

Long-Term Liabilities

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Textbook: Financial Accounting, Spiceland

- This presentation contains information, in addition to the material prepared and provided by the professor, from the book Financial Accounting, 4th. Ed., Spiceland which is the textbook assigned for the course CONT 3105 – “Introducción a los Fundamentos de Contabilidad” at the University of Puerto Rico, Río Piedras Campus.

Topics

Topics

1.0 Introduction

2.0 Installment Notes

3.0 Leases

4.0 Bonds – Types

5.0 Bonds – Pricing a Bond

6.0 Bonds – Recording Bond Payable

7.0 Bonds – Bond Retirements

Introduction

Introduction

1.1 Financing Alternative

Introduction

1.1 Financing Activities

- Some of the funds needed to pay for a company's growth can come from the profit generated by operations. Profit generated by the company are a source of **internal financing**.
- However, funds coming from those outside of the company are sources of **external financing**.

Introduction

1.1 Financing Activities

- Two sources of **external financing** are:
 1. **Debt Financing** refers to borrowing money from creditors (liabilities).
 2. **Equity financing** refers to obtaining investment from stockholders (stockholders' equity).
- The mixture of liabilities and stockholders' equity a business uses to finance its assets growth is called **capital structure**.

Introduction

1.1 Financing Activities

- One of the primary reason a company borrows money rather than issue additional stock relates to taxes.
- Interest expense incurred when borrowing money is tax-deductible, whereas dividends paid to stockholders are not tax-deductible.

Installment Notes

Installment Notes

2.1 Definition

Installment Notes

2.1 Definition

- Companies often borrow cash using installment notes.
- An **installment note** is a promise to pay a determine amount plus interest in a future in monthly payments rather than by a single amount at maturity.

Installment Notes

2.1 Definition

- Each **installment payment** includes both:
 1. An amount that represent a reduction of the outstanding loan balance, and
 2. An amount that represents interest.

Installment Notes

Example 1

Installment Notes

Example 1

- Vienna School obtains a \$22,000, 1.99%, two-year loan for a new auto on January 1, 2018. Payments of \$630.04 are required at the end of each month for 24 months. An **amortization schedule** provides a summary of the cash paid, interest expense, and decrease in carrying value for each monthly payment.

| Month | Payment | Interest | Principal | Balance |
|-------|---------|----------|-----------|-----------|
| 0 | | | | 22,000.00 |
| 1 | 630.04 | 36.48 | 593.56 | 21,406.44 |
| 2 | 630.04 | 35.50 | 594.54 | 20,811.90 |
| 3 | 630.04 | 34.51 | 595.53 | 20,216.37 |

Installment Notes

Example 1

| Month | Payment | Interest | Principal | Balance |
|-------|---------|----------|-----------|-----------|
| 0 | | | | 22,000.00 |
| 1 | 630.04 | 36.48 | 593.56 | 21,406.44 |
| 2 | 630.04 | 35.50 | 594.54 | 20,811.90 |
| 3 | 630.04 | 34.51 | 595.53 | 20,216.37 |

- The first month of interest is calculated as follows:
$$\$22,000 \times 1.99\% \times 1/12 = \$36.48$$
- The difference between the cash paid (\$630.04) and the interest expense (\$36.48) equals the decrease (\$593.56) in carrying value. After the first payment of \$630.04, the loan balance decrease from \$22,000 to \$21,406.44 (\$22,000 - \$593.56).

Installment Notes

Example 1

| Month | Payment | Interest | Principal | Balance |
|-------|---------|----------|-----------|-----------|
| 0 | | | | 22,000.00 |
| 1 | 630.04 | 36.48 | 593.56 | 21,406.44 |
| 2 | 630.04 | 35.50 | 594.54 | 20,811.90 |
| 3 | 630.04 | 34.51 | 595.53 | 20,216.37 |

- The second month of interest is calculated as follows:
$$\$21,406.44 \times 1.99\% \times 1/12 = \$35.50$$
- The difference between the cash paid (\$630.04) and the interest expense (\$35.50) equals the decrease (\$594.54) in carrying value. After the second payment of \$630.04, the loan balance decrease from \$21,406.44 to \$20,811.90 (\$21,406.44 - \$594.54).

