

CHAPTER 10

Reporting and Analyzing Liabilities

Study Objectives

- Explain a current liability and identify the major types of current liabilities.
- Describe the accounting for notes payable.
- Explain the accounting for other current liabilities.
- Explain why bonds are issued and identify the types of bonds.
- Prepare the entries for the issuance of bonds and interest expense.
- Describe the entries when bonds are redeemed.
- Identify the requirements for the financial statement presentation and analysis of liabilities.

Chapter Outline

Study Objective 1 - Explain a Current Liability and Identify the Major Types of Current Liabilities

1. Liabilities are defined as "creditors' claims on total assets" and as "existing debts and obligations."
 - a. These claims, debts, and obligations must be settled or paid at some time in the future by the transfer of assets or services.
 - i. A **current liability** is a debt that can reasonably be expected to be paid
 1. from existing current assets or through the creation of other current liabilities, and
 2. within one year or the operating cycle, whichever is longer.
 - ii. **Long-term liabilities** are debts that do not meet both of the aforementioned criteria.
2. The different types of current liabilities include
 - a. notes payable,
 - b. accounts payable,
 - c. unearned revenues, and
 - d. accrued liabilities such as taxes, salaries and wages, and interest.

Study objective 2 - Describe the Accounting for Notes Payable

1. Obligations in the form of written notes are recorded as **notes payable**.
 - a. Notes payable are often used instead of accounts payable because they
 - i. give the lender written documentation of the obligation in case legal remedies are needed to collect the debt and
 - ii. they will be satisfied prior to accounts receivable in any reorganization proceeding
 - b. Notes payable usually require the borrower to pay interest and frequently are issued to meet short-term financing needs.
 - c. Notes are issued for varying periods of time.
 - i. **Notes due for payment within one year of the balance sheet date are generally classified as current liabilities.**

Accounting for Notes and Interest Illustrated

Assume Cole Williams Co. is borrowing \$100,000 from the First National Bank on September 1, 2004. The note earns interest at a rate of 12% and matures in four months. On September 1 Cole Williams Co. receives \$100,000 and makes the following journal entry:

Sep. 1	Cash	100,000	
	Notes Payable		100,000
	(To record issuance of 12%, 4-month note to First National Bank)		

The interest, which accrues over the life of the note, must be recorded when financial statements are prepared at December 31.

Dec. 31	Interest Expense	4,000	
	Interest Payable		4,000
	(To accrue interest for 4 months on First National Bank note)		

The note matures on January 1 and Cole Williams must pay the face amount of the note plus the interest ($\$100,000 \times 12\% \times 4/12$). The entry to record the payment of the note and interest is:

Jan. 1	Notes Payable	100,000	
	Interest Payable		4,000
	Cash		104,000
	(To record payment of First National Bank note and accrued interest at maturity)		

Study objective 3 - Explain the Accounting for Other Current Liabilities

1. **Sales taxes payable** - Sales taxes are expressed as a percentage of the sales price.
 - a. The seller collects the sales tax from the customer when the sale occurs and remits the tax collected to the state's department of revenue periodically (usually monthly).
 - b. Most states require that the sales tax collected be rung up separately on the cash register. (Gasoline sales are a major exception.)

Accounting for Sales Tax Liability

Assume Cooley Grocery Stores records the March 25 cash register reading showing sales of \$10,000 and sales taxes of \$600.

Mar. 25	Cash	10,600	
	Sales		10,000
	Sales Taxes Payable		600
	(To record daily sales and sales taxes)		

When the taxes are remitted to the state taxing agency the Sales Taxes Payable account is decreased (debited) and Cash is decreased (credited).

- c. When sales taxes are not rung up separately on the cash register, total receipts are divided by 100% plus the sales tax percentage to determine sales.

Note: if Cooley did not ring the sales tax up separately, total receipts of \$10,600 would have been rung up. To find the amount of sales and tax, Cooley would divide the \$10,600 by 106% (100% + 6%). Thus, the sales is determined to be \$10,000 and the remainder of \$600 is the amount of the sales tax.

2. **Payroll and payroll taxes payable** - Every employer incurs liabilities relating to employees' salaries and wages; those liabilities are the payroll itself and the taxes on that payroll.

(Note that the employer is responsible for collecting both Employer and Employee portions of payroll tax)

- a. **Wages and salaries payable:** This liability is the amount owed to employees for services performed.
 - i. **Wages:** Liabilities to employees compensated on an hourly basis
 - ii. **Salaries:** Compensation owed to supervisory employees who are compensated for performing a task and not compensated on an hourly basis.
 - b. **Withholding taxes—federal and state income and FICA**

- i. Employers are responsible for two components of withholding taxes:
 1. **Employee taxes:** These are the employee's income taxes owed to federal, social security, state and local governments.
 - a. Often referred to as employee deductions, it is the employers responsibility to deduct these taxes and remit them to the appropriate agency for the employee.
 - i. These items are carried as current liabilities on the employers books.
 2. **Employer taxes:** Employers incur various payroll taxes levied upon the employer.
 - a. These payroll taxes include the employer's share of Social Security (FICA) taxes and state and federal unemployment taxes.

Accounting for Payroll Liabilities Illustrated

Assume employee's accrue a salary of \$100,000. The following entry for the accrual and payment of a \$100,000 payroll illustrates the recognition of the two liabilities incurred by the employer.

Mar. 7	Salaries and Wages Expense	100,000	
	FICA Taxes Payable		7,250
	Federal Income Taxes Payable		21,864
	State Income Taxes Payable		2,922
	Salaries and Wages Payable		67,964
	(To record payroll and withholding taxes for the week ending March 7)		

Liability to employees, state and federal agencies for employee's wages and taxes

Mar. 7	Salaries and Wages Payable	67,964	
	Cash		67,964
	(To record payment of the March 7 payroll)		

Note that "take home" (net pay) is only about 2/3 of gross pay. Unless the Feds fix SSI, it's going to much lower in the coming

The employer's share of Social Security (FICA) taxes and state and federal unemployment taxes would be recorded with the following entry:

Mar. 7	Payroll Tax Expense	13,450	
	FICA Taxes Payable		7,250
	Federal Unemployment Taxes Payable		800
	State Unemployment Taxes Payable		5,400
	(To record employer's payroll taxes on March 7 payroll)		

Liability to state and federal agencies for employer's share of taxes on employee wages.

