike rate, Issuer will pay Bank an amount based on the difference. The contract expires on the issue date of the bonds and neither party pays the other for the contract.

Rates do in fact rise, and Bank pays Issuer the specified amount on the issue date. This amount is to be taken into account in computing the issue price of the bonds (decreasing the bond yield) and taken into account in computing the sale proceeds of the bonds (meaning that the payment is subject to rebate). If the payment was made before the issue date, then the future value of the payment as of the issue date would be taken into account. Future value would be computed at the yield on the bonds not including the payment on the contract.

General Anti-Abuse Rule

Commissioner's Discretion

Under the general anti-abuse rule provided in Treas. Reg. section 1.148-10(e), the Commissioner may take into account the economic substance of a transaction in determining whether to treat a hedge as a qualified hedge.

Under Treas. Reg. section 1.148-4(h)(6), the Commissioner may specify that a contract that does not meet the requirements of a qualified hedge is in fact a qualified hedge, or that an issue that does not meet the requirements for "superintegration" should in fact be treated as a fixed yield issue.

Summary

Review of Module A

Module A discussed the calculation of bond yield when specific circumstances are present.

For fixed rate issues, term bonds sold at a discount and callable bonds sold at a premium sometimes require special calculations.

For issues that have a combination fixed and variable rate bonds, the entire issue is treated as a variable rate issue. When a variable yield issue is converted to a fixed yield issue, two bond yields are computed - one for the variable yield issue as of the redemption date, and one for the fixed yield issue treating the conversion date as the issuance date.

In certain situations, the value of the bonds must be determined. The value of a plain par bond is its outstanding principal amount, plus accrued interest. The value of a bond other than a plain par bond is its present value.

In computing bond yield, payments made for qualified guarantees and qualified hedges are taken into account.

END OF MODULE A