

Accounting for Serial Bonds

At the beginning of 2006; a company issued \$500,000 of ten-year, 10% serial bonds, to be repaid in the amount of \$50,000 each year.

Assume that interest payments are made annually and that the bonds are issued to yield:

Case 1 9% p.a.

Case 2 11% p.a.

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Example 1: Bonds are issued to yield 9%

a. Proceeds of bond issue = PV (I) + PV (P)

	A	B	A+B		$A+B$ $(1+i)^{-n}$
End of	Interest Due	Principal Due	Total Amount Due	Discount Factor (9%)	Present value
2006	50,000	50,000	100,000	0.917	91,700
2007	45,000	50,000	95,000	0.842	79,990
2008	40,000	50,000	90,000	0.772	69,480
2009	35,000	50,000	85,000	0.708	60,180
2010	30,000	50,000	80,000	0.650	52,000
2011	25,000	50,000	75,000	0.596	44,700

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b. Premium on bond issue

Total proceeds.....	
\$519,780	
Face value.....	
<u>500,000</u>	
Premium.....	<u><u>19,780</u></u>

c. Journal entry for the issuance of the serial bonds using the interest method

Cash.....	519,780
Bonds payable.....	519,780

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d. Premium amortization table for the serial bonds using the interest method

	A	B	C	D		
Year	Carrying Amount	Interest Expense (9%*CV)	Interest Payment (10%*FV)	Premium Amortization (C-B)	Bond Premium Bal. (BB-D)	Cumulative Principal Payment
Issue	519,780	-	-	-	19,780	-
2006	466,560	46,780	50,000	3,220	16,560	50,000
2007	413,550	41,990	45,000	3,010	13,550	100,000
2008	360,770	37,220	40,000	2,780	10,770	150,000
2009	308,230	32,469	35,000	2,531	8,239	200,000
*Rounding up difference						
2010	255,981	27,742	25,000	2,258	5,981	250,000
2011	204,000	22,000	20,000	1,000	4,000	300,000

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Journal entry to record the retirement of the first serial bond and the payment of the first interest for 1996:

Bonds payable.....53, 220

Bond Interest Expense.....46,780

Cash

100,000

Case 2: Bonds are issued to Yield 11%

**a. Proceeds of bond issue =
PV (I) + PV (P)**

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	A	B	A+B	$(1+i)^{-n}$	A+B $(1+i)^{-n}$
End of	Interes t Due	Princip al Due	Total Amount Due	Discount factor (11%)	Present value
1996	50,000	50,000	100,000	0.901	90,100
1997	45,000	50,000	95,000	0.812	77,140
1998	40,000	50,000	90,000	0.731	65,790
1999	35,000	50,000	85,000	0.659	56,015
2000	30,000	50,000	80,000	0.593	47,440
2001	25,000	50,000	75,000	0.535	40,125
2002	20,000	50,000	70,000	0.482	33,740
2003	15,000	50,000	65,000	0.434	28,210
2004	10,000	50,000	60,000	0.391	23,460
2005	5,000	50,000	55,000	0.352	19,360
Total s	275,00 0	500,00 0	775,000		481,380
<i>Proceeds of Serial Bond issue @ 11% yield</i>					481,380

	Face
Accounting for Serial Bonds.....	
500,000	
	Total
proceeds.....	<u>\$481,380</u>
	Discount
.....	<u>18,620</u>

c. Journal entry to record the issuance of the bonds

	Cash
d. Discount amortization table using the	
interest method	
	Bonds
Payable.....	481,380

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Year	Carrying Amount	Interest Expense (11%)	Interest Payment (10%)	Discount Amortization	Bond Discount Balance	Cumulative Principal Payment
Issue	481,380	-	-	-	18,620	-
1996	434,332	52,952	50,000	2,952	15,668	50,000
1997	387,109	47,777	45,000	2,777	12,891	100,000
1998	339,691	42,582	40,000	2,582	10,309	150,000
1999	292,057	37,366	35,000	2,366	7,943	200,000
*Rounding up difference	244,186	32,126	25,000	2,126	5,817	250,000
e. Journal Entry to record the retirement of the first serial bond and the payment of the first interest for 1996.	196,043	26,860	20,000	1,860	3,957	300,000
2001	147,608	21,565	15,000	1,565	2,392	350,000
2002	98,845	16,237	10,000	1,237	1,155	400,000
2003	49,512	10,257	5,000	523	532	450,000

Bonds payable [50000-2952]
 Bond Interest Expense.....52,952
 Cash.....10,000

serial

VI. Special Issues Related To Non-current Liabilities

Extinguishment of Non-Current Liabilities (repurchase or retirement of its outstanding bonds)

1. Extinguishment with cash before maturity,
2. Extinguishment by transferring assets or securities, and

3. Extinguishment with modification of terms. **Retirement of bonds at maturity.** There is no recognition of any gain or loss on retirement, as the carrying value is equal to the maturity value, which is also equal to the market value of the bonds at that point.

Extinguishment of Non-Current Liabilities

Extinguishment with Cash before

Maturity

When debt is retired prior to maturity, a gain or loss must be recognized for the difference between the carrying value of the debt and the amount paid to satisfy the obligation.

- ◆ Net carrying amount > Reacquisition price = **Gain**
- ◆ Reacquisition price > Net carrying amount = **Loss**
- ◆ At time of reacquisition, **unamortized premium or discount must be amortized up to the**

If the redemption occurs between interest payment dates, adjusting entries must be made to recognize the accrued interest and to amortize the bond discount or premium.