3. **Unearned revenues** - Companies such as magazine publishers and airlines typically receive cash before goods are delivered or services are rendered. The companies account for these unearned revenues as follows:
 - a. When the advance (prepayment) is received, both Cash and a current liability account identifying the source of the unearned revenue are increased.
 - b. When the revenue is earned (service is performed), the unearned revenue account is decreased (debited) and an earned revenue account is increased (credited).

Accounting for Unearned Revenue Illustrated

Assumes that CSULB sold 10,000 season basketball tickets at \$50 each for its five-game home schedule. The entry for the sales of season tickets is:

Aug. 6	Cash	500,000	
	Unearned Ticket Revenue		500,000
	(To record sale of 10,000 season tickets)		

As each game is completed, this entry is made:

	Unearned Ticket Revenue	100,000	
	Basketball Revenue		100,000
	(To record basketball ticket revenues earned)		

The balance in the account, Unearned Ticket Revenue, is reported as a liability.

4. **Current maturities of long-term debt** - The current portion of a long-term debt should be included in Current Liabilities.
 - a. The current maturities portion of long-term debt are frequently identified in the current liabilities portion of the balance sheet as **long-term debt due within one year**.
 - b. It is not necessary to prepare an adjusting entry to recognize the current maturity of long-term debt.

Study objective 4 - Explain why Bonds are Issued and Identify the Types of Bonds

1. Bonds are formal financing instruments designed to borrow from investors over an extended period of time.
 - a. Bonds are long-term liabilities and bond investors are creditors (as opposed to stockholders) who are equity investors (owners) of the corporation.
 - i. Remember that **Long-term liabilities** are obligations that are expected to be paid after one year.
 - ii. The most common Long-term liabilities are bonds or long-term notes.
 1. **Bonds** are a form of interest-bearing notes payable issued by corporations, universities, and governmental agencies.
 - a. Like common stock, bonds are sold in small denominations (usually \$1,000 or multiples of \$1,000).
 - i. **Secured bonds** have specific assets of the issuer pledged as collateral for the bonds.
 - ii. **Unsecured bonds** are issued against the general credit of the borrower.
 - iii. **Convertible bonds** can be converted into common stock at the bondholder's option.
 1. The conversion often gives bondholders an opportunity to benefit if the market price of the common stock increases substantially.
 2. Bonds are an attractive financing tool for the issuer because they sell at a higher price and pay a lower rate of interest than comparable debt securities that do not have a conversion option.
 - a. This is because they are less risky than notes (Bondholders get paid first in any liquidation process).
 - b. In business there is always a "risk/return" matrix in which investors/creditors require a higher return on more risky investments.
 - b. **Callable bonds** are subject to retirement at a stated dollar amount prior to maturity at the option of the issuer.
 - c. **Bond Terminology:**
 - i. A **bond certificate** is issued to the investor to provide evidence of the investor's claim against the company.
 - ii. The **face value** is the amount of principal due at the maturity date.
 - iii. The **maturity date** is the date that the final payment is due to the investor from the company.
 - iv. The **contractual interest rate**, often referred to as the **stated rate**, is the rate used to determine the amount of cash interest the borrower pays and the investor receives.
 1. The contractual rate is generally stated as an annual rate, and interest is usually paid semiannually.
2. **Determining the Market Value of Bonds**
 - a. When an investor purchases a bond, he purchases the right to receive two things:

- i. The principal (face value of the bond) at maturity and
- ii. Interest on the face value of the bond during the life of the bond.
 1. The market value (what the bond can be bought or sold for) of a bond is the present value of those two components computed using the market rate of interest.
 - a. The process of finding the present value is referred to as **discounting** the future amounts.

Determining the Market Value of a Bond Illustrated

Assume that Acropolis Company on January 1, 2004, issues \$100,000 of 9% bonds, due in five years, with interest payable annually at year end.

The Market Rate is 9%

The purchaser of the bonds would receive the following two cash payments:

- Principal of \$100,000 to be paid at maturity
- Five \$9,000 interest payments (\$100,000 x 9%) over the term of the bonds

Refer to tables 3 and 4 pp c9,c11
 PV of a sum n=5, i=9: .64993
 PV of an ordinary annuity n=5, i=9: 3.88965

Compute the sales price of the Bond in each of the following situations:

Situation # 1: The Market Rate is 9% (i.e. the market rate is equivalent to the stated rate)

Present value of \$100,000 received in five years @ 9% (100,000 x .64993)	\$ 64,993
Present value of \$9,000 received annually for five years @ 9% (9,000 x 3.88965)	<u>35,007</u>
Market price of bonds	<u>\$ 100,000</u>

Journal Entry:

Cash		100,000		
	Bonds Payable		100,000	

Situation #2: The Market Rate is 12% (i.e. the market rate is greater than the stated rate)

The present values of these amounts are shown below:

Present value of \$100,000 received in five years @ 12% (100,000 x .56743)	\$ 56,743
Present value of \$9,000 received annually for five years @ 12% (9,000 x 3.60478)	<u>32,443</u>
Market price of bonds	<u>\$ 89,168</u>

Bond sells at a discount because market rate is greater than state

Journal Entry:

Cash		89,168		
	Discount on B/P	10,832		
	Bonds Payable		100,000	

Situation #3: The Market Rate is 6% (i.e. the market rate is greater than the stated rate)

The present values of these amounts are shown below:

Present value of \$100,000 received in five years @ 6% (100,000 x .74726)	\$ 74,726
Present value of \$9,000 received annually for five years @ 6% (9,000 x 4.21236)	<u>37,911</u>
Market price of bonds	<u>\$ 112,637</u>

Bond sells at a premium because market rate is greater than state rate

Journal Entry:

Cash		112,637		
	Premium on B/P	12,637		
	Bonds Payable		100,000	

Study objective 5 - Prepare the Entries for the Issuance of Bonds and Interest Expense

1. A business records bond transactions when it
 - a. issues or buys back bonds,
 - b. when it makes interest payments and
 - c. when bondholders convert bonds into common stock.