Installment Notes

Example 1

- The journal entry to record the note of \$22,000 follows:

| GENERAL JOURNAL | | | | JE # |
|-----------------|---------------------------------|------|--------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| X | Auto | | 22,000 | |
| | Notes Payable | | | 22,000 |
| | | | | |
| | | | | |
| | <i>(Issue a notes payable.)</i> | | | |

Installment Notes

Example 1

- The journal entry to record the first payment follows:

| GENERAL JOURNAL | | | | JE # |
|-----------------|--|------|--------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| X | Interest Expense | | 36.48 | |
| | Notes Payable | | 593.56 | |
| | Cash | | | 630.04 |
| | | | | |
| | <i>(Pay monthly installment on notes.)</i> | | | |

Installment Notes

Example 1

- The journal entry to record the second payment follows:

| GENERAL JOURNAL | | | | JE # |
|-----------------|--|------|--------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| X | Interest Expense | | 35.50 | |
| | Notes Payable | | 594.54 | |
| | Cash | | | 630.04 |
| | | | | |
| | <i>(Pay monthly installment on notes.)</i> | | | |

Leases

Leases

3.1 Definition

- A **lease** is a contractual arrangement by which the lessor (owner) provides the lessee (user) the right to use an asset for a specific period of time.
- Leasing has grown to be the most popular method of external financing of corporate assets in America. In fact, many financing companies exist for the sole purpose of acquiring assets and leasing them to others.

Leases

3.2 Types of Leases

- For accounting purposes, we have two basic types of leases: operating leases and capital leases.
- In an **operating lease** the user (lessee) has no intention of owning the car. The lessor owns the asset, and the lessee simply uses the asset temporarily. Over the lease term, the lessee records rent expense and the lessor records rent revenue.

Leases

3.2 Types of Leases

- **Capital leases** occur when the lessee essentially buys an asset and borrows the money through a lease to pay for the asset.

Bonds

Bonds – Types

4.1 Introduction

Bonds – Types

4.1 Introduction

- A **bond** is a formal debt instrument that obligates the borrower to repay a stated amount, referred to as the principal or face amount, at a specific maturity date.
- Bonds are very similar to notes. Bonds, though, usually are issued to many lenders (ex. Governments issue bonds to the general public), while notes most often are issued to a single lender (such as a bank).

Bonds – Types

4.1 Introduction

- Traditionally, interest on bonds is paid twice a year (semiannually) on designated interest dates, beginning six months after the original bond issue date.
- For most large corporations, bond are sold, or underwritten, by investment houses. The three largest bond underwriters are **JPMorgan Chase**, **Citigroup**, and **Bank of America**.

Bonds – Types

4.1 Introduction

- The issuing company, the borrower, pays a fee for these underwriting services.
- Other costs include legal, accounting, registration, and printing fees.

Bonds – Types

4.1 Introduction

- Bonds may be:
 1. Secured or unsecured
 2. Term or serial
 3. Callable
 4. Convertible

Bonds – Types

4.2 Secured or Unsecured Bonds

Bonds – Types

4.2 Secured or Unsecured Bonds

- **Secured Bonds:** The **secured bonds** are supported by specific assets the issuer has pledged as collateral. If the borrower defaults on the payments, the lender is entitled to the assets pledged as collateral.

Bonds – Types

4.2 Secured or Unsecured Bonds

- **Unsecured Bonds:** The **unsecured bonds**, also referred to as debentures, are not backed by a specific asset. These bonds are secured only by the “full faith and credit” of the borrower.

