

CHAPTER 15

Long-Term Liabilities

Chapter Overview

This chapter introduces the student to long-term liabilities, particularly bonds, as a way to finance operations. General background information is given for bond terminology, interest rates, and bond quotations. The concept of present value is related to bonds. Entries are illustrated for issuing bonds, paying interest, and paying bonds at maturity. The concept of selling bonds between interest dates at par value plus accrued interest is explained. Next, students learn about bonds issued at a discount and at a premium and the differences in accounting for them. At this point, straight-line amortization of the premium or discount is presented, followed by a presentation of the effective-interest method of amortizing the discount or premium. Illustrations and tables help the student grasp the effective-interest method. The reasons that the effective-interest method is preferable over the straight-line method are explained. A discussion follows of how to report bonds payable on the financial statements, and how to accrue interest and amortize premium or discount at year end.

The chapter continues with retirement and conversion of bonds prior to maturity. Next, the chapter discusses convertible bonds and notes, and illustrates how the current portion of long-term debt appears on the balance sheet. A comparison of financing by borrowing or by issuing shares helps the student understand the advantages and disadvantages of borrowing. The chapter then focuses on leases and lease liabilities. A checklist presents criteria that distinguish an operating lease from a capital lease. Off-balance-sheet financing is explained. The chapter concludes with a discussion on the impact of IFRS on long-term liabilities.

An appendix on the time value of money covers both future value and present value. This section teaches the student how to compute both future value and present value of a single payment and an annuity. Calculations based on future value and present value tables are explained and illustrated. The appendix shows how to calculate both the market price of a note or bond and the cost of an asset acquired through a capital lease.

Try It! questions appear at the end of each Learning Objective for students to test their understanding of the Learning Objective just completed. The answers appear at the end of the chapter and on MyLab Accounting.

Students should be directed to MyLab for extra practice. Also included on MyLab are Excel templates for Exercises 15-10, 15-11, and 15-12, and Problems 15-4A, 15-5A, 15-4B, and 15-5B.

The **Assignment Grid** recommends “Pre-Test” problems in MyLab that can be assigned before a test or exam to ensure students understand the topics, as well as “Post-Test” problems that students can complete after a test or exam to check understanding before moving on.

Connecting Learning Objectives and Key Questions

	Learning Objective	Key Question
1	Define bonds payable and the types of bonds	What are bonds?
2	Determine the price of a bond, and account for basic bond transactions	How do we account for the sale of a bond?
3	Amortize a bond discount and premium by the straight-line amortization method and the effective- interest amortization method	How do we allocate a bond discount or premium over the life of a bond?
4	Account for retirement and conversion of bonds	How do we account for changes in a bond issue?
5	Show the advantages and disadvantages of borrowing	How do we decide whether to issue debt versus equity?
6	Account for other long-term liabilities	How do we account for other long-term liabilities?
7	Account for operating leases and for assets acquired through a capital lease	How do we account for leases?
8	Identify the effects of IFRS on long-term liabilities	How does IFRS affect long-term liabilities?
A1	Compute the future value of an investment	How do we find the future value of an investment?
A2	Compute the present value of a single future amount and the present value of an annuity	How do we find a present value of an investment?

Suggested Priority of Chapter Topics

Must cover

- Bonds, an introduction
- Bonds
- Issuing bonds to borrow money
- Amortization of a bond discount and a bond premium
- Adjusting entries for interest expense

Recommended

- Mortgages and other long-term liabilities
- Retirement of bonds
- Convertible bonds and notes
- Advantages and disadvantages of issuing bonds versus shares
- Lease liabilities
- The effects on long-term liabilities of IFRS
- Future value
- Present value

Chapter Outline

Learning Objective 1: Define bonds payable and the types of bonds.

(What are bonds?)

- A. **Bonds payable** are groups of notes payable issued to many lenders (bondholders)
1. Purchasers receive a **bond** or **bond debenture** certificate bearing the name of the issuer that includes the following information as illustrated in Exhibit 15-1:
 - a. The **principal**—the amount the company has borrowed. Also referred to as the **face value**, **maturity value**, or **par value**. The principal is usually stated in multiples of \$1,000.
 - b. The **maturity date**—the date on which the principal amount must be repaid to the bondholder.
 - c. The **coupon rate** (the stated interest rate) and the interest dates (generally semi-annually).
 2. Bonds are usually sold through an **underwriter**, which purchases the bonds from the issuing company and resells them to its clients.
- B. **Types of bonds** (see Exhibit 15-2) include:
1. **Term bonds**—mature on a specific date.
 2. **Serial bonds**—mature in installments.
 3. **Secured bonds**—give the bondholder the right to take specific assets (called collateral) if the borrowing company **defaults** (fails to pay interest or principal). A **mortgage** is an example of a secured bond.
 4. **Debenture**—unsecured bonds that are backed only by the good faith of the borrower.
 5. **Bearer bonds** are bonds payable to the person that has possession of them. They are also called **unregistered bonds**.