- i. If a bondholder sells a bond to another investor (in the bond market), the issuing firm receives no further money on the transaction, **nor is the transaction journalized by the issuing corporation.**

1. The issuing corporation (or the underwriter) is notified of the new bondholder address so that interest payments can be made to the bond investor.

2. Accounting for Bonds Issued at Face Value:

- ◆ **Issuing Bonds at Face Value**—To illustrate, assume that CSULB Corporation issued 100, 5-year, 10%, \$1,000 bonds dated January 1, 2004, at 100 (100% of face value). Assume interest is payable annually on January 1 when the market rate was 10%. The entry to record the sale is:

Jan. 1	Cash	100,000
	Bonds Payable	100,000
	(To record sale of bonds at face value)	

The bonds are reported in the long-term liability section of the balance sheet because the maturity date is more than one year away.

The adjusting entry to record the accrued interest on December 31 is:

Dec. 31	Bond Interest Expense	10,000
	Bond Interest Payable	10,000
	(To accrue bond interest)	

Bond interest payable is classified as a current liability because it is scheduled for payment within the next year.

The entry to record the payment on January 1:

Jan. 1	Bond Interest Payable	10,000
	Cash	10,000
	(To record payment of bond interest)	

◆ Issuing Bonds at a Discount

- If the contractual interest rate is less than the market rate, bonds sell at a **discount** or at a price less than 100% of face value.
- Although **Discount on Bonds Payable** has a debit balance, it is **not an asset**; it is a **contra account**, which is **deducted from bonds payable** on the balance sheet.
- To illustrate bonds sold at a discount, assume that on January 1, 2004, Candlestick, Inc., sells \$100,000, 5-year, 10% bonds at 98 (98% of face value) with interest payable on January 1. The entry to record the issuance is:

Jan. 1	Cash	98,000
	Discount on Bonds Payable	2,000
	Bonds Payable	100,000
	(To record sale of bonds at a discount)	

- The \$98,000 represents the **carrying amount** of the bonds.
- The issuance of bonds below face value causes the total cost of borrowing to differ from the bond interest paid. The difference between the issuance price and the face value of the bonds—the discount—

represents an **additional cost of borrowing** and should be recorded as **bond interest expense** over the life of the bond.

- The total cost of borrowing \$98,000 for Candlestick, Inc. is \$52,000 computed as follows:

Annual interest payments		
(\$100,000 × 10% = \$10,000; \$10,000 × 5)	\$50,000	
Add: Bond discount (\$100,000 - \$98,000)		<u>2,000</u>
Total cost of borrowing		<u>\$52,000</u>

- To follow the matching principle, bond discount is allocated to expense in each period in which the bonds are outstanding. This is referred to as **amortizing the discount**.
- Amortization of the discount **increases** the amount of interest expense reported each period.
- As the discount is amortized, its balance will decline and as a consequence, the carrying value of the bonds will increase, until at maturity the carrying value of the bonds equals their face amount.

◆ Issuing Bonds at a Premium

- If the contractual interest rate is greater than the market rate, bonds sell at a **premium** or at a price greater than 100% of face value.
- To illustrate bonds sold at a premium, assume the Candlestick, Inc. bonds described before are sold at 102 (102% of face value) rather than 98. The entry to record the sale is:

January 1	Cash	102,000	
	Bonds Payable		100,000
	Premium on Bonds Payable		2,000
	(To record sale of bonds at a premium)		

- The premium on bonds payable is **added to bonds payable** on the balance sheet, as shown below:

Long-term liabilities		
Bonds payable	\$100,000	
Add: Premium on bonds payable	<u>2,000</u>	\$102,000

- The sale of bonds above face value causes the total cost of borrowings to be **less than the bond interest paid** because the borrower is not required to pay the bond premium at the maturity date of the bonds. Thus, the premium is considered to be a **reduction in the cost of borrowing** that reduces bond interest expense over the life of the bonds.
- A bond premium, like a bond discount, is allocated to expense in each period in which the bonds are outstanding. This is referred to as **amortizing the premium**.
- Amortization of the premium **decreases** the amount of interest expense reported each period. That is, the amount of interest expense reported in a period will be less than the contractual amount.
- As the premium is amortized, its balance will decline and as a consequence, the carrying value of the bonds will decrease, until at maturity the carrying value of the bonds equals their face amount.

- ◆ Procedures for amortizing bond premium are discussed in Appendix 10A and Appendix 10B at the end of this chapter.

Study objective 6 - Describe the Entries when Bonds are Redeemed

1. Bonds are retired when they are purchased (redeemed) by the issuing corporation.
 - a. **Redeeming Bonds at Maturity**
 - i. Regardless of the issue price of bonds, the book value of the bonds at maturity will equal their face value.
 - ii. Assuming that the interest for the last interest period is paid and recorded separately, the interest to record the redemption of the Candlestick bonds at maturity is:

Bonds Payable	100,000	
Cash		100,000
(To record redemption of bonds at maturity)		

2. **Redeeming Bonds before Maturity**
 - a. A company may decide to retire bonds before maturity to reduce interest cost and remove debt from its balance sheet.
 - i. A company should retire debt early only if it has sufficient cash resources.
 - ii. When bonds are retired before maturity, it is necessary to eliminate all components of the bond from the company books. This usually involves three steps:
 1. eliminate the carrying value of the bonds at the redemption date,
 - a. The carrying value is the face value of the bonds less unamortized bond discount or plus unamortized bond premium at the redemption date.
 2. record the cash paid, and
 3. recognize the gain or loss on redemption.