Bonds – Types

4.3 Term and Serial Bonds

Bonds – Types

4.3 Term and Serial Bonds

- **Term Bonds:** **Term bonds** require payment of the full principal amount of the bond at the end of the loan term. Most bonds have this characteristic. To ensure that sufficient funds are available to pay back the bonds at the end of the loan term, the borrower usually sets aside money in a “sinking fund.”
- A **sinking fund** is an investment fund to which an organization makes payments each year over the life of its outstanding debt.

Bonds – Types

4.3 Term and Serial Bonds

- **Serial Bonds:** **Serial bonds** require payments installments over a series of years. Rather than issuing a bond that will be due at the end of the term, the entity may issue a serial bond, which a portion of the principal is due each year over the term of the bond.

Bonds – Types

4.4 Callable Bonds

Bonds – Types

4.4 Callable Bonds

- **Callable** means redeemable. This feature allows the borrower to repay the bonds before their scheduled maturity date at a specified call price, usually at an amount just above face value.
- Callable bonds protect the borrower can buy back future decreases in interest rates. If interest rates decline, the borrower can buy back the high-interest-rate bonds at a fixed price and issue new bonds at the new, lower interest rate.

Bonds – Types

4.5 Convertible Bonds

Bonds – Types

4.5 Convertible Bonds

- **Convertible bonds** allow the lender (the investor) to convert each bond into a specified number of shares of common stock.
- Prior the conversion, the bondholder still receives interest on the convertible bond.
- Convertible bonds sell at a higher price and require a lower interest rate than bonds without a conversion feature.

Bonds – Pricing a Bond

Bonds – Pricing a Bond

5.1 Procedure to Issue a Bond

Bonds – Pricing a Bond

5.1 Procedure to Issue a Bond

- The issuance and marketing of bonds to the public does not happen overnight. It usually takes weeks or even months.
- First, the issuing company must arrange for underwriters that will help market and sell the bonds. Then, it must obtain the Securities and Exchange Commission's approval of the bond issue, undergo audits, and issue a prospectus (a document, which describes the features of the bond and related financial information). [**Kieso**]

Bonds – Pricing a Bond

5.1 Procedure to Issue a Bond

- Finally, the company must generally have the bond certificates printed. Frequently, the issuing company establishes the terms of a bond indenture well in advance of the sale of the bonds. Between the time the company sets these terms and the time it issues the bonds, the market conditions and the financial position of the issuing corporation may change significantly. Such changes affect the marketability of the bonds and thus their selling price.

Bonds – Pricing a Bond

5.2 Selling Price

Bonds – Pricing a Bond

5.2 Selling Price

- The selling price of a bond issue is set by the supply and demand of buyers and sellers, relative risk, market conditions, and the state of the economy.
- The investment community values a bond at the present value of its expected future cash flows, which consists of (1) interest, and (2) principal. [**Kieso**]

Bonds – Pricing a Bond

5.2 Selling Price

- The rate used to compute the present value of these cash flows is the interest rate that provides an acceptable return on an investment commensurate with the issuer's risk characteristics.
- The interest rate written in the terms of the bond (and often printed on the bond certificate) is known as the **stated**, **coupon**, or **nominal rate**. The issuer of the bond sets this rate.

Bonds – Pricing a Bond

5.2 Selling Price

- The stated rate is expressed as a percentage of the face value of the bonds (also called the **par value**, **principal amount**, or **maturity value**).
- If a rate employed by the investment community (buyers) differs from the stated rate, the present value of the bonds computed by the buyers (and the current purchase price) will differ from the face value of the bonds.

Bonds – Pricing a Bond

5.2 Selling Price

- The difference between the face value and the present value of the bonds determines the actual price that buyers pay for the bonds. This difference is either a discount or premium.
 - If a bond sell for less than face value, they sell at a **discount**.
 - If a bond sell for more than face value, they sell at a **premium**.

Bonds – Recording Bonds Payable

Bonds – Recording Bonds Payable

6.1 Bond Issue at Face Value

Bonds – Recording Bonds Payable

6.1 Bond Issue at Face Value

- A bond issue at face value means the market interest rate is exactly the same as the stated interest rate.