Teaching Tip

Students may have difficulty understanding that bonds payable have characteristics similar to notes payable. To demonstrate, you should discuss the terms principal, due date, maturity value, interest rate, interest payments, and interest expense, and the need for adjusting entries at the end of the accounting period.

Learning Objective 2: Determine the price of a bond, and account for basic bond transactions.

(How do we account for the sale of a bond?)

- A. A bond is issued at a **premium** when issued at a price *above* its maturity value. A bond is issued at a **discount** when issued at a price *below* its maturity value. A bond issued at **par** is issued at its

principal, maturity, or face value, so has no premium or discount. For example, if a bond having a face value of \$1,000 is issued for \$1,000, it is said to be issued at par.

1. As a bond approaches the maturity date, the price of the bond moves toward its maturity value.
 2. The market value is equal to the maturity value on the maturity date.
 3. Bond prices are quoted using a basis of 100, the percent of maturity value. (Refer to Exhibit 15-4.)
- B. The purchase price of a bond, the amount an investor is willing to pay for it, is affected by the *time value of money*—the fact that money earns income over time.
1. The amount a person would pay *now* to receive a greater amount at a future date is the **present value**. (Refer to the appendix for a detailed discussion.)
 2. The present value is dependent on the amount of the future receipt (payment), the length of time from the investment to the date when the future amount is to be received (paid), and the interest rate during the period.
 3. The present value is always less than the future value.
- C. Two interest rates work to set the price of a bond—the **contract (stated) interest rate** and the **market (effective) interest rate**.
1. The **contract interest rate** determines the cash interest that the borrower pays. The contract rate is set by the bond contract and may be fixed or adjustable.
 2. The **market interest rate** is the rate investors demand for loaning their money and may vary from day to day. (Exhibit 15-3 summarizes how these two interest rates interact to determine bond prices.)
 - a. If investors demand a higher rate than the contract rate, the bonds will sell at a **discount**.
 - b. If investors demand a lower rate than the contract rate, the bonds will sell at a **premium**.
- D. Journal entries for bonds issued **at par** on an interest date follow:
1. On the date of *issuance*:

Cash	XX	
Bonds Payable		XX
 2. On the *interest payment* date:

Interest Expense	XX	
Cash		XX
 3. On the *maturity* date:

Bonds Payable	XX	
Cash		XX

E. Bonds issued between interest dates are sold at their market value *plus accrued interest*, that is, the interest since the last semiannual interest date.

1. The entry to record the *issuance* is:

Cash	XX	
Bonds Payable		XX
Interest Payable		XX

2. On the first semiannual interest date, the issuing company pays the entire semiannual interest payment to investors; however, the interest expense recorded is for the amount of time since the bonds were issued.

Interest Expense	XX	
Interest Payable		XX
Cash		XX

F. Discount on Bonds Payable, a contra account, records the difference between the issue price and the par value of bonds. This account balance must be amortized (reduced) over the life of the bonds.

1. The entry to record the *issuance of bonds at a discount* is:

Cash	XX	
Discount on Bonds Payable	XX	
Bonds Payable		XX

2. On each semiannual interest payment date, a portion of the discount is *amortized* to interest expense.

G. Premium on Bonds Payable is added to Bonds Payable to show the carrying amount of the bonds. This account must also be amortized over the life of the bonds.

1. The entry to record the *issuance of bonds at a premium* is:

Cash	XX	
Bonds Payable		XX
Premium on Bonds Payable		XX

Teaching Tip

The discussion of present value and its implication in determining bond prices is mentioned briefly in the chapter and covered in greater detail in the appendix. Depending on time and relevance of this topic to your course, you may want to skip the detailed calculations appearing in the appendix.