Early Retirement (Redemption) of Bond Liability

Assume at the end of the fourth period Candlestick, inc., having sold its bonds at a premium, retires its bonds at 103 after paying the annual interest. The carrying value of the bonds at the redemption date is \$100,400. The entry to record the redemption of Candlestick's bonds at the end of the fourth interest period (January 1, 2008) is:

Jan. 1	Bonds Payable	100,000	
	Premium on Bonds Payable	400	
	Loss on Bond Redemption	2,600	
	Cash		103,000
	(To record redemption of bonds at 103)		

Study objective 7 - Identify the Requirements for the Financial Statement Presentation and Analysis of Liabilities

1. **Balance Sheet Presentation**
 - a. All items on the balance sheet are presented in order of liquidity.
 - i. Current liabilities are the first category under Liabilities on the balance sheet.
 1. Each of the principal types of current liabilities is listed separately within the category.
 - a. Within each category a common method of presenting current liabilities is to list them by **order of magnitude**, with the largest obligation first.
 - ii. Long-term liabilities are reported in a separate section of the balance sheet immediately following "Current Liabilities."
 - i. Disclosure of debts is very important. Summary data regarding debts may be presented in the balance sheet with detailed data (such as interest rates, maturity dates, conversion privileges, and assets pledged as collateral) shown in a supporting schedule in the notes.
 - ii. The current maturities of long-term debt should be reported as current liabilities if they are to be paid from current assets.

2. Statement of Cash Flows Presentation

- a. Information regarding cash inflows and outflows that resulted from the principal portion of debt transactions is provided in the "Financing activities" section of the statement of cash flows.
- b. Interest expense is reported in the "Operating activities" section, even though it resulted from debt transactions.
 - i. Recall that interest from any source is always an operating activity

3. Analysis of Liabilities: Careful examination of debt obligations helps you assess a company's ability to pay its current obligations; it also helps to determine whether a company can obtain long-term financing in order to grow.

- a. **Liquidity ratios** measure the short-term ability of a company to pay its maturing obligations and to meet unexpected needs for cash.
 - i. A commonly used measure of liquidity is the current ratio (presented in Chapter 2), calculated as current assets divided by current liabilities.
 1. In recent years many companies have intentionally reduced their liquid assets (such as cash, accounts receivable, and inventory) because they cost too much to hold. Companies that keep fewer liquid assets on hand must rely on other sources of liquidity.
 - a. One such source is a **bank line of credit**—a prearranged agreement between a company and a lender that permits the company to borrow up to an agreed-upon amount.
- b. **Solvency ratios** measure the ability of a company to survive over a long period of time.
 - i. Although at one time there were many U. S. automobile manufacturers, only two U.S. based firms survive today. Many of the others went bankrupt. To reduce risks associated with having a large amount of debt during an economic downturn, U.S. automobile manufacturers have taken two precautionary steps.
 1. They have built up large balances of cash and cash equivalents to avoid a cash crisis.
 2. They have been reluctant to build new plants or hire new workers to meet their production needs. Instead, they have asked existing workers to work overtime, or they "outsource" work to other companies.
 - ii. One measure of a company' solvency is the debt to total assets ratio (Chapter 2), calculated as total liabilities divided by total assets. This ratio indicates the extent to which a company's debt could be repaid by liquidating its assets.
 - iii. Another useful measure is the **times interest earned ratio**, which provides an indication of a company's ability to meet interest payments as they come due, computed by dividing income before interest expense and income taxes by interest expense.

Times Interest Earned

The computation of the debt to total assets ratio and the times interest earned ratio for the Automotive Division of General Motors and the auto industry which is presented in your text.

(\$ in millions)	2001	2000
Net income (loss)	(\$ 1,167)	\$ 2,839
Interest expense	751	815
Tax Expense (refund)	(270)	1,443

Debt to Total Assets Ratio = Total Liabilities ÷ Total Assets

Times Interest Earned Ratio = (Net Income + Interest Expense + Tax Expenses) ÷ Interest Expense

(\$ In Millions)	General Motors	Industry Average	
	2001	2000	2001
Debt to Total Assets Ratio	\$ 126,171 = 97%	\$ 116,704 = 88%	88.9%
	\$ 130,210	\$ 133,356	
Times Interest Earned Ratio	(\$1,167)+\$751-\$270 \$751	\$2,839+\$815+\$1,443 \$815	
	= 0 Times	= 6.3 Times	1.4 Times

Different industries have different capital structures and businesses within different industries have ratios that are quite different from the ones computed here.

4. Other Analysis Issues: Unrecorded Debt

- a. A concern for analysts when they evaluate a company's liquidity and solvency is whether that company has properly recorded all of its obligations.
 - i. The bankruptcy of **Enron Corporation**, one of the largest bankruptcies in U.S. history, demonstrates how much damage can result when a company does not properly record or disclose all of its obligations.
 - ii. A company's balance sheet may not fully reflect its potential obligations due to **contingencies**—events with uncertain outcomes.
 - iii. A the various results of a lawsuit are an example of a contingent liability.
- b. A company's balance sheet may not fully reflect its actual obligations due to "**off-balance-sheet financing**"—an attempt to borrow funds in such a way that the obligations are not recorded.
 - i. One example of this practice is leasing assets without showing the assets or related debt on the balance sheet.
 1. Critics of off-balance-sheet financing contend that many leases represent unavoidable obligations that meet the definition of a liability, and therefore should be reported as liabilities on the balance sheet.
 - a. Companies are required to report their operating lease obligations (an operating lease is like an apartment rental: the rights and responsibilities of ownership remain with the lessor) for subsequent years in a note which allows analysts and other financial statement users to adjust a company's financial statements by adding leased assets and lease liabilities if they feel that this treatment is more appropriate.
 - b. Appendix 10D of the Kimmel et al text discusses the criteria used to determine the accounting treatment for contingent liabilities and leases.

