g2 FINTECH

Phase III Cost Basis Reporting:

Intermediate Bond Math

04/2015

White Paper

Phase III of the Cost Basis Reporting (CBR) regulations requires brokers and other transfer agents to report a client's adjusted bases for the following covered securities: options, securities futures contracts and less-complex debt (bonds) acquired on January 1, 2014 or later.

This paper offers an intermediate-level discussion of the bond math necessary to abide by these reporting requirements. It covers key aspects of the Internal Revenue Code (IRC) regulations that govern debt securities and discusses various topics including de minimis rules for amortization, elections, bond premium and bonds with call or put features. The paper also uses examples of securities transactions to illustrate how to accurately calculate bond cost bases.

By William Fang with George Michaels and Daniel Tilkin

Contents

Introduction 1

The de minimis rules for amortization 1

Elections 2

Minimizing tax obligations via elections 8

Deeper dive into bond premium 11

Short bond position 14

Amortization and wash sales 14

Bonds with put or call features 16

Less-complex debt (LCD) 19

Conclusion 20

Introduction

In order to comply with the third phase of the Cost Basis Reporting (CBR) requirements, brokers and taxpayers must calculate complex basis adjustments for options, securities futures contracts and fixed income (bonds) / less-complex debt acquired on or after January 1, 2014. The mathematics needed to calculate this information for bonds is complex and worthy of several white papers. Our earlier white paper Phase III Cost Basis Reporting: Basic Bond Math covers the mechanics behind calculating bond premium, market discount, OID, and acquisition premium and focuses on non-OID bonds and OID bonds with fixed coupons over a fixed-maturity period. This paper delves deeper into some of the topics covered in Basic Bond Math and it explores the following topics:

1) De Minimis Rule - the threshold below which OID and market discount are not reported
2) Elections – four (until recently was five) taxpayer elections brokers must support
3) Bond Premium - a deeper dive into this topic
4) Interaction of Amortization and Wash Sales - does a wash sale change the starting basis of amortization?
5) Bonds with call or put features and how to amortize them
6) Less-complex debt (LCD) covered January 2014 vs more-complex debt (MCD) covered January 2016

We include the most recent instructions from the IRS published in the Federal Register (Vol. 80, No. 49) on March 13, 2015. These affect premium and basis determination as well as reporting by brokers.

In the interest of brevity and since this is an intermediate-level paper, we include salient data in our examples and omit substantial details. Please refer to our Basic Bond Math white paper for more detailed examples. In our discussion and examples below, please assume a cash-basis taxpayer unless otherwise stated.

The de minimis rules for amortization

In order to prohibit taxpayers from paying capital gains tax rates (a lower rate than ordinary income tax rates) from income (in the form of imputed interest), bonds purchased at a discount are normally subject to amortization rules. However, in certain circumstances, the amortization calculation must be skipped. There are two situations in which this can occur and they are governed by the two de minimis rules, which are found in sections 1273(a)(3) (OID Bonds) and 1278(a)(2)(C) (Market Discount Bonds). If a taxpayer were to ignore these rules, typically this would result in an overpayment of taxes, something that will not irk the U.S. Treasury Department. *Brokers must comply with these rules; non-compliance may be viewed as a disservice to clients and could result in substantial penalties.*

Also, in the election discussion, we discuss an all-OID election that can and will interact with these de minimis rules. A broker does not need to support this election, but a taxpayer may nonetheless make it.

1278(a)(2)(C) (Market Discount Bonds)

In general, the rules state that if a bond is traded with market discount and the discount is considered small enough, then the amortization amount must be ignored.

The rule in 1278(a)(2)(C) is quite simple. The taxpayer must skip the amortization rules if his imputed interest, based on redemption value, is no more than 0.25% per *complete* year. If the amount of imputed interest exceeds 0.25% per year, then the entire amount of discount must be amortized, *not just the amount in excess of 0.25%.* It is important to clarify what is meant by the term "complete," which we interpret to mean that the number of years must be an integer that can be determined by truncating the actual number of years to maturity. For example, a bond with 4.9 years to maturity is considered to have 4 "complete" years for *de minimis* calculations.

The calculation is performed by multiplying the time to maturity (from the acquisition date in complete years) by 0.25%. This amount is subtracted from par to create a *de minimis discounted redemption (herein after called DMDR)*. If the *clean* bond purchase price is between the redemption price and the DMDR price, then the taxpayer *must* ignore the amortization rules. Note: the exact text of 1273 reads "then the original issue discount shall be treated as zero."

1273(a)(3) (OID Bonds)

The rule in 1273 is similar to the rule in 1278 but applies to *OID* interest. When considering an OID bond trading below revised issue price (adjusted issue price), you must ***also*** consider the 1278 rule.

The rule can be paraphrased as "if a bond is issued with OID and that OID is less than 0.25% per *complete* year, then the bond can be treated as a non-OID bond." It will ***never*** have OID interest no matter where it trades for its entire lifespan. It is important to note that this bond might still be traded with market discount and that market discount may in turn qualify for the 1278 rule. If a bond issued with de minimis OID is sold, the subsequent buyer treats the de minimis OID as market discount. See Example 4 "Sequentially applying 1273 and 1278."

Example 1: 1278 rule
A vanilla bond is purchased with 10.5 years to maturity at a clean price of 98 and a maturity price of 100. The DMDR is calculated as 100 - (0.25% * 10 years) = 97.5. Since the purchase price is between 97.5 and 100, then the 1278 de minimis rule kicks in and the taxpayer must ignore the market discount.

Example 2: 1273 rule
An OID bond is issued with 10.5 years to maturity at a price of 98 and a maturity price of 100. The DMDR is calculated as 100 - (0.25% * 10 years) = 97.5. Since the issue price is between 97.5 and 100, the de minimis rule kicks in and the taxpayer (or broker) must ignore the presence of OID interest.

Example 3: 1273 in the secondary market
An OID bond is issued with 10.5 years to maturity at a price of 97 and a maturity price of 100. After 0.5 years have passed, a taxpayer purchases this bond at 98. Can the taxpayer claim de minimis OID? No. The OID surpassed the threshold at the time of issuance and it can never be de minimis thereafter. De minimis OID is determined by the issue price and maturity. Subsequent purchase price and acquisition premium do not affect whether a bond has 1273 de minimis interest.

Example 4: Sequentially applying 1273 and 1278
An OID bond is issued with 10 years to maturity at a price of 98 and a maturity price of 100, which is 0.2% per year of OID. A taxpayer purchases this bond with 6 complete years left at a price of 97.60, which *seems apparently* 0.2% per year of market discount. Does the taxpayer now have a 0.2% per year OID and 0.20% per year market discount, both of which he can ignore? No. When he buys the bond, the adjusted issue price is 100, because the original OID is below the de minimis threshold and ignored. Thus he has a total market discount of 2.4% over 6 years (0.4% per year). This is above the 1278 de minimis market discount and thus the market discount must be considered.