2. On each semiannual interest payment date, a portion of the premium is amortized, thus reducing interest expense.

Learning Objective 3: Amortize a bond discount and premium by the straight-line amortization method and the effective-interest amortization method.

(How do we allocate a bond discount or premium over the life of a bond?)

There are two methods for amortizing bond discounts and bond premiums: the Straight-line Method and the Effective-Interest Method.

- A. Under the **straight-line amortization** method, the amount that is amortized is divided equally over each semiannual interest period.

1. The entry to record the amortization of a *bond discount* is:

Interest Expense	XX	
Cash		XX
Discount on Bonds Payable		XX

2. Cash interest paid + Discount amortization = Interest expense

3. The entry to record the amortization of a *bond premium* is:

Interest Expense	XX	
Premium on Bonds Payable	XX	
Cash		XX

4. Cash interest paid – Premium amortization = Interest expense

- B. The **effective-interest method of amortization** is another method of amortizing premium or discount and is considered preferable to the straight-line method.

1. Under the straight-line method, the interest expense *is not* a constant percentage of the bonds' carrying value. Under the effective-interest method, the interest expense *is* a constant percentage of the bonds' carrying value.

2. The *total* amount of premium or discount amortized is the same under the two methods.

- C. When using the effective-interest method, an *amortization table* is helpful. The table has the following headings as shown in Exhibit 15-5 and Exhibit 15-7:

1. **Semiannual interest period**
2. **Interest Payment** —contract rate × maturity value
3. **Interest Expense** —market (effective) rate × carrying amount
4. **Discount or Premium Amortization**
5. **Unamortized Discount or Premium Balance**
6. **Bond Carrying Amount**

- D. The accounts debited and credited are the same under the effective-interest method and the straight-line method. Only the *amounts* are different. These entries are summarized below with a column reference from the amortization table.

Bonds issued at a discount

At issuance:

Cash (E)	XX
Discount on Bonds Payable (D)	XX
Bonds Payable	XX

To pay interest:

Interest Expense (B)	XX
Cash (A)	XX
Discount on Bonds Payable (C)	XX

To accrue interest:

Interest Expense (B)	XX
Interest Payable (A)	XX
Discount on Bonds Payable (C)	XX

Note: the amounts from the table must be adjusted for partial periods when interest is accrued and in the next entry when the payment is made.

To pay interest following accrual:

Interest Expense (B)	XX
Interest Payable (A)	XX
Discount on Bonds Payable (C)	XX
Cash (A)	XX

Bonds issued at a premium

Cash (E)	XX
Bonds Payable	XX
Premium on Bonds Payable (D)	XX

Interest Expense (B)	XX
Premium on Bonds Payable (C)	XX
Cash (A)	XX

Interest Expense (B)	XX
Premium on Bonds Payable (C)	XX
Interest Payable (A)	XX

Note: the amounts from the table must be adjusted for partial periods when interest is accrued and in the next entry when the payment is made.

Interest Expense (B)	XX
Premium on Bonds Payable (C)	XX
Interest Payable (A)	XX
Cash (A)	XX

- E. When bonds are issued at a **discount**, the *interest expense will increase* each period as the carrying amount increases. (Exhibits 15-5 and 15-6)
- F. When bonds are issued at a **premium**, the *interest expense will decrease* each period as the carrying amount increases. (Exhibits 15-7 and 15-8).
- G. Amortization of the discount reduces the balance of Discount on Bonds Payable, thus increasing the **book value** or **carrying amount** of the bonds. The carrying amount is reported on the financial statements. The formula for determining the carrying amount is:

$$\begin{aligned}
 &\text{Bonds Payable (par value)} \\
 &- \text{Discount on Bonds Payable (unamortized portion)} \\
 &= \text{Carrying amount}
 \end{aligned}$$

- H. Amortization of the premium decreases the balance of Premium on Bonds Payable, thus decreasing the carrying amount of the bonds. The carrying amount is reported on the financial statements. The formula for determining the carrying amount is:

$$\begin{aligned} & \text{Bonds Payable (par value)} \\ & + \text{Premium on Bonds Payable (unamortized portion)} \\ & = \text{Carrying amount} \end{aligned}$$

- I. If the year-end is not an interest-payment date, an entry is required to accrue interest and to amortize a portion of the premium or discount based on the number of months since the last interest date. This entry results in both the correct amount of interest expense and the correct carrying amount.