Appendix 10A – Amortizing Bond Premiums and Discounts

1. Straight-Line Amortization

- a. To follow the matching principle, bond discount should be allocated to expense in each period in which the bonds are outstanding.
- b. Straight-line method of amortization allocates the same amount of interest expense in each interest period.
 - i. In the Candlestick, Inc. example (page 482 Kimmel et.al.) the company sold \$100,000, 5-year, 10% bonds on January 1, 2004, for \$98,000. The \$2,000 bond discount (\$100,000 - \$98,000) amortization is \$400 ($\$2,000 \div 5$) for each of the five amortization periods.
 1. The entry to record the accrual of bond interest and the amortization of bond discount on the first interest date (December 31) is:

Amortization of Bond Discount

Dec. 31	Bond Interest Expense	10,400	
	Discount on Bonds Payable	400	
	Bond Interest Payable	10,000	
	(To record accrued bond interest and amortization of bond discount)		

- ii. Over the term of the bonds, the balance in Discount on Bonds Payable will decrease annually by the same amount until it has a zero balance at the maturity date of the bonds.
 1. Thus, the carrying value of the bonds at maturity will be equal to the face value of the bonds.

- Continuing the Candlestick, Inc. example, assume the bonds are sold for \$102,000, rather than \$98,000. This results in a bond premium of \$2,000 ($\$100,000 - \$102,000$). The premium amortization for each interest period is \$400 ($\$2,000 \div 5$). The entry to record the first accrual of interest on December 31 is:

Dec. 31	Bond Interest Expense	9,600	
	Premium on Bonds Payable	400	
	Bond Interest Payable	10,000	
	(To record accrued bond interest and amortization of bond premium)		

Amortization of Bond Premium

- Over the term of the bonds, the balance in Premium on Bonds Payable will decrease annually by the same amount until it has a zero balance at maturity.
- The carrying value of the bond decreases \$400 each period until it reaches its face value of \$100,000 at the end of period five.

Appendix 10B – Effective-Interest Amortization

1. We noted above that to comply with the matching principle, bond discount should be allocated to expense in each period in which the bonds are outstanding.
 - a. Under straight-line amortization the interest expense allocated to each period changes because the carrying value of the bond is decreasing while the interest amortization remains the same.
 - i. To completely comply with the matching principle, interest expense as a percentage of carrying value should not change over the life of the bonds.
 1. This means that the same percentage of the carrying value of the bond should be used each period.
 - ii. This percentage, referred to as the **effective-interest rate**, is established when the bonds are issued and remains constant in each interest period.

- b. Under the **effective-interest method**, the amortization of bond discount or bond premium results in periodic interest expense equal to a constant percentage of the carrying value of the bonds.
- i. The following steps are required under the effective-interest method:
 1. Compute the **bond interest expense** by multiplying the carrying value of the bonds at the beginning of the interest period by the effective-interest rate.
 2. Compute the **bond interest paid** (or accrued) by multiplying the face value of the bonds by the contractual interest rate.
 3. Compute the **amortization amount** by determining the difference between the amounts computed in the first two steps.
- c. Both the straight-line and the effective-interest methods of amortization result in the same total amount of interest expense over the term of the bonds.
- i. If interest expense each period is comparable in amount (e.g. not materially different) either method may be used.
 - ii. When the amounts are materially different, the effective-interest method is required under generally accepted accounting principles (GAAP).

2. The Effective Interest Method of **Amortizing Bond Discount Illustrated**

- a. Assume that Wrightway Corporation issues \$100,000 of 10%, 5-year bonds on January 1, 2004, with interest payable each January 1. The bonds sell for \$92,790 (92.79% of face value), which results in bond discount of \$7,210 (\$100,000 - \$92,790) and an effective-interest rate of 12%. For the first period, the computations of bond interest expense and the bond discount amortization are as follows:

Bond interest expense (\$92,790 × 12%)	\$ 11,135
Bond interest paid (\$100,000 × 10%)	<u>10,000</u>
Bond discount amortization	<u>\$ 1,135</u>

Effective Interest Method: Bond Discount

	Date	Interest Payment	Effective Interest	Amortization (Premium) Discount	Carrying Value	
	0	37,987			92,790	100,000
	1	38,352	10,000	11,135 (1,135)	6,075	93,925
	2	38,717	10,000	11,271 (1,271)	4,804	95,196
	3	39,082	10,000	11,424 (1,424)	3,380	96,620
	4	39,447	10,000	11,594 (1,594)	1,786	98,214
	5	39,812	10,000	11,786 (1,786)	0	100,000

The entry to record the accrual of interest and amortization of bond discount by Wrightway Corporation on December 31, is:

Dec. 31	Bond Interest Expense	11,135	
	Discount on Bonds Payable		1,135
	Bond Interest Payable		10,000

(To record accrued bond interest and amortization of bond discount)

For the second interest period, bond interest expense will be \$11,271 (\$93,925 × 12%) and the discount amortization will be \$1,271. At December 31, the following adjusting entry is made:

Dec. 31	Bond Interest Expense	11,271	
	Discount on Bonds Payable		1,271
	Bond Interest Payable		10,000

(To record accrued bond interest and amortization of bond discount)

3. The Effective Interest Method of **Amortizing Bond Premium Illustrated**

- a. The amortization of bond premium by the effective-interest method is similar to the procedures described for bond discount.
- b. Assume that Wrightway Corporation issues \$100,000, 10%, 5-year bonds on January 1, with interest payable on January 1. In this case, the bonds sell for \$107,985, which results in bond premium of \$7,985 and an effective-interest rate of 8%.