Elections

Brokers must support the following 4 elections that a taxpayer can make on bonds. The "all-OID" election is no longer needed after instructions issued in the Federal Register (Vol. 80, No. 49) on March 13, 2015. However, we keep the discussion here because it may be of interest to our readers and the IRS may change its mind again. Also, even though a broker does not need to support this election, a taxpayer may still make it. He just wouldn't be supported by the broker in his tax reporting

I. Election to amortize bond premium (i.e., recognize bond premium).
II. Election to currently include accrued market discount (i.e., recognize market discount).
III. Election to accrue market discount based on a constant yield.
~~IV. Election to treat all interest as OID.~~
V. Election to translate interest income and expense at the spot rate.

These are not new elections; they are merely pre-existing elections that taxpayers could have made but the brokers must now support. The taxpayer is not obligated to inform the broker whether he makes an election or

which election he chooses. In the absence of any input from the taxpayer, the broker assumes the client elected (i) and (iii)[1] and has not elected any others. However, to ensure he receives useful and accurate 1099 forms, the taxpayer should inform the broker which election has been chosen. Table 1 summarizes the regulations that stipulate the elections.

Table 1: Regulations that stipulate elections

Election	Pre-existing Regulation
i	section 171 and §1.171-4
ii	section 1278(b)
iii	section 1276(b)(2)
~~iv~~	~~§1.1272-3~~
v	§1.1988-2(b)(2)(iii)(B)[2]

Note that bond premium always has to be accrued using constant yield accrual. Acquisition premium must always be recognized. It may be accrued using constant yield for 2014. But starting with bonds purchased in 2015, acquisition premium must be accrued using ratable accrual. Market discount may be accrued using constant yield or ratable accrual. Thus the option for market premium is whether to recognize on an annual basis or at disposition; the option for market discount is whether to recognize on an annual basis or at disposition **and** whether to accrue using constant yield or ratable accrual.

When elections change

Elections (i) and (ii) are both revocable, although a taxpayer typically has to wait 5 years before this is possible. That means a taxpayer can have different election configurations from year to year. Table 2 illustrates what this could look like.

Table 2: Different election configurations from year to year

Year	Election (i)	Election (ii)
1	Yes	No
2	Yes	Yes
3	Yes	Yes
4	Yes	Yes
5	Yes	Yes
6	No	Yes
7	No	No

Because of the 5-year wait, a Yes has to persist for 5 years, but a No can persist for just 1 year. How should the taxpayer change his computation to reflect the election change? The short answer is the computation does not change; the taxpayer recognizes or does not recognize the accrual on his tax forms. Example 5 illustrates this point using several methods.

[1] This reflects the recent modification stated in the Federal Register (Vol. 80, No. 49) on March 13, 2015.

[2] While election (v) is required in Phase III, reporting of bonds denominated in a non-U.S. currency or paying interest in a non-U.S. currency is not required until 2016. Thus, support for election (v) is not needed until 2016. We therefore do not discuss this option any further in this paper.

Example 5: When election (ii) changes
A taxpayer buys a non-OID bond, paying 2% coupon, with market discount, with 10 years left to mature at a price of $90,000 with a redemption value of $100,000. In real-life, this could happen if the yield on the 10-year T-Note shot up 1% from 1.75% to 2.75% after the bond was issued and the bond trades at a spread above the T-Note. The constant yield is 3.1833%. In Table 3, the first 3 columns describe what the fully amortized schedule for this bond would look like at the end of each year. The taxpayer elects to use constant yield accrual (election (iii)) and changes his mind a few times on whether to recognize market discount. Table 3 shows what the adjusted basis looks like in 4 different scenarios, but only scenario 1 is correct.

Correct Method - If a given year is set to recognize, then add in the annual accrual for that year to the previous year's adjusted basis

Mistake 1 - (True-up method) If a given year is set to recognize, then add in all annual accrual between this year and the last year that was set to recognize

Mistake 2 - (Apply yield incorrectly) If a given year is set to recognize, then increase the previous year's adjusted basis by the yield (i.e. current basis is 3.1833% X last year's adjusted basis)

Mistake 3 - (Recalibrate yield) If a given year is set to recognize, then find the constant yield in the remaining term and increase the previous year's adjusted basis by the yield. For year 3, a new yield of 3.6443% is calculated as the yield needed for $90,000 to accrue to $100,000 in 8 years. For year 10, a new yield of 4.2438% is calculated as the yield needed for $95,929 to accrue to $100,000 in 1 year

Table 3: When election (ii) changes

Year	Accrued Market Discount	Fully Amortized Basis	Recognize Market Discount Annually?	Correct Method	Mistake 1	Mistake 2	Mistake 3
1	865	90,865	No	90,000	90,000	90,000	90,000
2	893	91,757	No	90,000	90,000	90,000	90,000
3	921	92,678	Yes	90,921	92,678	90,865	91,107
4	950	93,629	Yes	91,871	93,629	91,757	92,252
5	980	94,609	Yes	92,851	94,609	92,678	93,436
6	1,012	95,621	Yes	93,863	95,621	93,629	94,661
7	1,044	96,665	Yes	94,907	96,665	94,609	95,929
8	1,077	97,742	No	94,907	96,665	94,609	95,929
9	1,111	98,853	No	94,907	96,665	94,609	95,929
10	1,147	100,000	Yes	96,054	100,000	95,621	100,000

A halfhearted reading of the regulation could make all of these mistakes seem plausible. But after carefully reading the regulations, there is only one correct method to follow. Mistakes 1 and 2 are less wrong, but still wrong. Mistakes 1 and 3 can cause egregious errors.

Phase III is a reporting regulation, and does not introduce any new computation methods. Therefore a taxpayer simply recognizes or does not recognize the accrued market discount for *that year* and the method of accrual does not change. The correct method is simply add or don't add the *annual accrual* depending on the chosen election.

Mistake 1 not only includes that year, it also includes all previous years. But the regulation does not state such a catch-up method is permissible. Mistake 2 includes the accrued market discount for only one year using the same yield, but on a different basis. However, the accrual and the recognition are separate actions and this mistake

commingles the two. Also, this scenario is not applicable to ratable (straight-line) accrual. Mistake 3 calculates an entirely different yield, which is not allowed except at the time of initial acquisition, as described in 26 USC 1276(b)(2)(C).

Therefore, only one method is consistent with 26 USC 1278(b)(1)(B): If a given year is set to "include," then add in the annual accrual for that year to the previous year's adjusted basis.