1. The year-end accrual is:

Bonds issued at a discount

Interest Expense	XX
Interest Payable	XX
Discount on Bonds Payable	XX

Bonds issued at a premium

Interest Expense	XX
Premium on Bonds Payable	XX
Interest Payable	XX

2. The next semiannual interest payment is recorded as follows:

Bonds issued at a discount

Interest Expense	XX
Interest Payable	XX
Cash	XX
Discount on Bonds Payable	XX

Bonds issued at a premium

Interest Expense	XX
Premium on Bonds Payable	XX
Interest Payable	XX
Cash	XX

Teaching Tip

Point out that regardless of whether the straight-line or effective-interest method of amortization is used, the carrying value of bonds increases as the discount and decreases while a premium is amortized.

Example:

Issued at discount, Principal \$1,000,000, 20 years

Year 1 Bonds Payable	\$1,000,000
Less: Discount	<u>20,000</u>
	<u>980,000</u>
Year 2 Bonds Payable	\$1,000,000
Less: Discount	<u>19,000</u>
	<u>981,000</u>

Issued at premium, Principal \$1,000,000, 25 years

Year 1 Bonds Payable	\$1,000,000
Add: Premium	<u>25,000</u>
	<u>1,025,000</u>
Year 2 Bonds Payable	\$1,000,000
Add: Premium	<u>24,000</u>
	<u>1,024,000</u>

Learning Objective 4: Account for retirement and conversion of bonds.

(How do we account for changes in a bond issue?)

- A. Normally, companies wait until maturity to pay off bonds payable. If a company wants to retire the bonds early, two options exist.
1. If the bonds are **callable**, the issuer may **call** the bonds, that is, retire the bonds at some specified price (usually above par).

Teaching Tip

Explain who has control over when bonds are called and discuss whether this is an attractive feature/characteristic to bondholders.

2. Alternatively, the company may purchase the bonds at the current market price. In either case, the journal entry is the same.
- B. The journal entry to retire the bonds removes the bonds payable and the related unamortized premium or discount from the accounts and records a *gain* or *loss*.

Teaching Tip

Discuss why changes in market interest rates may prompt the early retirement or exercising the right to “call” a bond issue..

- C. **Convertible** bonds allow the bondholder the option to exchange the bonds for common shares. The conversion feature usually entices investors to accept a lower contract interest rate.
- D. Bondholders may convert if the market price of the common shares gets high enough.
- E. The conversion journal entry removes bonds payable and the related unamortized premium or discount from the accounts and increases common shares; *no gain or loss* is recorded.
- F. Current portion of long-term debt due within the next year needs to be reclassified from the long-term debt section of the balance sheet to the short-term section.

Learning Objective 5: Show the advantages and disadvantages of borrowing.

(How do we decide whether to issue debt versus equity?)

- A. Advantages of financing with shares include:
1. There is no interest expense or debt to repay—less risky to the issuing corporation.
 2. The business raises capital without increasing debt and adversely affecting some key ratios.
 3. There is no obligation to pay dividends to shareholders.

B. The disadvantages of financing with shares include:

1. Ownership is spread among more shareholders.
2. Control and income (dividends) are spread over more shares.

C. The advantages of financing with debt include:

1. There is no dilution of ownership when bonds are issued, resulting in higher EPS. (See Exhibit 15-9.)
2. Since interest expense is tax-deductible and dividends are not, there is a tax savings when bonds are issued.
3. If the business earns more on the investment than the interest it pays on the bonds, earnings will also increase. This effect is referred to as **trading on the equity** and results in higher EPS.

D. The disadvantages of financing with debt include:

1. Interest payments must be made even in years when the business cannot afford to pay.
2. The principal amount must be repaid at maturity.

Teaching Tip

You should also mention a few other disadvantages for both methods of financing. Either plan requires the corporation to spend thousands of dollars for independent, professional services (underwriters, investment brokers). In addition, there may be government or other regulatory bodies that need to provide approval of the plan before any transactions can occur.

Learning Objective 6: Account for other long-term liabilities

(How do we account for other long-term liabilities?)

A **mortgage** is a loan secured by real property using a mortgage note. The mortgage is repaid in weekly or monthly installments. A portion of each payment represents interest on the unpaid balance of the loan and the remainder reduces the principal, or the outstanding balance of the loan. Such payments are known as **blended payments**.

The current and long-term portions of the mortgage loans are reported on the balance sheet.

