Chapter 15 Long-Term Liabilities

DO IT!

Bond Terminology

State whether each of the following statements is true or false.

1. Mortgage bonds and sinking fund bonds are both examples of secured bonds.  
2. Unsecured bonds are also known as debenture bonds.  
3. The stated rate is the rate investors demand for loaning funds.  
4. The face value is the amount of principal the issuing company must pay at the maturity date.  
5. The market price of a bond is equal to its maturity value.

Solution

1. True.
2. True.
3. False. The stated rate is the contractual interest rate used to determine the amount of cash interest the borrower pays.
4. True.
5. False. The market price of a bond is the value at which it should sell in the marketplace. As a result, the present value of the bond and its maturity value are often different.


DO IT!

Bond Issuance

Giant Corporation issues $200,000 of bonds for $189,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

Solution

(a)

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>189,000</td>
<td></td>
</tr>
<tr>
<td>Discount on Bonds Payable</td>
<td></td>
<td>11,000</td>
</tr>
<tr>
<td>Bonds Payable</td>
<td></td>
<td>200,000</td>
</tr>
</tbody>
</table>

(To record sale of bonds at a discount)

(b)

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds payable</td>
<td>$200,000</td>
</tr>
<tr>
<td>Less: Discount on bonds payable</td>
<td>11,000</td>
</tr>
<tr>
<td>Long-term liabilities</td>
<td></td>
</tr>
</tbody>
</table>

DO IT!

**Long-Term Note**

Cole Research issues a $250,000, 8%, 20-year mortgage note to obtain needed financing for a new lab. The terms call for semiannual payments of $12,631 each. Prepare the entries to record the mortgage loan and the first installment payment.

**Solution**

<table>
<thead>
<tr>
<th>Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>250,000</td>
</tr>
<tr>
<td>Mortgage Payable</td>
<td>250,000</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>10,000*</td>
</tr>
</tbody>
</table>

*Interest expense = $250,000 × 8% × 6/12.

Related exercise material: **BE15-6, E15-10, E15-11, and DO IT! 15-4.**

DO IT!

**Lease Liability; Analysis of Long-Term Liabilities**

FX Corporation leases new equipment on December 31, 2014. The lease transfers ownership to FX at the end of the lease. The present value of the lease payments is $240,000. After recording this lease, FX has assets of $2,000,000, liabilities of $1,200,000, and stockholders’ equity of $800,000. (a) Prepare the entry to record the lease, and (b) compute and discuss the debt to assets ratio at year-end.

**Solution**

(a) Leased Asset—Equipment | 240,000 | Lease Liability | 240,000 | (To record leased asset and lease liability)

(b) Debt to assets ratio = $1,200,000 ÷ $2,000,000 = 60%. This means that 60% of its assets were provided by creditors. The higher the percentage of debt to assets, the greater the risk that the company may be unable to meet its maturing obligations.

Related exercise material: **BE15-7, E15-12, E15-14, and DO IT! 15-5.**
Snyder Software Inc. has successfully developed a new spreadsheet program. To produce and market the program, the company needed $2 million of additional financing. On January 1, 2014, Snyder borrowed money as follows.

1. Snyder issued $500,000, 11%, 10-year convertible bonds. The bonds sold at face value and pay semiannual interest on January 1 and July 1. Each $1,000 bond is convertible into 30 shares of Snyder’s $20 par value common stock.

2. Snyder issued $1 million, 10%, 10-year bonds at face value. Interest is payable semiannually on January 1 and July 1.

3. Snyder also issued a $500,000, 12%, 15-year mortgage payable. The terms provide for semiannual installment payments of $36,324 on June 30 and December 31.

**Instructions**

1. For the convertible bonds, prepare journal entries for:
   (a) The issuance of the bonds on January 1, 2014.
   (b) Interest expense on July 1 and December 31, 2014.
   (c) The payment of interest on January 1, 2015.
   (d) The conversion of all bonds into common stock on January 1, 2015, when the market price of the common stock was $67 per share.

2. For the 10-year, 10% bonds:
   (a) Journalize the issuance of the bonds on January 1, 2014.
   (b) Prepare the journal entries for interest expense in 2014. Assume no accrual of interest on June 30.
   (c) Prepare the entry for the redemption of the bonds at 101 on January 1, 2017, after paying the interest due on this date.

3. For the mortgage payable:
   (a) Prepare the entry for the issuance of the note on January 1, 2014.
   (b) Prepare a payment schedule for the first four installment payments.
   (c) Indicate the current and noncurrent amounts for the mortgage payable at December 31, 2014.

**Solution to Comprehensive DO IT!**

1. **(a) 2014**
   - Jan. 1: Cash 500,000
     - Bonds Payable 500,000
     - (To record issue of 11%, 10-year convertible bonds at face value)

2. **(b) 2014**
   - July 1: Interest Expense 27,500
     - Cash ($500,000 × 0.055) 27,500
     - (To record payment of semiannual interest)
   - Dec. 31: Interest Expense 27,500
     - Interest Payable 27,500
     - (To record accrual of semiannual bond interest)

3. **(c) 2015**
   - Jan. 1: Interest Payable 27,500
     - Cash 27,500
     - (To record payment of accrued interest)
(d) Jan. 1
<table>
<thead>
<tr>
<th>Bonds Payable</th>
<th>500,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock</td>
<td>300,000*</td>
</tr>
<tr>
<td>Paid-in Capital in Excess of Par—Common Stock</td>
<td>200,000</td>
</tr>
</tbody>
</table>
(To record conversion of bonds into common stock)