Bonds – Recording Bonds Payable

Example 2

Bonds – Recording Bonds Payable

Example 2

- On January 1, 2018, California Coasters issues \$100,000 of **7% bonds**, due in 10 years, with interest payable semiannually on June 30 and December 31 each year. The **market interest rate is 7%**. Then, the bonds issue for exactly \$100,000. The journal entry to record the issuance is:

| GENERAL JOURNAL | | | | JE # |
|-----------------|--------------------------------------|------|---------|---------|
| Date | Account Title | Ref. | Debit | Credit |
| Jan. 1 | Cash | | 100,000 | |
| | Bonds Payable | | | 100,000 |
| | <i>(Issue bonds at face amount.)</i> | | | |

Bonds – Recording Bonds Payable

Example 2

- On June 30, 2018, California Coasters records the first semiannual interest payment of \$3,500 ($\$100,000 \times 7\% \times 6/12$).

| GENERAL JOURNAL | | | | JE # |
|-----------------|-----------------------------------|------|-------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| Jun. 30 | Interest Expense | | 3,500 | |
| | Cash | | | 3,500 |
| | <i>(Pay semiannual interest.)</i> | | | |

Bonds – Recording Bonds Payable

6.2 Bond Issue at a Discount

Bonds – Recording Bonds Payable

6.2 Bond Issue at a Discount

- When bonds issue at less than face value, we say they issue at a discount.
- When bonds are issue at discount, we take the following steps:
 1. Calculate the cash proceeds at issuance of bond.
 2. Record the cash receipt and liability.
 3. Calculate the semiannual interest expense using the effective-interest method.
 4. Calculate the cash payment of interest using the stated interest rate.
 5. Record the semiannual interest expense, interest payment and discount amortization.
 6. Calculate the carrying value.

Bonds – Recording Bonds Payable

Example 3

Bonds – Recording Bonds Payable

Example 3

- On January 1, 2018, California Coasters issues \$100,000 of 7% bonds, due in 10 years, with interest payable semiannually on June 30 and December 31 each year. The market interest rate is 8%.

Bonds – Recording Bonds Payable

Example 3

Step 1: Calculate the cash proceeds at issuance of bond

- Since the **market interest rate is 8%**, then, the bonds are issue at only \$93,205. This is less than \$100,000 because the bonds are paying only 7%, while investors can purchase bonds of similar risk paying 8%. When bonds issue at less than face value, we say they issue at a discount.
- The \$93,205 is given in the exercise, but, this amount is calculated using the **present value of the face amount plus the present value of the periodic interest payment** (See pages 417 to 424 on textbook for further explanation).

Bonds – Recording Bonds Payable

Example 3

Step 2: Record the cash receipt and liability

| GENERAL JOURNAL | | | | JE # |
|-----------------|-------------------------------------|------|--------|---------|
| Date | Account Title | Ref. | Debit | Credit |
| Jan. 1 | Cash | | 93,205 | |
| | Discount on Bonds Payable | | 6,795 | |
| | Bonds Payable | | | 100,000 |
| | <i>(Issue bonds at a discount.)</i> | | | |

Bonds – Recording Bonds Payable

Example 3

- The “Discount on Bonds Payable” is a contra-liability, which is deducted from Bonds Payable in the balance sheet as shown below:

| Balance Sheet (Partial) | |
|---------------------------------|------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Less: Discount on bonds payable | <u>(6,795)</u> |
| Carrying Value | <u>\$93,205</u> |

Bonds – Recording Bonds Payable

Example 3

Step 3: Calculate the semiannual interest expense using the effective-interest method

- We calculate each period's **interest expense** as the carrying value (the amount actually owed during that period) times the market rate (4% semiannually or 8% annually). This method of calculating interest is referred to as the **effective-interest method**. The calculation of the interest expense for the six months ended **June 30, 2018** follows:

| | | | | |
|------------------|---|------------------------|---|--------------------------------------|
| Interest Expense | = | Carrying Value of Bond | x | Market Interest Rate (semiannual) |
| \$3,728 | = | \$93,205 | x | 4% |