Learning Objective 7: Account for operating leases and for assets acquired through a capital lease
(How do we account for leases?)

A. **Leases** are rental agreements between the **lessee** (tenant) and the **lessor** (owner) of the property. Leases fall into two categories:

1. An **operating lease** is a short-term or cancelable rental agreement. The lessee records the rental payment with a debit to Rent Expense.
2. A **capital lease** is a long-term, *non*-cancellable financing for the use of an asset. It is a form of debt.
 - a. To be considered a capital lease, the lease must meet *at least one* of the following criteria for the lessee:
 - (1) There is reasonable assurance that the lessee will obtain ownership of the leased asset at the end of the lease term.
 - (2) The lease term is of such a length that the lessee will obtain almost all (usually 75% or more) of the benefits from the use of the leased asset over its life.
 - (3) The lessor would both recover the original investment and earn a return on that investment from the lease.

b. Accounting for a capital lease by the lessee is like accounting for a purchase.

- (1) The lease liability is recorded at the *present value* (PV) of future lease payments as shown below:

Asset under Capital Lease (PV of all payments)	XX	
Obligation under Capital Lease (PV of future payments)		XX
Cash (first lease payment)		XX

- (2) The lessee records amortization on the leased asset.
- (3) If the payment date is other than the year end, the lessee must also **accrue interest**. The interest expense is determined by multiplying the lease liability by the interest rate.

Interest Expense	XX	
Obligation under Capital Lease		XX

- (4) The lease payment following the accrual would be recorded as follows:

Obligation under Capital Lease	XX	
Cash		XX

- (5) The lease liability will be split into current and long-term portions for financial statement reporting.

Teaching Tip

Discuss the reasons for a corporation wanting to record a transaction as an operating versus a capital lease. Ask students to think of some examples, other than those listed in the text, of a transaction that should be recorded as either an operating or capital lease.

- B. **Off-balance-sheet financing** is the acquisition of assets or services with debt that is not reported on the balance sheet. An operating lease is an example. The lessee has the use of the leased asset, but neither the asset nor any lease liability is reported on the balance sheet.

Learning Objective 8: Identify the effects of IFRS on long-term liabilities (How does IFRS affect long-term liabilities?)

ASPE allows either straight-line amortization or the effective interest method; IFRS requires the use of the effective-interest method. After 2019 IFRS 16 is effective and virtually all leases are treated as capital leases

Appendix to Chapter 15: (starts after Financial Statement Case 2)

Objective A1: Compute the future value of an investment. (How do we find the future value of an investment?)

- A. The term *time value of money* refers to the fact that money earns interest over time.
- B. The *future value of an investment* is the amount that an amount invested would accumulate to in the future. (Refer to Exhibit 15A-1.) Three factors must be known to compute the future value.
1. The amount of the investment.
 2. The length of time between investment and future accumulation.
 3. The interest rate.

- C. Future value can be calculated by using a formula that can require many mathematical calculations:

$$\text{Future value} = \text{Present value} \times (1 + \text{Interest rate})^n$$

n = number of interest periods

- D. To compute a future value for a single sum more easily, use the **Future Value of \$1** table (Exhibit 15A-2). Find the factor in the table that corresponds with the number of interest periods and the interest rate. Multiply that factor by the amount of the investment.
- E. To compute a future value of an annuity (refer to Exhibit 15A-3), use the **Future Value of Annuity of \$1** table (Exhibit 15A-4).
1. An **annuity** is a series of periodic investments at fixed intervals.

3. To use the tables, the amount of the annuity must be the same each period. To compute the future value, find the factor in the table that corresponds with the number of periods and the interest rate. Multiply that factor by the amount of the periodic investment.

Teaching Tip

Emphasize to students that as a bondholder, they would use the above to calculate the future value of their investment.

Objective A2: Compute the present value of a single future amount and the present value of an annuity.

(How do we find a present value of an investment?)