*(500,000 ÷ $1,000 = 500 bonds; 500 × 30 = 15,000 shares; 15,000 × $20 = $300,000)

2. (a) 2014
Jan. 1
| Cash | 1,000,000 |
| Bonds Payable | 1,000,000 |
(To record issuance)

(b) 2014
July 1
| Interest Expense | 50,000 |
| Cash | 50,000 |
(To record payment of semiannual interest)

Dec. 31
| Interest Expense | 50,000 |
| Interest Payable | 50,000 |
(To record accrual of semiannual interest)

(c) 2017
Jan. 1
| Bonds Payable | 1,000,000 |
| Loss on Bond Redemption | 10,000* |
| Cash | 1,010,000 |
(To record redemption of bonds at 101)

*(1,010,000 – $1,000,000)

3. (a) 2014
Jan. 1
| Cash | 500,000 |
| Mortgage Payable | 500,000 |
(To record issuance of mortgage payable)

(b) Semiannual
<table>
<thead>
<tr>
<th>Interest Period</th>
<th>Cash Payment</th>
<th>Interest Expense</th>
<th>Reduction of Principal</th>
<th>Principal Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue date</td>
<td></td>
<td></td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td>1</td>
<td>36,324</td>
<td>30,000</td>
<td>6,324</td>
<td>493,676</td>
</tr>
<tr>
<td>2</td>
<td>36,324</td>
<td>29,621</td>
<td>6,703</td>
<td>486,973</td>
</tr>
<tr>
<td>3</td>
<td>36,324</td>
<td>29,218</td>
<td>7,106</td>
<td>479,867</td>
</tr>
<tr>
<td>4</td>
<td>36,324</td>
<td>28,792</td>
<td>7,532</td>
<td>472,335</td>
</tr>
</tbody>
</table>

(c) Current liability: $14,638 ($7,106 + $7,532)
Long-term liability: $472,335
Gardner Corporation issues $1,750,000, 10-year, 12% bonds on January 1, 2014, at $1,968,090, to yield 10%. The bonds pay semiannual interest July 1 and January 1. Gardner uses the effective-interest method of amortization.

**Instructions**
(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the journal entry to record the payment of interest on July 1, 2014.

**Solution**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash</th>
<th>Bonds Payable</th>
<th>Premium on Bonds Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td></td>
<td>1,968,090</td>
<td>1,750,000</td>
</tr>
</tbody>
</table>

*(To record issuance of bonds at a premium)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest Expense</th>
<th>Premium on Bonds Payable</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>98,405*</td>
<td>6,595**</td>
<td>105,000</td>
</tr>
</tbody>
</table>

*$1,968,090 \times 5%$

**$105,000 - 98,405$**

Glenda Corporation issues $1,750,000, 10-year, 12% bonds on January 1, 2014, for $1,968,090 to yield 10%. The bonds pay semiannual interest July 1 and January 1. Glenda uses the straight-line method of amortization.

**Instructions**
(a) Prepare the journal entry to record the issuance of the bonds.
(b) Prepare the journal entry to record the payment of interest on July 1, 2014.

**Solution**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash</th>
<th>Bonds Payable</th>
<th>Premium on Bonds Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td></td>
<td>1,968,090</td>
<td>1,750,000</td>
</tr>
</tbody>
</table>

*(To record issuance of bonds at a premium)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Interest Expense</th>
<th>Premium on Bonds Payable</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>94,095.50**</td>
<td>10,904.50*</td>
<td>105,000</td>
</tr>
</tbody>
</table>

*$218,090 \div 20$

**$105,000 - 10,904.50$**
### DO IT! Review

#### Evaluate statements about bonds.

**DO IT!** 15-1 State whether each of the following statements is true or false.

1. Mortgage bonds and sinking fund bonds are both examples of debenture bonds.
2. Convertible bonds are also known as callable bonds.
3. The market rate is the rate investors demand for loaning funds.
4. Semiannual interest on bonds is equal to the face value times the stated rate times 6/12.
5. The present value of a bond is the value at which it should sell in the market.

**DO IT!** 15-2 Eubank Corporation issues $500,000 of bonds for $520,000. (a) Prepare the journal entry to record the issuance of the bonds, and (b) show how the bonds would be reported on the balance sheet at the date of issuance.

**DO IT!** 15-3 Prater Corporation issued $400,000 of 10-year bonds at a discount. Prior to maturity, when the carrying value of the bonds was $390,000, the company redeemed the bonds at 99. Prepare the entry to record the redemption of the bonds.

**DO IT!** 15-4 Detwiler Orchard issues a $700,000, 6%, 15-year mortgage note to obtain needed financing for a new lab. The terms call for semiannual payments of $35,714 each. Prepare the entries to record the mortgage loan and the first installment payment.

**DO IT!** 15-5 Huebner Corporation leases new equipment on December 31, 2014. The lease transfers ownership of the equipment to Huebner at the end of the lease. The present value of the lease payments is $192,000. After recording this lease, Huebner has assets of $1,800,000, liabilities of $1,100,000, and stockholders’ equity of $700,000. (a) Prepare the entry to record the lease, and (b) compute and discuss the debt to assets ratio at year-end.