Bonds – Recording Bonds Payable

Example 3

Step 4: Calculate the semiannual cash payment of interest using the stated interest rate

- The bond agreement specifies that cash paid for interest is equal to the face amount times the stated rate (3.5% semiannually or 7% annually). The interest to be paid semiannually to the bondholders follows:

| Cash Paid for Interest | = | Face Amount of Bond | x | Stated Interest Rate (semiannual) |
|------------------------|---|---------------------|---|--------------------------------------|
| \$3,500 | = | \$100,000 | x | 3.5% |

Bonds – Recording Bonds Payable

Example 3

Step 5: Record the semiannual interest expense, interest payment and discount amortization

| GENERAL JOURNAL | | | | JE # |
|-----------------|-----------------------------------|------|-------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| Jun. 30 | Interest Expense | | 3,728 | |
| | Discount on Bonds Payable | | | 228 |
| | Cash | | | 3,500 |
| | <i>(Pay semiannual interest.)</i> | | | |

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- The difference between the Interest Expense (\$3,728) and the interest paid (\$3,500) of \$228 is called the discount amortization. The discount account balance is semiannually reduced (amortized) by the difference. After the discount amortization as of June 30, 2018, the Discount on Bonds Payable balance is:

| <i>Discount on Bonds Payable</i> | | | |
|----------------------------------|-----------------------|----------------|--------------|
| <i>Jan. 1</i> | <u><i>\$6,795</i></u> | <i>Jun. 30</i> | <i>\$228</i> |
| <i>Balance</i> | <u><i>\$6,567</i></u> | | |

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- Consequently, as of June 30, 2018 the carrying value will be:

| Balance Sheet (Partial) | |
|---------------------------------|------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Less: Discount on bonds payable | <u>(6,567)</u> |
| Carrying Value | <u>\$93,433</u> |

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- At maturity, the discount account balance will be \$0 and the carrying value will equal the face amount of \$100,000.

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- A **bond amortization schedule** summarizes the cash paid, interest expense, and changes in carrying value for each semiannual interest period.
- See the Amortization Schedule on Illustration 9-16 on page 426 on textbook.
- Go to mhhe.com/4fa37 and watch a video (2 minutes) explaining the amortization schedule for this example.

Bonds – Recording Bonds Payable

Example 3

- To record the interest expenses for the six months ended December 31, 2018, we must apply the steps 3, 4, 5 and 6, as explained on next pages.

Bonds – Recording Bonds Payable

Example 3

Step 3: Calculate the semiannual interest expense using the effective-interest method

- We calculate each period's **interest expense** as the carrying value (the amount actually owed during that period). The carrying value as of June 30, 2018 of \$93,433 (*See calculation on page 66*) is used to calculate the interest expense as of December 31, 2018.
- The calculation of the interest expense for the six months ended **December 31, 2018** follows:

| | | | | |
|-------------------------|----------|-------------------------------|----------|--|
| Interest Expense | = | Carrying Value of Bond | x | Market Interest Rate (semiannual) |
| \$3,737 | = | \$93,433 | x | 4% |

Bonds – Recording Bonds Payable

Example 3

Step 4: Calculate the semiannual cash payment of interest using the stated interest rate

- The bond agreement specifies that cash paid for interest is equal to the face amount times the stated rate (3.5% semiannually or 7% annually). The interest to be paid semiannually to the bondholders follows:

| Cash Paid for Interest | = | Face Amount of Bond | x | Stated Interest Rate (semiannual) |
|------------------------|---|---------------------|---|--------------------------------------|
| \$3,500 | = | \$100,000 | x | 3.5% |