- A. The **present value (PV)** is the amount that would have to be invested now to accumulate to some specified future amount. The process of computing present value is called **discounting**.
- B. Present value depends on three factors:
 1. The **amount** of the payment (receipt).
 2. The **length of time** between investment and future receipt (payment).
 3. The **interest rate**.
- C. Present value can be calculated by using a formula, which is the reciprocal of the future-value formula.
(Refer to Exhibit 15A-5):

$$\text{Present value} = \frac{\text{Future value}}{(1 + \text{Interest rate})^n}$$

- D. The present value of a single sum can also be computed using the **Present Value of \$1** table (Exhibit 15A-6). Find the factor in the table that corresponds with the number of interest periods and the interest rate. Multiply that factor by the future value.
- E. The present value of an **annuity** is determined by using the factors in the **Present Value of an Annuity of \$1** table (Exhibit 15A-7). To compute the present value of an annuity, find the factor in the table that corresponds with the number of periods and the interest rate. Multiply that factor by the amount of the periodic payment (receipt).
- F. The present value techniques can be applied to determining the market price of a bond. The market price of a bond is determined by making two computations:
 1. First compute the *PV of the principal*. Multiply the principal by the appropriate factor in the Present Value of \$1 table.

2. Then compute the *PV of the interest payments*. Multiply the interest payments by the appropriate factor in the Present Value of an Annuity of \$1 table.
4. Add the amounts from 1 and 2 to determine the market price of the bonds.

Assignment Grid (2nd column: * = Excel Template available; W = writing required)

<i>Assignment</i>		<i>Topic(s)</i>	<i>Learning Objective(s)</i>	<i>Time in Minutes</i>	<i>Level of Difficulty</i>	<i>MyLab Pre-Test/ Post-Test</i>
Starter 15-1		Bond terms and definitions	1	5	Easy	
Starter 15-2		Pricing bonds	2	5-10	Easy	
Starter 15-3		Maturity value of a bond	2	5	Easy	
Starter 15-4		Journalizing basic bond payable transactions	2	10	Easy	
Starter 15-5		Determining bonds payable amounts	2	5	Easy	
Starter 15-6		Bond interest rates	2	5	Easy	
Starter 15-7		Issuing bonds payable and accruing interest	2	10	Easy	
Starter 15-8		Issuing bonds payable between interest dates and then paying the interest	2	10-15	Medium	
Starter 15-9		Issuing bonds payable at a discount, paying interest and amortizing discount by the straight-line method	2, 3	5-10	Easy	
Starter 15-10		Issuing bonds payable at a premium, paying interest; amortizing premium by the straight-line method	2, 3	10	Easy	
Starter 15-11		Issuing bonds payable and amortizing discount by the effective-interest method	3	15-20	Medium	
Starter 15-12		Issuing bonds payable and amortizing premium by the effective-interest method	3	15-20	Medium	
Starter 15-13		Accounting for the retirement of bonds payable	4	10-15	Medium	
Starter 15-14		Accounting for the conversion of bonds payable	4	5-10	Medium	
Starter 15-15		Comparison of financing plans	5	5-10	Medium	
Starter 15-16		Earnings-per-share effects of financing with bonds versus shares	5	10-15	Difficult	
Starter 15-17		Reporting liabilities	3,6	5-10	Medium	
Starter 15-18		Applying mortgage concepts to a loan	6	10-15	Medium	
Starter 15-19		Account for long-term notes payable	4	10-15	Medium	
Starter 15-20	W	Reporting lease liabilities	7	10-15	Medium	
Starter 15-21	W	Difference between ASPE and IFRS	8	5	Easy	
E15-1	W	Bond types	1	5-10	Easy	
E15-2	W	Determining whether the bond price will be at par, at a discount, or at a premium	2	5-10	Easy	
E15-3		Issuing bonds and paying interest	2	5-10	Easy	
E15-4		Calculating bond proceeds when sale is between interest dates	2	10-15	Difficult	
E15-5		Journalizing bond issue between interest dates	2	10-15	Difficult	
E15-6		Issuing bonds; paying and accruing	2, 3	10-15	Easy	