Election (iv): Election to treat all interest as OID

As mentioned earlier, a broker is no longer required to support this election. However, we describe this election for the sake of historical and intellectual discussion, as well as the possibility that the IRS may change the regulation again. Also, a taxpayer may still make this election on his own; he just wouldn't be supported by the broker in his tax reporting. Election (iv) appears quirky. But for vanilla bonds, to elect (iv) is the same as: elect (i), elect (ii), elect (iii), and lump in all premium, market discount, OID, and acquisition premium with the interest received. In simpler language, election (iv) means applying constant yield accrual on a bond and summing all components of amortization into one net number called OID, as explained in §1.1272-3(a). The taxpayer reports the lump-sum on form 1099-OID.

For "Normal" amortization/accrual with election (iii) made, one must calculate the yield (y). Once the yield (y) is calculated, the premium or discount for the first period is the basis (B) from period 0 (B0) times the yield (y), adjusted for accrual frequency (N), minus the QSI (Q). The basis for period 1 (B1) is B0 plus the premium or discount. As a reminder, the taxpayer is free to decide on the accrual period as long as it is no longer than 1 year and is anchored by coupon payment dates. If the taxpayer chooses 1-yr, then N = 1; if the taxpayer chooses 6-month, then N = 2; etc.

Formulaically:

$$B1 = B0 + [B0 * (y/N) – Q]$$
$$B2 = B1 + [B1 * (y/N) – Q]$$
$$B3 = B2 + [B2 * (y/N) – Q]$$

So on and so forth. The Q is reported in Box 1 Interest Income of 1099-INT. The B * (y/N) is reported in either Box 10 Market Discount or Box 11 Premium of 1099-INT, as appropriated, or netted into Box 1.

For "All-OID" amortization/accrual, one must calculate the yield (y). Once the yield is calculated, the accrued OID for the first period is the basis from period 0 (B0) times the yield (y), adjusted for accrual frequency (N). The basis for period 1 (B1) is B0 plus the accrued OID, minus any pay down. In this case, all interest payments count as pay down.

Formulaically:

$$B1 = B0 + [B0 * (y/N)] – Q$$
$$B2 = B1 + [B1 * (y/N)] – Q$$
$$B3 = B2 + [B2 * (y/N)] – Q$$

So on and so forth. The B * (y/N) – Q is reported on 1099-OID.

Note that the calculation of basis is the same in either "Normal" or "All-OID." That is, the parenthesis do not substantively change the computation. Only the reporting is different: "Normal" reports the accrual and the Q separately; whereas "All-OID" just has one lump-sum. In fact, this election tends to simplify computation. Examples 6 and 7 and Tables 4 and 5 illustrates the "Normal" and "All-OID" computation side-by-side.

Example 6: All-OID election and premium
A taxpayer buys $100,000 face value of a bond at 105. The bond has 10 years remaining and pays 5% annual coupon (just to keep things simple), maturing at 100. Yield is 4.3721%.

Table 4: Normal and All-OID premium amortization

"Normal" premium amortization					"All-OID" premium amortization			
Year	Begin Basis	QSI	Premium	End Basis	Begin Basis	Accrued OID	Pay Down	End Basis
1	105,000	5,000	(409)	104,591	105,000	4,591	(5,000)	104,591
2	104,591	5,000	(427)	104,163	104,591	4,573	(5,000)	104,163
3	104,163	5,000	(446)	103,718	104,163	4,554	(5,000)	103,718
4	103,718	5,000	(465)	103,252	103,718	4,535	(5,000)	103,252
5	103,252	5,000	(486)	102,766	103,252	4,514	(5,000)	102,766
6	102,766	5,000	(507)	102,259	102,766	4,493	(5,000)	102,259
7	102,259	5,000	(529)	101,730	102,259	4,471	(5,000)	101,730
8	101,730	5,000	(552)	101,178	101,730	4,448	(5,000)	101,178
9	101,178	5,000	(576)	100,602	101,178	4,424	(5,000)	100,602
10	100,602	5,000	(602)	100,000	100,602	4,398	(5,000)	100,000

Example 7: All-OID election and discount
A taxpayer buys $100,000 face value of a bond at 95. The bond has 10 years remaining and pays 5% annual coupon, maturing at 100. Yield is 5.6687%.

Table 5: Normal and All-OID discount accrual

"Normal" discount accrual					"All-OID" discount accrual			
Year	Begin Basis	QSI	Discount	End Basis	Begin Basis	Accrued OID	Pay Down	End Basis
1	95,000	5,000	385	95,385	95,000	5,385	(5,000)	95,385
2	95,385	5,000	407	95,792	95,385	5,407	(5,000)	95,792
3	95,792	5,000	430	96,223	95,792	5,430	(5,000)	96,223
4	96,223	5,000	455	96,677	96,223	5,455	(5,000)	96,677
5	96,677	5,000	480	97,158	96,677	5,480	(5,000)	97,158
6	97,158	5,000	508	97,665	97,158	5,508	(5,000)	97,665
7	97,665	5,000	536	98,201	97,665	5,536	(5,000)	98,201
8	98,201	5,000	567	98,768	98,201	5,567	(5,000)	98,768
9	98,768	5,000	599	99,367	98,768	5,599	(5,000)	99,367
10	99,367	5,000	633	100,000	99,367	5,633	(5,000)	100,000

Note that in Table 5, the End Bases in both methods are the same; QSI + Premium = Accrued OID; and QSI + Discount = Accrued OID.

Election (iv) interacting with other elections

Election (iv) may have had interesting effects on other elections.

If a taxpayer makes election (iv) for an instrument, he is deemed to have elected 171 (c)(2), that is election (i); 1278(b), that is election (ii); and 1276(b)(2), that is election (iii), for that instrument. The text of §1.1272-3(b)(1) states "a holder may make the election for any debt instrument." In plain-language, this implies the taxpayer makes election (iv) on an instrument-by-instrument basis.

However, based on a literal interpretation of election (iv), if you make this election for a bond with premium, you are forced into making election (i) for all your premium bonds; if you make this election for a bond with market discount, you are forced into making election (ii) for all your market discount bonds. For example,

1. You have two premium bonds. If you take election (iv) on one of them, you're forced to take election (i) on the other bond.
2. You have two discount bonds. If you take election (iv) on one of them, you're forced to take elections (ii) and (iii) on the other bond.
3. You have a discount bond and a premium bond. If you take election (iv) on one of them, the other one is unaffected.

The authors think such a blunt side-effect is contrary to the spirit of the regulation, but acknowledge this is still a valid literal interpretation. Such theoretical ambiguity may have been a reason brokers no longer support election (iv).

If the taxpayer were able to elect (iv), the de minimis rules would be ignored. So the taxpayer may have used this election so that he would have been allowed to report de minimis OID and/or market discount. We're not sure why he would want to, but he may! Even if the combined interest income had fallen within the de minimis threshold, it would have still been reported.

