

the right to demand repayment for more than one year or it is probable that the **debtor** will cure the violation within the grace period allotted.

470-10-45-11 Current liabilities shall include long-term obligations that are or will be callable by the creditor either because the debtor’s violation of a provision of the debt agreement at the balance sheet date makes the obligation callable or because the violation, if not cured within a specified grace period, will make the obligation callable. Accordingly, such callable obligations shall be classified as current liabilities unless either of the following conditions is met:

- a. The creditor has waived or subsequently lost (for example, the debtor has cured the violation after the balance sheet date and the obligation is not callable at the time the financial statements are issued or are available to be issued) . . . the right to demand repayment for more than one year (or operating cycle, if longer) from the balance sheet date . . .
- b. For long-term obligations containing a grace period within which the debtor may cure the violation, it is probable that the violation will be cured within that period, thus preventing the obligation from becoming callable.

[2] Criteria to Evaluate Debt to be Refinanced

Current liabilities expected to be refinanced are reclassified as long-term liabilities on the balance sheet only if the debtor:

- Fully intends to refinance the specific short-term liability.
- Shows an ability to do so by
 - Actually refinancing debt on a long-term basis before the financial statements are issued.
 - Entering in good faith into a long-term, noncancelable refinancing agreement supported by a viable lender.
 - Issuing an equity instrument.

470-10-45-14 A short-term obligation shall be excluded from current liabilities if the entity intends to refinance the obligation on a long-term basis . . . and the intent to refinance the short-term obligation on a long-term basis is supported by an ability to consummate the refinancing demonstrated in either of the following ways:

- a. Post-balance-sheet-date issuance of a long-term obligation or equity securities.
- b. Financing agreement.

An ability to refinance is required to reduce the risk of a failure to refinance, which would result in the understatement of current liabilities on the balance sheet date. This ability can be demonstrated up to the point that the financial statements are issued, which may be several weeks after the balance sheet date.

Balance Sheet Classification of Debt

LO15-4

Demo 15-4C

Example One—Current Maturities of Long-Term Debt

Blues Company borrowed \$500,000 through a 5% note payable dated December 31, 2020. Interest is due annually on December 31, and the principal is due annually in \$100,000 installment payments, beginning on December 31, 2021. Show the balance sheet presentation for the note payable on December 31, 2020.

Solution

Because \$100,000 of the total debt amount is due within the next year, this amount will be classified as current while the remaining amount of \$400,000 (\$500,000 – \$100,000) will be classified as noncurrent.

Balance Sheet excerpt	Dec. 31, 2020
Liabilities	
Current liabilities	
Current payment on note payable (due in 2021)	\$100,000
Noncurrent liabilities	
Note payable (less current portion of \$100,000)	400,000

continued

Liquidity Ratios

LO15-6

Demo 15-6

The following financial information is provided for **Target Corporation**. Compute the current asset ratio and the quick ratio for the two years presented. Provide a brief analysis of your results.

(\$ millions)	2017	2016
Current assets		
Cash and cash equivalents, including short-term investments of \$1,110 and \$3,008 . . .	\$ 2,512	\$ 4,046
Inventory	8,309	8,601
Assets of discontinued operations	69	322
Other current assets	1,100	1,161
Total current assets	<u>\$11,990</u>	<u>\$14,130</u>
Current liabilities		
Accounts payable	\$7,252	\$7,418
Accrued and other current liabilities	3,737	4,236
Current portion of long-term debt and other borrowings	1,718	815
Liabilities of discontinued operations	1	153
Total current liabilities	<u>\$12,708</u>	<u>\$12,622</u>

Solution

Current Ratio			
		2017	2016
Current Ratio	=	$\frac{\text{Current assets}}{\text{Current liabilities}}$	
		$\frac{\$11,990}{\$12,708} = 0.94$	$\frac{\$14,130}{\$12,622} = 1.12$

Quick Ratio			
		2017	2016
Quick Ratio	=	$\frac{\text{Cash} + \text{Marketable securities} + \text{Receivables}}{\text{Current liabilities}}$	
		$\frac{\$2,512}{\$12,708} = 0.20$	$\frac{\$4,046}{\$12,622} = 0.32$

For the past two years, Target had a current ratio of approximately 1.0. This means that for every dollar of current liabilities, Target has approximately \$1 of current assets. We see that the large decrease in the **numerator** for the quick ratio (relative to the current ratio) is due to the exclusion of inventory. Inventory takes longer to convert to cash because it first must be sold, and then the accounts receivable must be collected. The quick ratio decreased for Target from 2016 to 2017 mainly because of the excess cash from the sale of its pharmacy and clinic businesses disclosed in its annual report. Because the sale was completed in late 2015, the company had not fully deployed the proceeds by the 2016 financial statement date. Without this one-time bump due to a non-recurring item, the quick ratio for Target was roughly 0.20 for 2016.