<i>Assignment</i>		<i>Topic(s)</i>	<i>Learning Objective(s)</i>	<i>Time in Minutes</i>	<i>Level of Difficulty</i>	<i>MyLab Pre-Test/ Post-Test</i>
		interest				
E15-7		Issuing bonds; paying and accruing interest	2, 3	10-15	Easy	
E15-8		Issuing bonds, paying and earning interest, and amortizing discount by the straight-line method	2, 3	10-15	Medium	
E15-9		Issuing bonds, paying and accruing interest, and amortizing premium by the straight-line method	2, 3	10-15	Medium	
E15-10	*	Debt payment and preparing a discount amortization schedule using a spreadsheet	3	15-20	Medium	
E15-11	*	Preparing an effective-interest amortization table; recording interest payments, and the related discount amortization	3	15-20	Medium	
E15-12	*	Preparing an effective-interest amortization table; recording interest accrual and payment, and the related premium amortization	3	10-15	Medium	
E15-13		Account for retirement and conversion of bonds	4	15	Medium	
E15-14		Recording retirement of bonds payable	4	15-20	Medium	
E15-15		Account for retirement and conversion of bonds	4	15	Medium	
E15-16		Recording conversion of bonds payable	4	15-20	Medium	
E15-17		Recording early retirement and conversion of bonds payable	4	10-15	Medium	
E15-18		Analyzing alternative plans for raising money	5	15-20	Medium	
E15-19		Earnings-per-share effects of financing with bonds versus shares	5	15-20	Medium	
E15-20		Recording mortgage liabilities	6	10-15	Medium	
E15-21		Reporting long-term debt on the balance sheet	3, 6	10-15	Medium	
E15-22		Journalizing capital lease and operating lease transactions	7	15-20	Medium	
E15-23		Reporting liabilities, including capital lease obligations	7	15-20	Easy	
E15-24		Determine the price of bond and account for basic bond transactions, amortize a bond discount or premium using the straight-line method, account for other long-term liabilities	2, 3, 6	40-50	Difficult	
E15-25	W	Analyzing bond transactions—Challenge Exercise	2, 3	20-30	Difficult	

<i>Assignment</i>		<i>Topic(s)</i>	<i>Learning Objective(s)</i>	<i>Time in Minutes</i>	<i>Level of Difficulty</i>	<i>MyLab Pre-Test/ Post-Test</i>
BN15-1	W	Questions about long-term debt	2, 6	10-15	Medium	
EI15-1	W	Ethical issue	n/a	n/a		
P15-1A		Analyze and journalize bond transactions	1, 2	20-25	Medium	
P15-2A		Journalize bond transactions at par including accruals and interim sales, and reporting bonds payable	2, 3	20-25	Medium	Pre-Test
P15-3A		Issuing bonds at a discount, amortizing by the straight-line method, and reporting bonds payable on the balance sheet	2, 3	30-40	Medium	Pre-Test
P15-4A	*	Analyzing a company's bonds, amortizing by the effective-interest method, and journalizing transactions	5	30-45	Difficult	
P15-5A	*	Issuing convertible bonds at a premium, amortizing by the effective-interest method, retiring bonds early, converting bonds, and reporting the bonds payable on the balance sheet	2, 3, 4	40-50	Difficult	
P15-6A	W	Financing operations with debt or with shares	5	20-30	Medium	
P15-7A		Accounting for a mortgage	6	20-30	Difficult	
P15-8A		Journalizing bonds payable and capital lease transactions	2, 7	30-40	Medium	Pre-Test
P15-9A		Reporting liabilities on the balance sheet	6, 7	20-30	Medium	
P15-1B		Analyze and journalize bond transactions	1, 2	20-25	Medium	
P15-2B		Journalize bond transactions at par including accruals and interim sales, and reporting bonds payable	2, 3	20-25	Medium	
P15-3B		Issuing bonds at a premium, amortizing by the straight-line method, and reporting bonds payable on the balance sheet	2, 3	30-40	Medium	
P15-4B	*	Analyzing a company's bonds, amortizing by the effective-interest method, and journalizing transactions	2, 3	30-45	Difficult	
P15-5B	*	Issuing convertible bonds at a discount, amortizing by the effective-interest method, retiring bonds early, converting bonds, and reporting the bonds payable on the balance sheet	2, 3, 4	40-50	Difficult	Post-Test
P15-6B	W	Financing operations with debt or with shares	5	20-30	Medium	
P15-7B		Accounting for a mortgage	6	20-30	Difficult	