Example 8: QSI, All-OID, and de minimis
A 0.24% annual coupon bond is issued on 1/1/2001 at 100, maturing at 100 on 12/31/2010. The coupon is paid out on 12/31 of each year. A taxpayer buys $100,000 face value of the bond at issue and elects (iv) for this bond. Can the taxpayer now claim he has de minimis OID and not report the interest income?

No! Election (iv) does not magically convert QSI into OID. QSI is still interest income that must be reported, regardless of the amount. The "all-OID" means that all interest is treated with constant yield accrual, not that it really becomes OID.

If the taxpayer elects (iv) for a particular bond and subsequently revokes it (Note: this requires approval from the Commissioner of the IRS), then this bond reverts to whatever it was, which could be any of the following (though not all at once): a non-OID bond with coupon payments, OID (de minimis or not), market discount (de minimis or not), acquisition premium, or premium. The taxpayer now reports the interest income depending on his state of election (i) or election (ii). But we assume the implication is the taxpayer has made election (iii), which is using constant yield accrual for market discount. The regulation does not explicitly address this. But since a taxpayer must pick and stick with either ratable or constant yield accrual for market discount at the time of acquisition, the logical conclusion is that the bond that was using constant yield accrual must continue to accrue using constant yield accrual.

Minimizing tax obligations via elections

In general, to minimize tax liabilities, a taxpayer wants to accelerate losses or expenses and postpone gains or income. In addition, most taxpayers want to treat gains as capital gains, and losses as ordinary losses, ideally with gains as long-term and losses, if they are capital, as short-term. In that sense, it is generally better to elect (i) to amortize premium, which reduces interest income, and not elect (ii), which would otherwise increase interest income.

Example 9: Premium and taxation
A 2% semiannual coupon bond is issued on 4/1/2001 at 100, maturing at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year. A taxpayer buys $100,000 face value of the bond on 1/1/2002 for 102.511 dirty price, or 102 clean price. What is the annual interest income with and without premium amortization? For reasons we will explain later, assume this is an accrual-basis taxpayer.

The 0.511 is the accrued interest and the yield is 1.7633%. Table 6 shows the tax year interest and amortized premium (we leave the calculation as an exercise for the reader).

Table 6: Tax year interest and amortized premium

Tax Year	Coupon Payment	Tax Year Premium	Coupon Less Premium
2002	1989	(190)	1799
2003	2000	(205)	1795
2004	2000	(210)	1790
2005	2000	(213)	1787
2006	2000	(217)	1783
2007	2000	(220)	1780
2008	2000	(225)	1775
2009	2000	(228)	1772
2010	2000	(233)	1767
2011	1000	(59)	941

If the taxpayer elected to amortize premium, the annual taxable interest income is about $200 less for each year. At maturity, the amortized basis of the bond is exactly 100, hence the taxpayer recognizes no capital gain or loss. In sum, the taxpayer has a reduction of $2000 in ordinary income over the 10 years and no capital gain or loss.

If the taxpayer did not elect to amortize premium, his annual interest income is not reduced. At maturity, the basis of the bond is still 102, hence the taxpayer recognizes a capital loss of $2000. In general, this is less favorable than having made the election, because of the following: (1) ordinary income tends to be taxed higher, so a reduction in ordinary income is better than a capital loss and (2) the election accelerates the income reduction, thus capturing more time value.

Example 10: Market discount and taxation
A 2% semiannual coupon bond is issued on 4/1/2001 at 100, maturing at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year. A taxpayer buys $100,000 face value of the bond on 1/1/2002 for 80.511 dirty price, or 80 clean price. What is the annual interest income with and without recognizing market discount?

The 0.511 is the accrued interest and the yield is 4.6877%. Table 7 shows the tax year interest and accrued market discount using ratable accrual and constant yield accrual (we leave the calculation as an exercise for the reader).

Table 7: Tax year interest and accrued market discount

Tax Year	Coupon Payment	Market Discount (Constant Yield)	Market Discount (Ratable)
2002	1989	1,798	2,156
2003	2000	1,853	2,162
2004	2000	1,947	2,168
2005	2000	2,036	2,162
2006	2000	2,133	2,162
2007	2000	2,231	2,162
2008	2000	2,343	2,168
2009	2000	2,451	2,162
2010	2000	2,563	2,162
2011	1000	645	1,540

Note that the annual amounts in the ratable column vary slightly from year to year. This is due to variations in the number of days in each year. Note that leap years demonstrate slightly larger accruals.

If the taxpayer elected to recognize market discount on an annual basis, he would have to pay tax on an extra $2000 or so every year from 2002 to 2010, adding up to $20,000 over the 10 years. If he instead elected to recognize the market discount at disposition, in this case maturity, he would pay tax on $20,000 in 2011. Assuming the same tax rate, it is normally more advantageous to delay recognizing market discount until disposition.

In the above scenario, you'll note that constant yield accrual starts off with a smaller dollar amount and ends with a larger amount. This is generally true. Since this isn't a paper on math theory, we won't present a generalized proof. But we can formalize this slightly. A bond with a maturing price of 100 is purchased with market discount M at price B with a yield Y (note M = 100-B). For simplicity, assume Y has already stripped away QSI. The bond is purchased at the start of the year and matures at the end of the fifth year after purchase. Table 8 illustrates the accrual of market discount.

Table 8: Accrual of market discount

	Starting Basis for Constant Yield	Constant Yield Accrual	Ratable Accrual for Comparison Sake
Year 1	B	BY	M/5
Year 2	B+BY	BY+BY^2	M/5
Year 3	B+BY+BY^2+BY^3	BY+BY^2+BY^3	M/5
Year 4	B+BY+BY^2+BY^3+BY^4	BY+BY^2+BY^3+BY^4	M/5
Year 5	B+BY+BY^2+BY^3+BY^4+BY^5	BY+BY^2+BY^3+BY^4+BY^5	M/5

You can see that under Constant Yield Accrual, the accrued market discount becomes uniformly larger with each passing year. The total accrual under either method is the same: 5BY+4BY^2+3BY^3+2BY^4+BY^5 = M.

So BY+⅘ *BY^2+⅗*BY^3+⅖*BY^4+⅕*BY^5 = M/5. Since all numbers are positive, this means BY < M/5, since BY < BY+⅘ *BY^2+⅗*BY^3+⅖*BY^4+⅕*BY^5. Likewise, this means BY+BY^2+BY^3+BY^4+BY^5 > M/5 since BY+BY^2+BY^3+BY^4+BY^5 > BY+⅘ *BY^2+⅗*BY^3+⅖*BY^4+⅕*BY^5.