Bonds – Recording Bonds Payable

Example 3

Step 5: Record the semiannual interest expense, interest payment and discount amortization

| GENERAL JOURNAL | | | | JE # |
|-----------------|-----------------------------------|------|-------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| Dec. 31 | Interest Expense | | 3,737 | |
| | Discount on Bonds Payable | | | 237 |
| | Cash | | | 3,500 |
| | <i>(Pay semiannual interest.)</i> | | | |

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- The difference between the Interest Expense (\$3,737) and the interest paid (\$3,500) of \$237 is the discount amortization as of December 31, 2018. The discount account balance is semiannually reduced (amortized) by the difference. After this amortization, the Discount on Bonds Payable balance is:

| <i>Discount on Bonds Payable</i> | | | |
|----------------------------------|-----------------------|----------------|--------------|
| <i>Jan. 1</i> | <i><u>\$6,795</u></i> | <i>Jun. 30</i> | <i>\$228</i> |
| <i>Balance 12/31</i> | <i><u>\$6,330</u></i> | <i>Dec. 31</i> | <i>237</i> |

Bonds – Recording Bonds Payable

Example 3

Step 6: Calculate the Carrying Value

- Consequently, as of December 31, 2018 the carrying value will be:

| Balance Sheet (Partial) | |
|---------------------------------|------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Less: Discount on bonds payable | <u>(6,330)</u> |
| Carrying Value | <u>\$93,670</u> |

Bonds – Recording Bonds Payable

6.3 Bond Issue at a Premium

Bonds – Recording Bonds Payable

6.3 Bond Issue at a Premium

- When bonds issue at more than face value, we say they issue at a premium.
- When bonds are issue at premium, we take the following steps:
 1. Calculate the cash proceeds at issuance of bond.
 2. Record the cash receipt and liability.
 3. Calculate the semiannual interest expense using the effective-interest method.
 4. Calculate the cash payment of interest using the stated interest rate.
 5. Record the semiannual interest expense, interest payment and premium amortization.
 6. Calculate the carrying value.

Bonds – Recording Bonds Payable

Example 4

Bonds – Recording Bonds Payable

Example 4

- On January 1, 2018, California Coasters issues \$100,000 of 7% bonds, due in 10 years, with interest payable semiannually on June 30 and December 31 each year. The market interest rate is 6%.

Bonds – Recording Bonds Payable

Example 4

Step 1: Calculate the cash proceeds at issuance of bond

- Since the **market interest rate is 6%**, then, the bonds are issue at only \$107,439. Investors will pay more than \$100,000 for these 7% bonds because bonds of similar risk are paying only 6% interest.
- When bonds issue at more than face value, we say they issue at a premium.
- The \$107,439 is given in the exercise, but, this amount is calculated using the **present value of the face amount plus the present value of the periodic interest payment** (See pages 417 to 424 on textbook for further explanation).

Bonds – Recording Bonds Payable

Example 4

Step 2: Record the cash receipt and liability

| GENERAL JOURNAL | | | | JE # |
|-----------------|------------------------------------|------|---------|---------|
| Date | Account Title | Ref. | Debit | Credit |
| Jan. 1 | Cash | | 107,439 | |
| | Bonds Payable | | | 100,000 |
| | Premium on Bonds Payable | | | 7,439 |
| | <i>(Issue bonds at a premium.)</i> | | | |

Bonds – Recording Bonds Payable

Example 4

- The balance of “Premium on Bonds Payable” is added to Bonds Payable in the balance sheet as shown below:

| Balance Sheet (Partial) | |
|-------------------------------|-------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Add: Premium on bonds payable | <u>7,439</u> |
| Carrying Value | <u>\$107,439</u> |

Bonds – Recording Bonds Payable

Example 4

Step 3: Calculate the semiannual interest expense using the effective-interest method

- We calculate each period's **interest expense** as the carrying value (the amount actually owed during that period) times the market rate (3% semiannually or 6% annually). This method of calculating interest is referred to as the **effective-interest method** as follows:

| | | | | |
|-------------------------|----------|-------------------------------|----------|--|
| Interest Expense | = | Carrying Value of Bond | x | Market Interest Rate (semiannual) |
| \$3,223 | = | \$107,439 | x | 3% |