Effective Interest Method: Bond Premium

Date	Interest Payment	Effective Interest	Amortization (Premium)	Discount	Carrying Value	
	37,987			(7,985)	107,985	100,000
	38,352	10,000	8,639	1,361	(6,624)	106,624
	38,717	10,000	8,530	1,470	(5,154)	105,154
	39,082	10,000	8,412	1,588	(3,567)	103,567
	39,447	10,000	8,285	1,715	(1,852)	101,852
	39,812	10,000	8,148	1,852	0	100,000

The entry on December 31 is:

Dec. 31	Bond Interest Expense	8,639	
	Premium on Bonds Payable	1,361	
	Bond Interest Payable		10,000

(To record accrued bond interest and amortization of bond premium)

- c. For the first interest period, the computations of bond interest expense and the bond premium amortization are:

Bond interest paid (\$100,000 × 10%)	\$ 10,000
Bond interest expense (\$107,985 × 8%)	<u>8,639</u>
Bond premium amortization	<u>\$ 1,361</u>

- d. For the second interest period, bond interest expense will be \$8,530 and the premium amortization will be \$1,470.
 - i. Note that the amount of periodic interest expense decreases over the life of the bond when the effective-interest method is applied to bonds issued at a premium.
 1. The reason is that a constant percentage is applied to a decreasing bond carrying value to compute interest expense.

Appendix 10C – Accounting for Long-Term Notes Payable

1. Long-term notes payable are similar to short-term interest-bearing notes payable except that the terms of the notes exceed one year.
 - a. A long-term note may be secured by a document called a **mortgage** that pledges title to specific assets as security for a loan.
 - i. **Mortgage notes payable** are widely used in the purchase of homes by individuals and in the acquisition of plant assets by many companies.
 - ii. Like other long-term notes payable, the mortgage may stipulate either a fixed or an adjustable interest rate.
 1. Typically, the terms require the borrower to make installment payments over the term of the loan with each payment consisting of
 - a. interest on the unpaid balance of the loan and
 - b. a reduction of loan principle.
2. The portion of the payment applied to interest decreases each period, while the portion applied to the loan principal increases.
 - a. Mortgage notes are recorded initially at face value, and entries are required subsequently for each installment payment.
 - b. In the balance sheet, the reduction in principal for the next year is reported as a current liability, and the remaining unpaid principal balance is classified as a long-term liability.

Appendix 10D – Accounting for Contingencies and Leases

1. Contingent Liabilities

- a. **Contingencies** are events with uncertain outcomes.
 - i. Contingencies be disclosed in the notes, and in some cases they must be accrued as liabilities if both of the following conditions are met
 1. The contingency can be **reasonably estimated** of the expected loss and
 2. if there is a **probable** loss outcome
 - a. If both of these conditions are not met, then the company discloses the basic facts regarding the contingency in the notes to its financial statements.
 - ii. The loss is recorded by increasing (debiting) a loss account and increasing (crediting) a liability account.

2. Lease liabilities

- a. **Operating Leases:** (leases in which there is no transfer of ownership of the leased asset and the rights and responsibilities of ownership remain with the lessor), a periodic payment is made by the lessee and is recorded as rent expense.
 - i. In an **operating lease** the intent is temporary use of the property by the lessee with continued ownership of the property by the lessor.
- b. **Capital Leases:** (**all of the benefits and risks of ownership** are transferred to the lessee, so that the lease is in effect, a purchase of the property).
 - i. The type of lease described above is called a **capital lease** because the fair value of the leased asset is capitalized by the lessee by recording it on its balance sheet.
- c. Whether the lease is a capital lease or an operating lease is determined by asking the following questions:
 - i. Is it likely that the lessee will end up with the assets at the end of the lease?
 - ii. Will the lessee use the asset for most of its useful life?
 - iii. Will the payments made by the lessee be approximately the same as the payments it would have made if it had purchased the asset?

1. If the answer to any of these questions is yes, then the lease should be accounted for as a capital lease, and the lessee must record the asset and a related liability for the lease payments.
- d. Most lessees do not like to report leases on their balance sheets because the lease liability increases the company's total liabilities.
- i. Companies attempt to keep leased assets and lease liabilities off the balance sheet by structuring the lease agreement to avoid meeting the criteria of a capital lease.
 - ii. The procedure of keeping liabilities off the balance sheet is often referred to as **off-balance sheet financing**.

Chapter 10 Review

- ✓ Explain to someone who knows very little about accounting what a current liability is and illustrate by identifying major types of current liabilities.

- ✓ Describe the accounting for an interest-bearing note at its inception, at year-end, and at maturity.

- ✓ How do you account for unearned revenues?

- ✓ Why are bonds issued? What are the different types of bonds a company or municipality can issue?

- ✓ Describe the entries for the issuance of bonds issued at a discount.

- ✓ What entries are necessary when bonds are redeemed?

- ✓ In what sections of the statement of cash flows would a financial statement user obtain information related to the cash inflows and outflows related to debt transactions?

Chapter 10

_____ are defined as "creditors' claims on total assets" and as "existing debts and obligations." These _____, _____, and _____ must be settled or paid at some time in the future by the transfer of assets or services. The future date on which they are due or payable (the _____) is a significant feature of liabilities.

A current liability is a _____ that can reasonably be expected to be paid (1) from existing _____ or through the creation of other _____, and (2) within _____ or the operating cycle, whichever is longer. Debts that do not meet both of these criteria are classified as _____. The different types of current liabilities include _____, _____, _____, and such as taxes, salaries and wages, and interest.

Obligations in the form of written notes are recorded as _____. Notes payable are often used instead of _____ because they give the lender written documentation of the obligation in case legal remedies are needed to collect the debt. Notes payable usually require the borrower to pay _____ and frequently are issued to meet short-term financing needs. Notes are issued for varying periods of time. Those due for payment within one year of the balance sheet date are usually classified as _____.

Solutions - Reading Comprehension Check I

Chapter 10

Liabilities are defined as "creditors' claims on total assets" and "existing debts and obligations." These claims, debts, and obligations must be settled or paid at some time in the future by the transfer of assets or services. The future date on which they are due or payable (the maturity date) is a significant feature of liabilities.