In conclusion, if a taxpayer includes market discount annually and holds the bond to maturity, the constant yield accrual will postpone the income recognition more than the ratable accrual. Given that the taxpayer elected to include market discount in income annually, he probably does not want to postpone the income recognition. Given a market discount, the ratable accrual method is permitted, but it is generally less favorable for the taxpayer. It is interesting to note that the IRS has instructed brokers to use ratable accrual. In the case of premium, ratable accrual would be more advantageous, but it is not permitted.

Suppose the taxpayer does not include market discount annually, and does not hold the bond to maturity. In this case, using constant yield will cause less market discount to accrue during the time in which the taxpayer holds the bond. Assuming the bond is sold for more than the purchase price, this will cause less of the gain to be converted to ordinary income, and leave more as capital.

These general guidelines do get warped if the bond is sold at a much-changed price or if tax rates change.

Example 11: Taxation of bond recognizing market discount sold at a loss
A 2% semiannual coupon bond is issued on 4/1/2001 at 100, maturing at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year. A taxpayer buys $100,000 face value of the bond on 1/1/2002 for 80.511 dirty price, or 80 clean price. He elects (ii) and (iii), and recognizes market discount, which is annually accrued using constant yield accrual. At the end of 2008 he sells the bond for a price of 94.6. Had he known this, should he still have elected (ii) and (iii)? To illustrate this activity and calculations, please see Table 9 (we reuse Table 8 from the previous example and add a column showing the tax basis).

Table 9: Constant yield and ratable accruals

Tax Year	Coupon Payment	Market Discount (Constant Yield)	Year-end Tax Basis (Constant Yield)	Market Discount (Ratable)	Year-end Tax Basis (Ratable)
2002	1989	1,798	81,798	2,156	82,156
2003	2000	1,853	83,951	2,162	84,318
2004	2000	1,947	85,598	2,168	86,486
2005	2000	2,036	87,634	2,162	88,648
2006	2000	2,133	89,767	2,162	90,810
2007	2000	2,231	91,998	2,162	92,972
2008	2000	2,343	94,166	2,168	95,140

The taxpayer recognized $14,166 in market discount over the year. This is taxed as ordinary income. When he sells the bond at 94.6, he has a gain of $94,600 - $94,166 = $434. Had he not elected (ii) but elected (iii), his basis would have been $80,000, resulting in a gain of $94,600 - $80,000 = $14,600 as apparent gain. Since the accrued market discount is $14,166, this much of the apparent gain is ordinary income and $434 is capital gain.

In sum, Table 10 illustrates the 4 scenarios.

Table 10: Effect of election on categorization of income and gain/loss

Scenario	Accrued Market Discount	Ordinary Income	Capital Gain/(Loss)
Elect (ii) and elect (iii)	14,166	14,166	434
Not elect (ii) and elect (iii)	14,166	14,166	434
Elect (ii) and not elect (iii)	15,140	15,140	(540)
Not elect (ii) and not elect (iii)	15,140	14,600	0

In this example, the optimal tax strategy would have been to elect (iii), which is to elect constant yield accrual. Had he elected (iii), election (ii) would not have mattered. The most disadvantageous tax strategy would have been to elect (ii) and not elect (iii).

Another factor to consider in making an election is expectation of tax rate. If a taxpayer anticipates a lower tax bracket now and a higher tax bracket in the future, he may want to recognize more income now.

So in sum for tax optimization:

- Election (i) (amortize premium) is generally better because loss recognition is accelerated.
- No election (ii) (recognize discount) is generally better because income recognition is postponed.
- If your goal is to accelerate income recognition, perhaps in anticipation of higher tax rates in the future, you should elect (ii) (recognize discount) but not (iii) (constant yield accrual).
- Anticipated change in tax bracket can enhance or blunt all previous points.

Deeper dive into bond premium

If recognized on an annual basis, OID and market discount both increase tax liability while acquisition premium and premium both reduce tax liability. In a tax year, a taxpayer may report as much accrued OID or market discount as mathematics dictates. However, acquisition premium and premium are both capped. Acquisition premium is naturally limited by the amount of corresponding OID (if acquisition premium exceeds OID, then this bond would have been a premium bond). Premium is capped by fiat: In general, amortized premium for a given year can be used to reduce tax liability only to the extent of the interest received. Any amount over the interest received may still be used, but with more limitation, as described below:

In general, for the year:

1. Premium, including any carryforward, up to the amount of interest received on the bond can be used to reduce that interest for taxation purposes. (e.g., offset current income)
2. If the premium exceeds the interest, that excess premium up to the amount of total interest received since the acquisition of the bond, reduced by the total amortized premium recognized since the acquisition, can be used as a deductible expense. (e.g., offset past income)
3. If any premium is not consumed in #1 and #2, it becomes a carryforward that can be used in subsequent years. (e.g., save for future offset)
4. Upon disposition, such as sale or maturity, all carryforward can be recognized. (e.g., recognize all offset)

Example 12: Premium over multiple years
A taxpayer makes frequent trades on the same bond from year 1 to 5. All positions on the bond are sold in year 5. The annual interest and amortized premium is below in Table 11. For illustrative purposes, the numbers are made more complicated than they may be in real life. The numbered columns refer to the 4 steps listed above.
I = Interest, AP = Amortized Premium, Net = + for income / - for deduction

Table 11: Premium over multiple years

Y	I	AP	#1	#2	#3	#4	Net	Comment
1	100	50	50	0	0	0	50	Simple case since AP < I
2	150	215	150	50	15	0	(50)	The 215 AP is broken into: ● 150, the amount of I in this year (year 2) ● 50, the amount of I in excess of AP from year 1 ● 15, the unused AP becomes carryforward
3	80	60	75	0	0	0	5	The 75 in #1 is the 60 in AP this year combined with the 15 in carryforward from year 2
4	100	140	100	5	35	0	(5)	The 140 AP is broken into: ● 100, the amount of I in this year (year 4) ● 5, the amount of I in excess of AP from years 1-3 ● 35, the unused AP becomes carryforward
5	90	95	90	0	0	40	(40)	The 95 AP is broken into: ● 90, the amount of I in this year (year 5) ● (There is no I in excess of AP from years 1-4) ● 5, the unused AP becomes carryforward. Combined with the 35 from year 4, the total carryforward is now 40. But since this is disposition, the 40 in carryforward can be recognized as a deduction.

As an overall sanity check, total interest is 520, total amortized premium is 560, and total net deduction is 40.

The cap on the premium presents an interesting challenge for reporting purposes. Typically, an individual taxpayer is on cash basis. Thus aside from the impact of purchased accrued interest and sold accrued interest, the taxpayer pays tax in the year the interest was received. If the coupon payment dates happen to coincide with the calendar year, the reporting is simple.