Bonds – Recording Bonds Payable

Example 4

Step 4: Calculate the semiannual cash payment of interest using the stated interest rate

- The bond agreement specifies that cash paid for interest is equal to the face amount times the stated rate (3.5% semiannually or 7% annually). The interest to be paid semiannually to the bondholders follows:

| Cash Paid for Interest | = | Face Amount of Bond | x | Stated Interest Rate (semiannual) |
|------------------------|---|---------------------|---|--------------------------------------|
| \$3,500 | = | \$100,000 | x | 3.5% |

Bonds – Recording Bonds Payable

Example 4

Step 5: Record the semiannual interest expense, interest payment and premium amortization

| GENERAL JOURNAL | | | | JE # |
|-----------------|-----------------------------------|------|-------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| Jun. 30 | Interest Expense | | 3,223 | |
| | Premium on Bonds Payable | | 277 | |
| | Cash | | | 3,500 |
| | <i>(Pay semiannual interest.)</i> | | | |

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- The difference between the Interest Expense (\$3,223) and the interest paid (\$3,500) of \$277 is called the premium amortization. The premium account balance is semiannually reduced (amortized) by the difference. After the premium amortization as of June 30, 2018, the Premium on Bonds Payable balance is:

| <i>Premium on Bonds Payable</i> | | | |
|---------------------------------|---------------------|----------------|-----------------------|
| <i>Jun. 30</i> | <u><i>\$277</i></u> | <i>Jan. 1</i> | <u><i>\$7,439</i></u> |
| | | <i>Balance</i> | <u><i>\$7,162</i></u> |

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- Consequently, as of June 30, 2018 the carrying value will be:

| Balance Sheet (Partial) | |
|--------------------------------|-------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Plus: Premium on bonds payable | <u>7,162</u> |
| Carrying Value | <u>\$107,162</u> |

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- At maturity, the premium account balance will be \$0 and the carrying value will equal the face amount of \$100,000.

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- A **bond amortization schedule** summarizes the cash paid, interest expense, and changes in carrying value for each semiannual interest period.
- See the Amortization Schedule on Illustration 9-17 on page 428 on textbook.
- Go to mhhe.com/4fa38 and watch a video (2 minutes) explaining the amortization schedule for this example.

Bonds – Recording Bonds Payable

Example 4

- To record the **interest expenses** for the six months ended **December 31, 2018**, we must apply the steps 3, 4, 5 and 6, as explained on next pages.

Bonds – Recording Bonds Payable

Example 4

Step 3: Calculate the semiannual interest expense using the effective-interest method

- We calculate each period's **interest expense** as the carrying value (the amount actually owed during that period). The carrying value as of June 30, 2018 of \$107,162 (*See calculation on page 85*) is used to calculate the interest expense as of December 31, 2018.
- The calculation of the interest expense for the six months ended **December 31, 2018** follows:

| | | | | |
|-------------------------|----------|-------------------------------|----------|--|
| Interest Expense | = | Carrying Value of Bond | x | Market Interest Rate (semiannual) |
| \$3,215 | = | \$107,162 | x | 3% |

Bonds – Recording Bonds Payable

Example 4

Step 4: Calculate the semiannual cash payment of interest using the stated interest rate

- The bond agreement specifies that cash paid for interest is equal to the face amount times the stated rate (3.5% semiannually or 7% annually). The interest to be paid semiannually to the bondholders follows:

| Cash Paid for Interest | = | Face Amount of Bond | x | Stated Interest Rate (semiannual) |
|------------------------|---|---------------------|---|--------------------------------------|
| \$3,500 | = | \$100,000 | x | 3.5% |