A current liability is a debt that can reasonably be expected to be paid (1) from existing current assets or through the creation of other current liabilities, and (2) within one year or the operating cycle, whichever is longer. Debts that do not meet both of these criteria are classified as long-term liabilities. The different types of current liabilities include notes payable, accounts payable, unearned revenues, and accrued liabilities such as taxes, salaries and wages, and interest.

Obligations in the form of written notes are recorded as notes payable. Notes payable are often used instead of accounts payable because they give the lender written documentation of the obligation in case legal remedies are needed to collect the debt. Notes payable usually require the borrower to pay interest and frequently are issued to meet short-term financing needs. Notes are issued for varying periods of time. Those due for payment within one year of the balance sheet date are usually classified as current liabilities.

Chapter 10

Bonds have different features. Secured bonds have specific _____ of the issuer pledged as _____ for the bonds. Unsecured bonds are issued against the _____ of the borrower. Convertible bonds can be converted into _____ at the _____ option. Callable bonds are subject to retirement at a _____ amount prior to maturity at the option of the _____.

The _____ is the amount of principal due at the maturity date. The _____ is the rate used to determine the amount of cash interest the borrower pays and the investor receives. Usually the contractual rate is stated as an _____ rate, and interest is generally paid _____.

If the market rate of interest is lower than the contractual interest rate, investors will have to pay _____ than the face value of the bonds. Bond prices for both new issues and existing bonds are quoted as a percentage of the _____ of the bond, which is usually \$1,000. Bond interest is classified as a _____. Although Discount on Bonds Payable has a _____ balance, it is not an asset. Rather it is a _____, which is deducted from bonds payable on the balance sheet.

Solutions - Reading Comprehension Check II

Chapter 10

Bonds have different features. Secured bonds have specific assets of the issuer pledged as collateral for the bonds. Unsecured bonds are issued against the general credit of the borrower. Convertible bonds can be converted into common stock at the bondholder's option. Callable bonds are subject to retirement at a stated dollar amount prior to maturity at the option of the issuer.

The face value is the amount of principal due at the maturity date. The contractual interest rate is the rate used to determine the amount of cash interest the borrower pays and the investor receives. Usually the contractual rate is stated as an annual rate, and interest is generally paid semiannually.

If the market rate of interest is lower than the contractual interest rate, investors will have to pay more than the face value of the bonds. Bond prices for both new issues and existing bonds are quoted as a percentage of the face value of the bond, which is usually \$1,000. Bond interest is classified as a current liability. Although Discount on Bonds Payable has a debit balance, it is not an asset. Rather it is a contra liability, which is deducted from bonds payable on the balance sheet.

Chapter 10

- _____ 1. Provides evidence of the investor's claim against the company.
- _____ 2. Method of presenting current liabilities on the balance sheet.
- _____ 3. A prearranged agreement between a company and a lender that permits the company to borrow up to an agreed-upon amount.
- _____ 4. Provides an indication of a company's ability to meet interest payments as they come due.
- _____ 5. Events with uncertain outcomes, such as a potential liability that may become an actual liability sometime in the future.
- _____ 6. Allocates the same amount of interest expense in each interest period.
- _____ 7. Determined by the difference between the bond interest expense and the bond interest paid or accrued.
- _____ 8. Bonds issued against the general credit of the borrower.
- _____ 9. A long-term note secured by a document called a mortgage.
- _____ 10. Rate established when bonds are issued that remains constant in each interest period.

Solutions to Vocabulary Quiz

Chapter 10

1. Bond certificate
2. Order of magnitude
3. Bank line of credit
4. Times interest earned ratio
5. Contingency
6. Straight-line method of amortization
7. Amortization amount
8. Unsecured bonds
9. Mortgage notes payable
10. Effective-interest rate

Chapter 10

1. Liabilities are
 - a. creditors' claims on total assets.
 - b. existing debts and obligations.
 - c. obligations that must be settled or paid at some time in the future by the transfer of assets or services.
 - d. all of the above.

2. Notes payable provide the lender
 - a. written documentation of the obligation.
 - b. interest income.
 - c. both a and b.
 - d. none of the above.

3. Assume the tax rate in your state is 8%. Your cash register does not have a key for sales tax. However, the total amount of cash received for sales and sales tax during the month of June was \$27,000. Sales for the month of June totaled
 - a. \$24,840.
 - b. \$25,000.
 - c. \$27,000.
 - d. none of the above.

4. All of the following would have unearned revenue **except**
 - a. the publisher of the Rolling Stone magazine.
 - b. Delta Airlines.
 - c. the local Slurp and Burp.
 - d. the Athletic Department of Exceptional University.

5. Current liabilities are listed
 - a. alphabetically.
 - b. in order of liquidity.
 - c. in order of magnitude.
 - d. in order of maturity.

6. The cash inflows during the year that resulted from the principal portion of debt transactions is provided in the
 - a. Financing activities section of the cash flow statement.
 - b. Operating activities section of the cash flow statement.
 - c. Investing activities section of the cash flow statement.
 - d. both a and b.

7. The times interest earned ratio uses income before interest expense and taxes because
 - a. interest and taxes are important components in all ratio analysis.
 - b. paying interest and taxes does not affect a company's solvency.
 - c. the ratio is easier to compute without these items.
 - d. this number best represents the amount available to pay interest.

8. A bond issued at a premium
 - a. is issued by a corporation with an excellent credit rating.
 - b. has a stated rate of interest that exceeds the market rate.
 - c. sell at a price in excess of the face amount of the bond.
 - d. both b and c above.

9. Discount on Bonds Payable
 - a. is a contra liability.
 - b. is an expense.
 - c. is deducted from bonds payable on the balance sheet.
 - d. both a and c above.

10. Contingencies must be accrued as liabilities if
 - a. the company can determine a reasonable estimate of the debt.
 - b. the amount is over \$10,000.
 - c. it is probable the company will suffer a loss.
 - d. both a and c above.