But if the coupon payment dates straddle the year, then the first coupon payment received in a year includes interest that would have accrued in the last days of the previous year. Conversely, the last coupon payment received ignores the interest that would have accrued in the last days of this year. When the premium is amortized, it must match the periods for which the coupons were paid. This means including some of the prior year while ignoring some of the current year. Whereas OID, acquisition premium, and market discount are all reported on a calendar year basis, premium has to be reported on an accrual period basis, at least for cash basis taxpayers.

Example 13: Premium reported using accrual period
A 2% semiannual coupon bond is issued on 4/1/2001 at 100, maturing at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year. A taxpayer buys $100,000 face value of the bond on 1/1/2002 for 102.511 dirty price, or 102 clean price. What is the annual interest income with and without premium amortization? Assume this is a cash-basis taxpayer.

Table 12 shows the tax year interest and amortized premium. Premium is amortized to match the coupon

payment dates. Note the numbers are different from Example 9, where we illustrate tax year interest and amortized premium.
QSI = qualified stated interest, PAI = purchased accrued interest

Table 12: Tax year interest and amortized premium

Year	Mar 31			Sep 30		Total		Net
	QSI	(PAI)	Premium	QSI	Premium	QSI	Premium	
2002	1000	-511	(37)	1000	(101)	1489	(138)	1,351
2003	1000	0	(102)	1000	(103)	2000	(205)	1,795
2004	1000	0	(104)	1000	(105)	2000	(208)	1,792
2005	1000	0	(106)	1000	(107)	2000	(212)	1,788
2006	1000	0	(107)	1000	(108)	2000	(216)	1,784
2007	1000	0	(109)	1000	(110)	2000	(220)	1,780
2008	1000	0	(111)	1000	(112)	2000	(224)	1,776
2009	1000	0	(113)	1000	(114)	2000	(228)	1,772
2010	1000	0	(115)	1000	(116)	2000	(232)	1,768
2011	1000	0	(118)			1000	(118)	882

If the premium is larger than total remaining coupon payments, you can end up with negative yield. Let's look at a simple case.

Example 14: Negative yield
A 2% semiannual coupon bond is issued on 4/1/2001 at 100, maturing at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year. A taxpayer buys $100,000 face value of the bond on 1/1/2002 for 120.511 dirty price, or 120 clean price. What is the annual interest income with and without premium amortization?

The 0.511 is the accrued interest and the yield is -0.1478%. Since the yield is negative, the taxpayer has more in amortized premium than in QSI. Thus the taxpayer has no taxable interest income at all. In fact, the taxpayer has excess premium every year. If this is the only such bond the taxpayer holds, he must defer this excess premium until the bond is disposed of. However, he is still reducing the basis in his bond by the full amount of the amortized premium (that is, including the excess premium). At maturity, he will have a total carryforward of $1,511 (we leave the computation to the reader) and the basis on his bond is $100,000. Since maturity is a disposition event, the taxpayer may recognize this $1,511 as a deduction.

Short bond position

So far our discussion has focused on long bond positions. What if the taxpayer has a short position? How does one amortize a short position? The taxpayer actually does not amortize a short position. In the text of several laws and regulations (for example 171, 1.1272-1(a), 1278(a)(4)(B)), the term "holder" is used when describing amortization. A taxpayer with a short position never holds a bond. Occasionally the term "issuer" is used. Although a short-sale of a bond may result in economics similar to issuing a bond, the taxpayer is still not an issuer. Eventually a short position has to be closed with a long position. Amortization rules do apply to this long position.

This is a rather advanced topic, which we will cover in a subsequent paper. Here we will just highlight some of the characteristics with Example 15.

Example 15: Short bond position
BND is a 2% semiannual coupon bond issued on 4/1/2000 at 100 and matures at 100 on 3/31/2011. Coupons are paid on 9/30 and 3/31 each year.
On 1/1/2001, the taxpayer sells short $100,000 face value of the bond for 105.50.
On 1/1/2002, he buys $100,000 face value of the bond for 102.511 dirty price/102 clean price.
On 1/1/2003, he delivers the long position to close out the short position.

What is the annual interest income with premium amortization? Assume this is a cash-basis taxpayer. Note we tweaked the dates so that the long position has the same amortization as Example 13, which illustrates premium reported using accrual period.

- In 2001, for the short bond, the taxpayer is responsible for two coupon payments totaling $2000. This can generally be treated as a deductible expense.
- In 2002, for the long bond, the amortized premium is $138, adjusting the basis of the long bond to $101,862 at the end of 2002. The interest income is $1351. For the short bond, the taxpayer is again responsible for coupon payments totaling $2000. However, since this boxed position has created a tax straddle, the taxpayer may be barred from recognizing this expense and must instead adjust the basis of the short bond to $103,500. This possible adjustment is the result of a tax straddle analysis, and not of bond amortization. Therefore we will not discuss it further in this paper, but we have covered tax straddles in our white paper, Tax Implications of Straddles.
- In 2003, the taxpayer recognizes the gain from closing the short. Assuming the short bond was adjusted by the straddle, it has a basis of $103,500. The taxpayer has a short-term capital gain of $103,500 - $101,862 = $1,638. The gain is short-term because the taxpayer acquired the bond after he initiated the short sale.

We do not endeavor to fully explain Example 15 because it interacts with short sales and tax straddles. In simpler cases, a taxpayer does not box the position, but just covers the short position. Even in such a case, if the taxpayer has held a bond for at least one day, then he would still have to amortize for that holding period.

Amortization and wash sales

We start with an example. Consider two scenarios.

Scenario A: Buy-Buy-Sell (BBS)	**Scenario B:** Buy-Sell-Buy (BSB)
Day 1 Buy $100,000 face value of bond at 100 Day 2 Buy the bond at 95 Day 3 Sell the bond at 90	Day 1 Buy $100,000 face value of bond at 100 Day 2 Sell the bond at 90 Day 3 Buy the bond at 95

In both cases, a wash sale is generated with a $10,000 disallowed loss. How does this disallowed loss impact amortization? Scenario A presents a compelling case to use the unadjusted $95 as the basis of the

bond. Regulations 1.1272-2(b)(2) and (3), 1.171-1(d)(1), and section 1278(a)(2)(A)(ii) all use the language "the basis of such bond immediately after its acquisition by the taxpayer." The sell that happens the next day, Day 2, does not fall into that "immediately after" window.

What about Scenario B, where the sell leg has already occurred before the replacement buy? In this case, the text is unclear. Example 16 below, which uses the adjusted basis, helps explain how to handle this kind of Buy-Sell-Buy scenario.

Example 16: Wash sale
The taxpayer elects to minimize tax, which means he amortizes premium annually, but delays recognizing market discount until disposition. If he uses adjusted basis, his amortization looks like the following in a BBS vs BSB case, which is illustrated in Table 13. Assume for simplicity sake that coupon payment exceeds amortized premium.