Bonds – Recording Bonds Payable

Example 4

Step 5: Record the semiannual interest expense, interest payment and discount amortization

| GENERAL JOURNAL | | | | JE # |
|-----------------|-----------------------------------|------|-------|--------|
| Date | Account Title | Ref. | Debit | Credit |
| Dec. 31 | Interest Expense | | 3,215 | |
| | Premium on Bonds Payable | | 285 | |
| | Cash | | | 3,500 |
| | <i>(Pay semiannual interest.)</i> | | | |

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- The difference between the Interest Expense (\$3,215) and the interest paid (\$3,500) of \$285 is the premium amortization as of December 31, 2018. The premium account balance is semiannually reduced (amortized) by the difference. After this amortization, the Premium on Bonds Payable balance is:

| <i>Premium on Bonds Payable</i> | | | |
|---------------------------------|--------------|----------------------|-----------------------|
| <i>Jun. 30</i> | <i>\$277</i> | <i>Jan. 1</i> | <i><u>\$7,439</u></i> |
| <i>Dec. 31</i> | <i>285</i> | <i>Balance 12/31</i> | <i><u>\$6,877</u></i> |

Bonds – Recording Bonds Payable

Example 4

Step 6: Calculate the Carrying Value

- Consequently, as of December 31, 2018 the carrying value will be:

| Balance Sheet (Partial) | |
|--------------------------------|-------------------------|
| <u>Long-term Liabilities</u> | |
| Bonds Payable | \$100,000 |
| Plus: Premium on bonds payable | <u>6,877</u> |
| Carrying Value | <u>\$106,877</u> |

Bonds – Bonds Retirements

Bonds – Bonds Retirements

7.1 Bond Retirements at Maturity

Bonds – Bonds Retirements

7.1 Bond Retirements at Maturity

- Regardless of whether bonds are issued at face amount, a discount, or a premium, their carrying value at maturity will equal their face amount.
- Check the amortization tables for both scenarios: discount (mhhe.com/4fa37), or premium (mhhe.com/4fa38), and note the carrying value at maturity date (the end of the 10 year term) is \$100,000.

Bonds – Bonds Retirements

7.1 Bond Retirements at Maturity

- When the company wait until the bonds mature to retire them, the company pays the lender the carrying value, which will be the bond principal amount and close the note payable account in the general ledger.

Bonds – Bonds Retirements

Example 5

Bonds – Bonds Retirements

Example 5

- Refer to **Examples 3** and **4**. California Coasters retires the \$100,000 bonds at maturity (December 31, 2027). The journal entry to record the retirement follows:

| GENERAL JOURNAL | | | | JE # |
|-----------------|------------------------------------|------|---------|---------|
| Date | Account Title | Ref. | Debit | Credit |
| 2027 Dec. 31 | Notes Payable | | 100,000 | |
| | Cash | | | 100,000 |
| | <i>(Retire bonds at maturity.)</i> | | | |

Bonds – Bonds Retirements

7.2 Bond Retirements Before Maturity

Bonds – Bonds Retirements

7.2 Bond Retirements Before Maturity

- Even when bonds are not callable, the issuing company can retire bonds early by purchasing them on the open market. Regardless of the method, when the issuer retires debt or any type before its scheduled maturity date, the transaction is an **early extinguishment of debt**.

Bonds – Bonds Retirements

Example 6

Bonds – Bonds Retirements

Example 6

- Refer to **Examples 4**. California Coasters retires bonds on December 31, 2018 when the carrying value is \$106,877 (see page 93). Assume the market rate drops to 5%, and the bonds now cost \$114,353. California Coasters pays \$114,353 to retire the bonds. The journal entry follows:

| GENERAL JOURNAL | | | | JE # |
|-----------------|--|------|---------|---------|
| Date | Account Title | Ref. | Debit | Credit |
| Dec. 31 | Bonds Payable | | 100,000 | |
| | Premium on Bonds Payable (p. 92) | | 6,877 | |
| | Loss | | 7,476 | |
| | Cash | | | 114,353 |
| | <i>(Retire bonds before maturity.)</i> | | | |