Chapter 10

**ACCOUNTING FOR LONG-TERM LIABILITIES**

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| Chapter Outline |
| 1. **Basics of Bonds**

Projects that need a lot of money often are financed with bonds. |
| A. Bond Financing |
| 1. A **bond** is its issuer’s written promise to pay the par value of the bond with interest.  |
| a. Most bonds require the issuer to make periodic interest payments.b. The **par valueof a bond**, or *face value*, is paid at a stated future date called the *maturity date*.c. Most bonds also require the issuer to make semiannual (twice a year) *interest* payments. Interest is computed as par (face amount) value multiplied by the bond contract rate. |
| 2. Advantages of Bonds |
| a. *Bonds do not affect owner control.*b. *Interest on bonds is tax deductible.*c. *Bonds can increase return on equity*. A company that earns a higher return with borrowed funds than it pays in interest on those funds increases its return on equity. This process is called *financial* *leverage* or *trading on the equity.* |
| 3. Disadvantages of Bonds |
| a. *Bonds can decrease return on equity*. A company that earns a lower return with borrowed funds than it pays in interest on those funds decreases its return on equity. |
| b. *Bonds require payment of both periodic interest and par value at maturity*. Equity, by contrast, does not require any payments because cash withdrawals (dividends) are paid at the discretion of the owner (board). |
| B. Bond Issuing  Bond issuances state the number of bonds authorized, their par value, and the contract interest rate. |
| 1. **Bond indenture** is the legal contract between the bond issuer and the bondholders; it identifies the obligations and rights of each party. A bondholder may also 2. A bondholder may also receive a **bond certificate** is evidence of the company’s debt. |
| C. Bond Trading 1. Bonds are securities and can be readily bought and sold. 2. A bond *issue* is the sale of bonds (denominations of $1,000 or $5,000, etc.).3. Market value (price) is shown as a percentage of par (face) value. Examples: bonds issued at 103 ½ means that they are sold for 103.5% of par value. Bonds issued at 95 means that they are sold for 95% of par value.  |
| **II. Par Bonds** |
| Issuing bonds at par—bonds are sold for face amount.A. Entries are: |
| 1. Issue date: debit Cash, credit Bonds Payable (face amount).2. Interest date: debit Interest Expense, credit Cash (face times bond interest rate times interest period).3. Maturity date: debit Bonds Payable, credit Cash (face amount). |
| 1. **Discount Bonds**

A. Bond Discount or Premium—bonds are sold for an amount different  than the face amount.  |
| 1. **Contract rate**—(also called *coupon rate, stated rate*, or *nominal rate*) annual interest rate *paid* by the issuer of bonds (applied to par value).2. **Market rate**—annual rate borrowers are willing to pay and lenders are willing to accept for a particular bond and its risk level. |
| 3. When contract rate and market rate are equal, bonds sell at par value; when contract rate is above market rate, bonds sell at a *premium* (above par); when the contract rate is below market rate, bonds sell at a *discount* (below par).B. Issuing Bonds at a Discount—sell bonds for *less* than par value. |
| 1. The **discount on bonds payable** is the difference between the par (face) value of a bond and its lower issuance price.
2. Cash Payments with Discount Bonds

3. Recording Issuance of Discount Bonds—Entry to record issuance at a discount: debit Cash (issue price), debit Discount on Bonds Payable (amount of discount); credit Bonds Payable (par value).a. Discount on Bonds Payable is a contra liability account with a normal debit balance; it is *deducted* from par value to yield the **carrying (book) value** of the bonds payable. |
| 4. Amortizing Discount Bondsa. Total bond interest expense is the *sum* of all the cash interest payments plus the bond discount (or can be computed by comparing total amount borrowed to total amount repaid over life).b. Discount must be systematically reduced (*amortized*) over the life of the bond to report periodic interest expense incurred. |
| c. Requires crediting Discount on Bonds Payable when bond interest expense is recorded (payment and/or accruals) and increasing Interest Expense by the amortized amount.d*.* Amortizing the discount increases book value; at maturity, the unamortized discount equals zero and the carrying value equals par value. |
| 5. Straight-Line Method—allocates equal bond interest expense in each of the six-month interest periods. a. We divide the total bond interest expense by the number of semiannual periods in the bonds’ life. b. During the bonds’ life, the discount decreases each period by the semiannual amortization amount.  c. The carrying value increases each period by the amount of the semiannual amortization amount. |
| 1. **Premium Bonds**