Table 13: Amortization of BBS vs BSB

BBS		BSB		
Year	Basis	Year	Basis	Amortized Premium
1	95,000	1	104,489	(511)
2	95,000	2	103,980	(509)
3	95,000	3	103,474	(506)
4	95,000	4	102,971	(504)
5	95,000	5	102,470	(501)
6	95,000	6	101,971	(499)
7	95,000	7	101,474	(496)
8	95,000	8	100,981	(494)
9	95,000	9	100,489	(491)
10	95,000	10	100,000	(489)

In both the BBS and BSB cases, the $10,000 loss is disallowed. The BBS case, which uses the unadjusted basis, keeps the bond at a discount. But the BSB case, if it were to use the adjusted basis, would produce a bond purchased at a premium. The annual amortization of the premium actually reduces tax liability and is more favorable to the taxpayer than the BBS case.

We can generalize the BSB case by:
P1 = price of the original buy
P2 = price of the sell at a loss
P3 = price of the replacement.

The unadjusted price is P3 and the adjusted price is P3 + (P1-P2). By the definition of a wash sale, P1 > P2, thus P3 + (P1-P2) > P3. This means the adjusted price is always greater than the unadjusted price, and is thus more likely to result in a bond premium whose amortization reduces taxable ordinary income. In general, tax regulations increase tax liabilities by accelerating recognition of a gain (as in Constructive Sales), delaying recognition of loss (as in a Wash Sale and Tax Straddle), pushing short-term loss to long-term loss (as in short sale rules), or pulling long-term gain to short-term gain (as in short sale rules). Within that spirit of increasing tax liabilities, we expect the IRS to favor the unadjusted price. In sum, we think it is prudent to use the unadjusted price and would be pleasantly surprised if this assumption were wrong.

On a bit of a hand-waving note, we also find it more symmetrically appealing to use the unadjusted basis. For wash sale purposes, BBS = BSB. It is consistent to assume this commutative property applies in amortization as

well. However, we agree it is still an open question whether adjusted or unadjusted basis must be used.

Bonds with put or call features

Bonds with put or call features are more complicated than bonds without, but such bonds are nevertheless covered by Phase III starting in 2014 (phase 1). A taxpayer must decide at the time of acquisition whether a call or a put is likely to be exercised. The taxpayer makes this distinction by assuming that he will exercise a put or not so that his yield is maximized. For a taxable bond with a call, the taxpayer assumes the issuer will exercise a call or not so that the yield is also maximized[3], but for a non-taxable bond, assume the yield is minimized. If a bond has a series of calls or puts, the taxpayer finds the sequence of exercise or not exercise that follows these guidelines. See Example 19 "A bond with both call and put" and Example 20 "A taxable bond with multiple calls."

If the taxpayer decides the bond would terminate early due to an exercise, he amortizes to the exercise price and date. If he deems an exercise would not happen, he amortizes to maturity, ignoring the option feature.

If a call/put is expected but not exercised, then the surviving bond is amortized as if it were purchased anew at the amortized basis. If a call/put is not expected to exercise but is exercised, then a gain/loss is recognized and further amortization is not needed.

Example 17: Expected exercise does not happen
A 10yr 8% annual coupon bond is issued at 70 and matures at 100. At the end of year 6, the holder may exercise a put to the issuer at a strike of 85. A holder buys the bond at issue. How do you amortize?

First you must determine the yield for both scenarios: Put exercised and put not exercised. There are a few ways to calculate the yield. One way is to assume the final amortized basis is 100 at year 10 vs 85 at year 6 and use Excel's Goal-Seek to find the yield. Table 14 shows the yield in both scenarios.

Table 14: Comparing yield between hold-to-maturity and hold-to-put

	Yield is 13.6797%				Yield is 13.9427%			
Year	Begin Basis	QSI	OID	End Basis	Begin Basis	QSI	OID	End Basis
1	70,000	8,000	1,576	71,576	70,000	8,000	1,760	71,760
2	71,576	8,000	1,791	73,367	71,760	8,000	2,005	73,765
3	73,367	8,000	2,036	75,404	73,765	8,000	2,285	76,050
4	75,404	8,000	2,315	77,718	76,050	8,000	2,603	78,654
5	77,718	8,000	2,632	80,350	78,654	8,000	2,966	81,620
6	80,350	8,000	2,992	83,342	81,620	8,000	3,380	85,000
7	83,342	8,000	3,401	86,743				
8	86,743	8,000	3,866	90,609				
9	90,609	8,000	4,395	95,004				
10	95,004	8,000	4,996	100,000				

The put scenario results in higher yield. The assumption is the holder maximizes yield, so we expect the put scenario to occur and we amortize using the put scenario. At the end of year 6, if the put is exercised, the bond simply retires, resulting in no gain or loss. But if the put is not exercised, we re-amortize by assuming a 4yr 8% annual coupon bond is issued at 85 and matures at 100. The new yield is 13.0479% and the amortization is

[3] 1.171-3(c)(4)(ii)(A): Issuer options. In general, the issuer is deemed to exercise or not exercise an option or combination of options in the manner that minimizes the holder's yield on the obligation. However, the issuer of a taxable bond is deemed to exercise or not exercise a call option or combination of call options in the manner that maximizes the holder's yield on the bond.

illustrated in Table 15.

Table 15: Amortization in put is not exercised				
Year	Begin Basis	QSI	OID	End Basis
7	85,000	8,000	3,091	88,091
8	88,091	8,000	3,494	91,585
9	91,585	8,000	3,950	95,535
10	95,535	8,000	4,465	100,000

Example 18: Unexpected exercise does happen
A 10yr 8% annual coupon non-taxable bond is issued at 70 and matures at 100. At the end of year 6, the issuer may exercise a call to the holder at a strike of 85. A holder buys the bond at issue. How do you amortize?

Again you must figure out the yield for both scenarios: Call and uncalled. There are a few ways to calculate the yield. One way is to assume the final amortized basis is 100 at year 10 vs 85 at year 6 and use Excel's Goal-Seek to find the yield as in Table 16.

Table 16: Comparing yield between hold-to-maturity and hold-to-call								
	Yield is 13.6797%				Yield is 13.9427%			
Year	Begin Basis	QSI	OID	End Basis	Begin Basis	QSI	OID	End Basis
1	70,000	8,000	1,576	71,576	70,000	8,000	1,760	71,760
2	71,576	8,000	1,791	73,367	71,760	8,000	2,005	73,765
3	73,367	8,000	2,036	75,404	73,765	8,000	2,285	76,050
4	75,404	8,000	2,315	77,718	76,050	8,000	2,603	78,654
5	77,718	8,000	2,632	80,350	78,654	8,000	2,966	81,620
6	80,350	8,000	2,992	83,342	81,620	8,000	3,380	85,000
7	83,342	8,000	3,401	86,743				
8	86,743	8,000	3,866	90,609				
9	90,609	8,000	4,395	95,004				
10	95,004	8,000	4,996	100,000				

The uncalled scenario results in lower yield. The assumption is the issuer minimizes yield for a non-taxable bond, so we expect the not-called scenario to occur. We amortize using the uncalled scenario. At the end of year 6, if the call is unexercised, we continue with the amortization table. But if the call is exercised, we stop amortization and recognize a gain or a loss, as appropriate. In this example we have a gain.