<i>Assignment</i>		<i>Topic(s)</i>	<i>Learning Objective(s)</i>	<i>Time in Minutes</i>	<i>Level of Difficulty</i>	<i>MyLab Pre-Test/ Post-Test</i>
P15-8B		Journalizing bonds payable using the straight-line method and capital lease transactions	2, 7	30-40	Medium	Post-Test
P15-9B		Reporting liabilities on the balance sheet	6	20-30	Medium	
P15-1C	W	Evaluating alternative methods of financing growth	5	20-30	Difficult	
P15-2C	W	Amortizing bond premium by the effective-interest method; accounting for lease transactions	3, 7	40-60	Medium	
DP15-1	W	Analyzing alternative ways of raising \$10,000,000	5	30-40	Difficult	
FSC15-1	W	Long-term debt	6, 7	15-20	Medium	
FSC15-2		Long-term debt	6, 7	15-20	Medium	
P15A-1		Computing the future value of an investment	A1	15-20	Easy	
P15A-2		Relating the future and present values of an investment	A1, A2	15-20	Medium	
P15A-3		Computing the present values of various notes and bonds	A2	40-50	Difficult	
P15A-4		Computing a bond's present value; recording its issuance at a discount and interest payments	A2	40-50	Difficult	
P15A-5		Deciding between two payment plans	A2	20-30	Medium	

CHAPTER 15
TEN-MINUTE QUIZ

Circle the letter of the best response.

1. When a bond is sold at a premium:
 - A. The market (effective) rate of interest is higher than the contract (stated) rate of interest.
 - B. The market (effective) rate of interest is lower than the contract (stated) rate of interest.
 - C. The market (effective) rate of interest is equal to the contract (stated) rate of interest.
 - D. The carrying amount is less than the par value.

2. Which of the following statements about bonds is *false*?
 - A. A bondholder is an owner of the corporation.
 - B. Bonds represent a liability of the corporation.
 - C. The corporation must repay the principal.
 - D. Interest is a contractual obligation of the corporation.

3. On July 1, Como Inc. issued \$500,000 of 15-year 8% bonds dated April 1, with interest payable each October 1 and April 1. The bonds were sold at par plus accrued interest. The entry to record the issuance of the bonds would include:
 - A. Debit to Cash, \$500,000
 - B. Debit to Interest Expense, \$20,000
 - C. Credit to Bonds Payable, \$510,000
 - D. Credit to Interest Payable, \$10,000

4. Smit Corp. issued \$400,000 of 5-year, 7% bonds at 104.265 with a market interest rate of 6%. The bonds were sold on their issue date, March 1, 2019. Interest is payable on March 1 and September 1. What is the amount of the effective interest expense on September 1, 2019 when the first interest payment is made?
 - A. \$14,000
 - B. \$12,512
 - C. \$12,000
 - D. Some other number.

5. When a company uses the straight-line method of amortizing a bond discount:
 - A. Interest expense will be less than the cash interest paid.
 - B. The carrying amount of the bonds will decrease.
 - C. Interest expense will be a constant percent of the bonds' carrying amount.
 - D. The discount amortization will be the same each period.

6. Jackson Company has just made the interest payment on its \$1,000,000 of outstanding bonds. The bonds are callable at 105 and the unamortized premium is currently \$75,000. The entry to retire the bonds would include all the following *except* a:
- A. Credit to Premium on Bonds Payable, \$75,000.
 - B. Credit to Cash, \$1,050,000.
 - C. Credit to Gain on Retirement of Bonds, \$25,000.
 - D. Debit to Bonds Payable, \$1,000,000.
7. On July 1, 2019, Sara Corporation issues \$400,000 of 7%, 10-year bonds at 93.20 when the market rate of interest was 8%. Sara Corporation uses the effective-interest method of amortization. Interest is paid each June 30 and December 31. The entry to record the first semiannual interest payment on December 31, 2019, will include a:
- A. Debit to Premium on Bonds Payable for \$1,360.
 - B. Debit to Interest Expense for \$14,000.
 - C. Credit to Cash for \$16,000.
 - D. Credit to Discount on Bonds Payable for \$912.
8. Which of the following statements about the conversion of bonds payable into common shares is *false*?
- A. The common shares will be valued at the market value of the common shares.
 - B. When bonds are converted into common shares, no gain or loss is recorded.
 - C. The conversion of bonds into common shares decreases liabilities.
 - D. The conversion of bonds into common shares increases contributed capital.
9. Which of the following is an advantage of issuing bonds?
- A. Raises capital by increasing ownership of the corporation.
 - B. Raises capital without increasing ownership of the corporation.
 - C. Generally results in a lower earnings per share.
 - D. Creates no obligation for interest expense that must be paid.
10. A long-term and non-cancellable financing obligation is called a(n):
- A. Callable lease
 - B. Financing lease
 - C. Operating lease
 - D. Capital lease

Answer Key to Chapter 15 Quiz

1. B 2. A 3. D 4. B 5. D 6. A 7. D 8. A 9. B 10. D