Solutions to Multiple Choice Quiz

Chapter 10

1. d
2. c
3. b
4. c
5. c
6. a
7. d
8. d
9. d
10. d

Exercise 1 - World Wide Web Research and Market Terminology Activity

Chapter 10

There are a number of creative ways to borrow money when financing a business. In order to speak the language of financiers, you need to have a good understanding of the terms used in the banking and investment industry. Go to www.nyse.com, scroll down and click on [ABOUT THE NYSE](#) and [Glossary](#). Find the definitions to the following terms:

1. Bond
2. Callable
3. Commercial paper
4. Convertible
5. Coupon-bond
6. Face value
7. General mortgage bond
8. Income bond
9. Mortgage bond
10. Municipal bond
11. Premium
12. Registered bond
13. Secondary market
14. Serial bond
15. Yield
16. Zero coupon bond

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 2 - Bond Basics and Communications Activity

Chapter 10

Your friend is considering investing approximately \$5,000 in bonds issued by her local school district. She knows you are an accounting major and has come to you for advice. She provides you with the following information about the bonds:

The bonds are secured.

The bonds are "callable."

The bonds are 8%, 20-year bonds.

The bonds are available at 103.

She has never invested in bonds and does not understand bond terminology. She is confused about why she will have to pay more than \$5,000 for her initial investment in the bonds. What will you tell your friend to help her understand the basics of investing in bonds? Will you advise your friend to invest in the bonds? Why or why not?

Solution:

You should describe to your friend the types of bonds commonly issued. Secured bonds have specific assets pledged as collateral for the bonds. Unsecured bonds are issued against the general credit of the borrower.

Although your friend knows the bonds are secured, you should suggest that she find out what assets are pledged as collateral. Explain the difference between callable bonds—bonds subject to retirement at a stated dollar amount prior to maturity at the option of the issuer—and convertible bonds—bonds that can be converted into common stock at the bondholder's option. Make sure your friend knows the amount she will receive if the school district calls the bonds before maturity. Tell your friend why she must pay more than the face value for the bond. Since 8 percent is higher than the market rate of interest, the school district can sell their bonds at a premium. With this information, your friend can make a more informed decision about investing her \$5,000 in bonds.

Exercise 4 - Note Payable Activity

Chapter 10

Pat's Quilting Shop borrowed \$10,000 on January 1, 2004, from the local bank to expand its building. The funds were borrowed by signing a \$10,000, 12%, one-year note payable.

1. Prepare the entry to record the receipt of the funds on January 1, 2004.
2. Prepare the entry to accrue the interest on June 30, 2004.
3. Show the balance sheet presentation for the note and accrued interest at June 30.

Solutions:

1. Jan 1 Cash 10,000
 Note Payable 10,000
 (To record issuance of 12%,
 1-year bank note)

2. Jun 30 Interest Expense 600
 Interest Payable 600
 (To accrue interest for 6
 months on bank note)

3. Current Liabilities
 Note Payable \$10,000
 Accrued Liabilities 600

Exercise 5 - Payroll Entries Activity

Chapter 10

During the month of April, Marble Company's employees earned wages of \$50,000. The following amounts were withheld from employees' wages:

Federal income taxes	\$8,600	
State income taxes	1,800	
Social Security taxes (FICA and Medicare)		3,800
United Way contributions	300	
Health insurance	1,300	

In addition, Marble incurred \$500 for state unemployment tax.

1. Prepare the April 30 journal entry assuming that the wages earned will be paid on May 1.
2. Prepare the entry on April 30 to record Marble's payroll tax expense.
3. Prepare the entry to record the payment on May 1.

Solutions:

1. Apr. 30

Salaries and Wages Expense	50,000	
Federal Income Taxes Payable	8,600	
State Income Taxes Payable	1,800	
FICA Taxes Payable	3,800	
United Way Contributions Payable		300
Health Insurance Payable	1,300	
Salaries and Wages Payable	34,200	

(To record April payroll and taxes withheld)
2. Apr. 30

Payroll Tax Expense	4,300	
FICA Taxes Payable	3,800	
State Unemployment Taxes Payable		500

(To record employer's payroll taxes on April payroll)
3. May 1

Salaries and Wages Payable	34,200	
Cash		34,200

(To record payment of April payroll)

Exercise 6 - World Wide Web Research and Bonds Activity

Chapter 10

Mention securities in a crowded room and someone will start talking about bonds. To find information on investing in bonds, go to www.investinginbonds.com.

Summarize Seven Simple Steps: Educate Yourself About Investing in Bonds! and How do Bond Prices and Interest Rates Work Together?

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 7 - World Wide Web Research and Liabilities Activity

Chapter 10

James Drummond Dole founded the Hawaiian Pineapple Company in 1851 with an initial investment of \$1,000. Today the name Dole is synonymous with pineapple. Research your school library or the World Wide Web to find Dole's annual report. If researching the Web go to www.dole.com.

1. What contingent liabilities does Dole have?
2. Are these contingencies shown in the financial statements or are they disclosed only in the notes to the financial statements?
3. Summarize the types of operating and capital leases Dole has.

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 8 - Unearned Revenue Activity

Chapter 10

Local University's baseball program sells 2,000 season tickets at \$75 each for its 15-game home schedule. Regular tickets are \$7 per game for adults. Students of the University and children under 18 get in free. During February Local played three home games. Ticket sales at the gate totaled \$6,524.

1. Prepare the entry to record the sale of season tickets.

2. Record the entry to record the revenue earned in February.

Solutions:

- | | | | |
|----|---|---------|---------|
| 1. | Cash | 150,000 | |
| | Unearned Baseball Ticket Revenue | | 150,000 |
| | (To record sale of 2,000 season tickets) | | |
| 2. | Cash | 6,524 | |
| | Unearned Baseball Ticket Revenue | | 30,000 |
| | Baseball Ticket Revenue | | 36,524 |
| | (To record baseball ticket revenues earned) | | |