A. Issuing Bonds at a Premium—sell bonds for *more* than par value. |
| 1. The **premium on bonds payable** is the difference between the par value of a bond and its higher issuance price.
2. Cash Payments with Premium Bonds.

3. Recording Issuance of Premium Bonds—Entry to record issuance at a premium: debit Cash (issue price), credit Premium on Bonds Payable (amount of premium), credit Bonds Payable (par value). |
| 1. Premium on Bonds Payable is an adjunct liability account with a normal credit balance; it is added to par value to yield the carrying (or book) value of the bonds payable.
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| 4. Amortizing Premium Bondsa. Total bond interest expense incurred is the sum of the interest payments *less* the bond premium.b. Premiums must be systematically reduced (*amortized*) over the life of the bond to report periodic interest expense incurred.c. Requires debiting Premium on Bonds Payable when bond interest expense is recorded (payment and/or accruals) and decreasing Interest Expense by the amortized amount.d*.* Amortizing the premium decreases book value; at maturity, book value = face value. |
| 4. Straight-Line Method—allocates an equal portion of the total premium to bond interest expense in each of the six-month interest periods. |
| B. Bond Retirement |
| 1. Bond Retirement at Maturity |
| a. Carrying value at maturity will always equal par value.b. Entry to record bond retirement at maturity: debit Bonds Payable, credit Cash. |
| 1. Bond Retirement before Maturity

a. Two common approaches to retire bonds before maturity: |
| i. Exercise a call option—pay par value plus a call premium.ii. Purchase them on the open market.b. Difference between the purchase price and the bonds’ carrying value is recorded as a gain (or loss) on retirement of bonds. |
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| 1. **Long-Term Notes Payable**
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| Notes are issued to obtain assets, such as cash. Notes are usually issued to a single lender, such as a bank.A. Installment Notes—obligations requiring a series of periodic payments to the lender. |
| 1. Issuance of Notes—Entry to record issuance of an installment note for cash: debit Cash, credit to Notes Payable.2. Payments of Principal and Interest—Payments include interest expense accruing to the date of the payment plus a portion of the amount borrowed (*principal*). |
| 1. Equal total payments consist of changing amounts of interest and principal.

 b. Entry to record installment payment: debit Interest Expense (issue rate times the declining carrying value of note), debit Notes Payable (for difference between the equal payment and the interest expense), credit Cash for the amount of the equal payment.  |
| B. Mortgages |
| A **mortgage** is a legal agreement that helps protect a lender if a borrower does not make required payments. 1. Accounting for mortgages—similar to accounting for notes and bonds.2. Mortgage agreements must be disclosed in financial statements. |
| 1. **Decision Analysis—Debt Features and the Debt-to-Equity Ratio**
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| 1. Features of Bonds and Notes

1. Secured or Unsecured1. **Secured bonds** and notes have specific assets of the issuer pledged (or *mortgaged*) as collateral.
2. Unsecured bonds and notes also called *debentures*, are backed by the issuer’s general credit standing. Unsecured debt is riskier than secured debt.

2. Term or Serial1. **Term bonds** and notes mature on one specified date.
2. **Serial bonds** and notes mature at more than one date (often in series) and are usually repaid over a number of periods.
3. **Sinking fund bonds** reduce the holder’s risk by requiring the issue to set aside assets to pay debt in a sinking fund.

3. Registered or Bearer1. **Registered bonds** are issued in the names and addresses of their holders. Bond payments are sent directly to registered holders.
2. **Bearer bonds**, also called *unregistered* bonds, are made payable to whoever holds them (the bearer). Many bearer bonds are also **coupon bonds**; which are interest coupons that are attached to the bonds.