Basis at time of Call is $83,342
Call Price is $85,000
Gain/(Loss) results in a gain of $1,658 (= $85,000 - $83,342)

Example 19: A bond with both a call and a put
A 10yr non-taxable bond with 8% annual coupon is issued at 100 and matures at 100. At the end of year 5 is a put option at strike 100. At the end of year 7 is a call option at strike 96. An investor purchases the bond at the end of year 2 for 105. Assume premium is amortized. How does one amortize?

The first task is to decide which scenario -- called/not-called and put/not-put -- is mostly likely to occur. The possible cases to consider are: [put], [not-put then called], and [not-put and not-called]. See Table 17.

Table 17: Comparison of yields in all three possible scenarios

	Yield is 6.49% (put)		Yield is 6.3369% (not-put then called)		Yield is 7.3218% (not-put then not-called)	
Year after purchase	Cashflow	NPV	Cashflow	NPV	Cashflow	NPV
0	(104,000)	(104,000)	(104,000)	(104,000)	(104,000)	(104,000)
1	8,000	7,512	8,000	7,523	8,000	7,454
2	8,000	7,055	8,000	7,075	8,000	6,946
3	108,000	89,433	8,000	6,653	8,000	6,472
4			8,000	6,257	8,000	6,030
5			104,000	76,492	8,000	5,619
6					8,000	5,236
7					8,000	4,878
8					108,000	61,365

In this example if the holder exercises the put, the yield is 6.49%. If the holder does not exercise the put, the yield might be 6.34% (less favorable) or 7.32% (more favorable) depending on the issuer's action. If the holder did not put, then the issuer should call, because that results in a lower yield of 6.34%, rather than the higher 7.32% (again, we assume for a non-taxable bond the issuer acts to minimize yield). This is lower than the 6.49%, thus the holder, who always seeks to maximize yield, will decide to put.

So the taxpayer amortizes to the expected put. With this information, the full amortization table can be constructed, as seen in Table 18.

Table 18: Amortization in the put scenario

	yield		6.4900%	
Year after purchase	Begin Basis	Interest	Premium	End Basis
1	104,000	8,000	(1,250)	102,750
2	102,750	8,000	(1,332)	101,418
3	101,418	8,000	(1,418)	100,000

If the investor had elected against amortizing premium, this decision-tree would remain unchanged. The difference would be the broker does not report the premium at the end of each year. Instead, a premium of ($4000) can be used to offset interest income when the bond is put.

If the put is not exercised, the holder would treat the bond as newly purchased at its ending basis with the remaining terms of the bond still in effect, similar to Example 17 "Expected exercise does not happen."

Example 20: A taxable bond with multiple calls
A 10yr 8% annual coupon taxable bond is issued at 100 and matures at 100. At the end of year 5 and year 7, the issuer may exercise a call at a strike of 103. At the start of year 3, a taxpayer buys the bond for 105. How do you amortize?

Below are the three scenarios and the accompanying yield (we leave the calculation of the yield to the reader):

- Issuer calls at the end of year 5 at 103 - yield is 6.6975%
- Issuer calls at the end of year 7 at 103 - yield is 7.1913%
- Issuer never calls and the bond matures at the end of year 10 - yield is 7.0700%

Since this is a callable taxable bond, the taxpayer assumes the issuer exercises the call in such a way as to maximize yield. This occurs when the issuer calls the bond at the end of year 7 at 103, after the taxpayer has held the bond for 4 years. We leave the calculation of the amortization table as an exercise for the reader.

Less-complex debt (LCD)

The roll-out of Phase III in 2014 only applies to less-complex debt, also known as LCD. The term LCD applies to all debts whose yield can be defined by §1.1272-1(b), §1.1272-1(c), or §1.1272-1(d); and not included by §1.6045-1(n)(2)(ii). In practice, the regulations are quite lenient.

Bonds whose yields are defined in §1.1272-1(b) include the most common ones: bonds that have a single fixed rate coupon that is paid on a regular basis. Bonds whose yields are defined in §1.1272-1(c) include those common bonds with a call, a put, or a mixed schedule. Bonds whose yields are defined in §1.1272-1(d) include demand loans with a fixed annual interest charge, but no fixed maturity date.

But just because a bond has a fixed yield defined by these sections, it could still be exempt for the 2014 timeline if it also falls under §1.6045-1(n)(2)(ii), which lists various exclusions. For example, a common plain vanilla bond is exempt from CBR in 2014 if it is issued directly by a foreign corporation or requires payment in a non-USD currency. In particular, §1.6045-1(n)(2)(ii)(H) defines:

A debt instrument for which the terms of the instrument are not reasonably available to the broker within 90 days of the date the debt instrument was acquired by the customer.

Thus a reasonable delay in the transmission of information could render an otherwise LCD to be out of scope for 2014.

Occasionally, a bond may fall outside §1.6045-1(n)(2)(ii) but is still not LCD because it also falls outside §1.1272-1(b), §1.1272-1(c), or §1.1272-1(d). For example, REMIC (real estate mortgage investment conduit) and variable rate bonds are not LCD because they are listed as exceptions by §1.1272-1(b).

Conclusion

As we stated earlier, CBR Phase III does create substantial reporting burdens for brokers. For bonds, the greatest challenge is the sheer number of scenarios that a broker must handle, even though each given scenario is not by itself very complicated. Brokers face additional challenges because it is not 100% clear how to handle specific areas, such as reporting of premium tied to accrual period and the interplay of wash sales and starting amortization basis.

By the publication date of this paper, brokers must have already finished preparing for CBR Phase III. We hope the brokers among our readers have had a smooth transition and are now giving themselves plenty of time to prepare for the MCDs (more-complex debt) instruments, which must be reported starting in 2016.

This white paper is part of G2's Tax Analysis for Securities Transactions (TAST) Resource Page (http://g2ft.com/resources/), which provides best practice guidelines on IRC compliance. G2 also hosts a Taxable Events Webinar Series. For more information, visit http://www.g2ft.com/webinars/.

G2 FinTech (www.g2ft.com) provides European compliance add-on modules and financial services data warehouse software to the investment management community. The company also maintains a thought leadership page on Tax Analysis for Securities Transactions. This page provides tax practitioners and compliance officers with guidelines on how to perform tax accounting on investment portfolios.