Extinguishment with Cash before Maturity

Illustration: Evermaster bonds issued at a discount on January 1, 2015. These bonds are due in five years. The bonds have a par value of €100,000, a coupon rate of 8% paid semiannually, and were sold to yield 10%.

SCHEDULE OF BOND DISCOUNT AMORTIZATION EFFECTIVE-INTEREST METHOD—SEMIANNUAL INTEREST PAYMENTS 5-YEAR, 8% BONDS SOLD TO YIELD 10%

Date	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount of Bonds
1/1/15				€ 92,278
7/1/15	€ 4,000 ^a	€ 4,614 ^b	€ 614 ^c	92,892 ^d
1/1/16	4,000	4,645	645	93,537
7/1/16	4,000	4,677	677	94,214
1/1/17	4,000	4,711	711	94,925
7/1/17	4,000	4,746	746	95,671

Extinguishment with Cash before Maturity

Two years after the issue date on January 1, 2017, Evermaster calls the entire issue at 101 and cancels it.

Reacquisition price ($€100,000 \times 1.01$)	€101,000
Carrying amount of bonds redeemed	(94,925)
Loss on extinguishment	<u>€ 6,075</u>

Evermaster records the reacquisition and cancellation of the bonds as follows.

Bonds Payable	94,925	
Loss on Extinguishment of Bonds		6,075
Cash	101,000	

Extinguishment of Non-Current Liabilities

Extinguishment by Exchanging Assets or Securities

- ◆ **Creditor** should account for the non-cash assets or equity interest received at their fair value.
- ◆ **Debtor** recognizes a gain equal to the excess of the carrying amount of the payable over the fair value of the assets or equity transferred (gain).

Exchanging Assets

Illustration: Hamburg Bank loaned €20,000,000 to Bonn Mortgage Company. Bonn, in turn, invested these monies in residential apartment buildings. However, because of low occupancy rates, it cannot meet its loan obligations. Hamburg Bank agrees to accept from Bonn Mortgage real estate with a fair value of €16,000,000 in full settlement of the €20,000,000 loan obligation. The real estate has a carrying value of €21,000,000 on the books of Bonn Mortgage. Bonn (debtor) records this transaction as follows.

Note Payable (to Hamburg Bank) 20,000,000

Loss on Disposal of Real Estate 5,000,000

Real Estate 21,000,000

Gain on Extinguishment of Debt 4,000,000

Exchanging Securities

Illustration: Now assume that Hamburg Bank agrees to accept from Bonn Mortgage 320,000 ordinary shares (€10 par) that have a fair value of €16,000,000, in full settlement of the €20,000,000 loan obligation. Bonn Mortgage (debtor) records this transaction as follows.

Notes Payable (to Hamburg Bank)	20,000,000
Share Capital—Ordinary	3,200,000
Share Premium—Ordinary	12,800,000
Gain on Extinguishment of Debt	4,000,000

Extinguishment with Modification of Terms

Creditor may offer one or a combination of the following **modifications**:

1. Reduction of the stated interest rate.
2. Extension of the maturity date of the face amount of the debt.
3. Reduction of the face amount of the debt.
4. Reduction or deferral of any accrued interest.

Modification of Terms

Illustration: On December 31, 2015, Morgan National Bank enters into a debt modification agreement with Resorts Development Company. The bank restructures a ¥10,500,000 loan receivable issued at par (interest paid to date) by:

- ▶ Reducing the principal obligation from ¥10,500,000 to ¥9,000,000;
- ▶ Extending the maturity date from December 31, 2015, to December 31, 2019; and
- ▶ Reducing the interest rate from the historical effective rate of 12 percent to 8 percent. Given Resorts Development's financial distress, its market-based

Modification of Terms

IFRS requires the modification to be accounted for as an extinguishment of the old note and issuance of the new note, measured at fair value.

Present value of restructured cash flows:

Present value of ¥9,000,000 due in 4 years at 15%,
interest payable annually (Table 6-2); $FV(PVF_{4,15\%})$;
(¥9,000,000 $\times$.57175)

¥5,145,750

Present value of ¥720,000 interest payable annually
for 4 years at 15% (Table 6-4); $R(PVF-OA_{4,15\%})$;
(¥720,000 $\times$ 2.85498)

2,055,586

Fair value of note

¥7,201,336

Modification of Terms

The gain on the modification is ¥3,298,664, which is the difference between the prior carrying value (¥10,500,000) and the fair value of the restructured note, as computed in Illustration 14-23 (¥7,201,336). Given this information, Resorts Development makes the following entry to record the modification.

Note Payable (old)	10,500,000	
Gain on Extinguishment of Debt		3,298,664
Note Payable (new)	7,201,336	

Modification of Terms

Amortization schedule for the new note.

Date	Cash Paid	Interest Expense	Amortization	Carrying Value
12/31/2015				¥7,201,336
12/31/2016	¥720,000 ^a	¥1,080,200 ^b	¥360,200 ^c	7,561,536 ^d
12/31/2017	720000	1,134,230	414,230	7,975,767
12/31/2018	720000	1,196,365	476,365	8,452,132
12/31/2019	720000	1,267,820	547,868	9,000,000
^a ¥9,000,000 × 8%		^c ¥1,080,200 – ¥720,000		
^b ¥7,201,336 × 15%		^d ¥7,201,336 + ¥360,200		

VII. Presentation and Analysis

Presentation of Non-Current Liabilities

Note disclosures generally indicate the nature of the liabilities, maturity dates, interest rates, call provisions, conversion privileges, restrictions imposed by the creditors, and assets designated or pledged as security.

Fair value of the debt should be disclosed.

Must disclose **future payments** for sinking fund requirements and maturity amounts of long-term debt during each of the next five years.