4. Convertible and/or Callable1. **Convertible bonds** and notes can be exchanged for a fixed number of shares of the issuing company’s common stock.
2. **Callable bonds** and notes have an option exercisable by the issuer to retire them at a stated dollar amount before maturity.

B. Debt-to-Equity Ratio1. Knowing the level of debt helps in assessing the risk of a company’s financing structure.2. A company financed mainly with debt is riskier than a company financed mainly with equity because liabilities must be repaid.3. Debt-to-equity ratio measures the risk of a company’s financing structure. |
| 4. Debt-to-equity ratio is computed by dividing total liabilities by total equity.**VII. Bond Pricing (Appendix 10A)**The price of a bond is the present value of the bond’s future cash flows discounted at the current market rate. Present value tables can be used to compute price, which is the *combination* of the: |
| 1. Present value of the maturity payment (par value) is found by using single payment table, the market rate, and number of periods until maturity.2. Present value of the semiannual interest payments is found by using annuity table, the market rate, and number of periods until maturity.3. Present values found in present value tables in Appendix B at the end of this book. |
| 1. **Effective Interest Amortization (Appendix 10B)**
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| A. Effective Interest Amortization of Discount Bonds1. The straight-line method yields changes in the bonds’ carrying value while the amount for bond interest expense remains constant. (Total interest expense / # interest periods) |
| 2. The **effective interest method** allocates total bond interest expense over the bonds’ life in a way that yields a constant rate of interest.3. The key difference between the two methods lies in computing bond interest expense. Instead of assigning an equal amount of bond interest expense in each period, the effective interest method assigns a bond interest expense amount that increases over the life of a discount bond.4. Both methods allocate the same amount of bond interest expense to the bonds’ life, but in different patterns.5. Except for differences in amounts, journal entries recording the expense and updating the Discount on Bonds Payable account balance are the same under both methods. |
| B. Effective Interest Amortization of Premium Bonds1. As noted above, the **effective interest method** allocates total bond interest expense over the bonds’ life in a way that yields a constant rate of interest. |
| 2. Except for differences in amounts between the two methods (that is, the straight-line and effective interest methods), journal entries recording the expense and updating the Premium on Bonds Payable account are the same under both methods. |
| 1. **Leases and Pensions (Appendix 10C)**
2. Lease Liabilities

A **lease** is an agreement between a *lessor* (owner) and a *lessee* (renter or tenant) that gives the lessee the right to use the asset for a period of time in return for cash (rent) payments.Leases are either finance leases or operating leases. Lessee records a “Right-of-Use Asset” and “Lease Liability” equal to the present value of lease payments.B. **Finance Leases** are long-term leases where the lessee receives substantially all remaining benefits of the asset. Similar to financing an asset purchase.1. A finance lease must meet *one or more of five* criteria:

a. Transfer ownership of leased asset to lessee.b. Has a purchase option that lessee is reasonably certain to exercise.c. Lease term is for major part of leased asset’s remaining economic life. d. Present value of lease payments equals or exceeds  substantially all of leased asset’s fair value.e. Lease asset is specialized and expected to have no alternative use to lessor at lease-end.C. **Operating Leases** are long-term leases which do not meet any of the five criteria for finance leases.1. Lessee records lease payments as expenses.2. Lessor records lease payments as revenues.D. **Short-Term Leases** |
| E. Pension LiabilitiesA pension plan is an agreement for the employer to provide benefits (payments) to employees after they have retired.1. Employer records their payment into pension plan as a debit to Pension Expense and a credit to Cash.
2. Defined Benefit Plan gives workers defined future benefits.
3. Pension liability is reported when the accumulated benefit obligation is more than the plan assets.
4. Pension plans can be overfunded (resulting in plan assets) or underfunded (resulting in plan liabilities).
5. Other postretirement benefits refer to nonpension benefits such as health care and life insurance benefits. These costs are estimated, and liabilities accrued when employees earn them.
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