- 15-4. Why are most current liabilities recognized at maturity value at the beginning of their term?
- 15-5. Compute the present value of a \$10,000, one-year note payable that specifies no interest, although 10% would be a realistic rate. Is the present value less than, greater than, or equal to the maturity value?
- 15-6. In evaluating a balance sheet, some creditors say the liability section is one of the most important sections. What are some reasons justifying this position?
- 15-7. Some liabilities are reported at their maturity amount. In general, when should liabilities, prior to the maturity date, be reported at less than their maturity amount?
- 15-8. Explain why the amount of cash salaries paid to employees does not equal salaries expense for the employer.
- 15-9. Differentiate between secured and unsecured liabilities. Explain the reporting procedures for each.
- 15-10. What are examples of secured and unsecured liabilities?
- 15-11. Distinguish between the stated rate and the market rate on a debt.
- 15-12. Briefly define the following terms related to a note payable: present value of the note and maturity value of the note.
- 15-13. Distinguish between an interest-bearing note and a noninterest-bearing note.
- 15-14. Assume that \$4,000 cash is borrowed on a \$4,000, 10%, one-year note payable that is interest-bearing and that another \$4,000 cash is borrowed on a \$4,400 one-year note that is noninterest-bearing. For each note, provide the following:
a. Present value of the note. *b.* Maturity amount. *c.* Total interest paid.
- 15-15. How is gift card breakage recognized as revenue using the proportional method?
- 15-16. Why is deferred revenue classified as a liability?
- 15-17. What is a compensated absence? When should the expense related to compensated absences be recognized?
- 15-18. What is the accounting definition of a contingency? What are the three characteristics of a contingency? Why is this concept important?
- 15-19. How is the likelihood of the outcome of a contingency measured? In general, how does this affect the accounting for and reporting of contingencies?
- 15-20. Briefly explain the accounting and reporting for loss contingencies.
- 15-21. What costs are recognized for environmental obligations?
- 15-22. Under what conditions may a debt due within the next year (as measured at year-end) be reported as a noncurrent liability? Under what conditions may a long-term debt (as measured at year-end) be reported as a current liability?

Brief Exercises

Target Shoppers Inc. reported cash sales of \$18,000 for the month of June 2020. Sales taxes payable are recorded at the point of sale.

- a.* Assume that sales of Target Shoppers Inc. are *subject to a 6% sales tax*. Record the sales entry.
b. Now assume that the cash collected on sales *includes the 6% sales tax*. Record the sales entry.

Brief Exercise 15-23
 Recording Sales Tax
 Payable Entries **LO1**

On June 15, 2020, Red Buckle Inc. purchased merchandise for resale for \$12,000 on credit terms 2/10, n/30. On June 20, Red Buckle paid for the merchandise. Record the entry on June 15 and the entry on June 20 using the perpetual inventory **system and the gross method for recording discounts.**

Brief Exercise 15-24
 Recording Accounts
 Payable Entries **LO1**
Hint: See Demo 15-1A

Jet Air Inc. collected \$300 cash from a customer who purchased a one-way airline ticket on June 1, 2020, for a flight from Minneapolis to New York on August 15, 2020. Record the entry on June 1, and the entry on August 15 for Jet Air Inc.

Brief Exercise 15-25
 Recording Customer
 Advances **LO2**
Hint: See Demo 15-2B

Chica's Inc. sold a \$50 gift card on February 1, 2020. The gift card was redeemed on February 14, 2020. Record the **entry on February 1 and the entry on** February 14 for Chica's Inc.

Brief Exercise 15-26
 Recording Gift Card
 Entries **LO2**
Hint: See Demo 15-2C

BSW Inc. had a weekly payroll of \$5,000 for three employees with mandatory withholdings of social security tax (7.65%), federal withholdings of \$1,000, and state withholdings of \$200. Voluntary withholdings included retirement plan contributions of \$100, and health care savings account contributions of \$150. Record BSW Inc.'s weekly payroll entry.

Brief Exercise 15-27
 Recording Payroll
 Entries **LO3**
Hint: See Demo 15-3A

Brief Exercise 15-28

Recording Liability for Compensated Absences **LO3**

Hint: See Demo 15-3C

The following information relating to compensated absences was available from Graf Company's accounting records at December 31, 2020.

- Employees' rights to vacation pay vest and are attributable to services already rendered. Payment is probable, and Graf's obligation was reasonably estimated at \$220,000.
 - Employees' rights to sick pay benefits do not vest but accumulate for possible future use. The rights are attributable to services already rendered, the total accumulated sick pay was reasonably estimated at \$100,000, and payment is possible.
- a. What amount is Graf required to report as the liability for compensated absences on its December 31, 2020, balance sheet?
 - b. Record the appropriate journal entry on December 31, 2020.

Brief Exercise 15-29

Recording Bonus Payable **LO3**

Hint: See Demo 15-3D

On December 15, 2020, the board of directors of Limited Label Inc. approved a bonus payout of \$70,000 to executives, based upon services performed in 2020. The bonus is payable on January 25, 2021. Record the entries required on (1) December 15, 2020, and (2) January 25, 2021.

Brief Exercise 15-30

Recording Interest-Bearing Note Payable Entries **LO4**

Hint: See Demo 15-4A

On August 31, 2020, Pine Company issued a 9-month, 12% note payable to National Bank in the amount of \$900,000. Interest is due at maturity. Record the entries for Pine Company on the following dates.

- a. Issuance of the note on August 31, 2020.
- b. Adjusting entry on December 31, 2020, Pine Company's fiscal year-end.
- c. Payment of the note payable on May 31, 2021.

Brief Exercise 15-31

Recording Noninterest-Bearing Note Payable Entries **LO4**

First Choice Company buys equipment on October 1, 2020, providing as payment a noninterest-bearing note for \$20,000 to be paid one year from today. The equipment could be purchased for \$18,182 in cash today. Record the entries for First Choice Company on the following dates.

- a. Issuance of the note on October 1, 2020.
- b. Adjusting entry on December 31, 2020, First Choice Company's fiscal year-end. Amortize the discount on the note using the straight-line method.
- c. Payment of the note payable on October 1, 2021.

Brief Exercise 15-32

Recording Debt Issued at a Discount **LO4**

Hint: See Demo 15-4B

The face value of commercial paper borrowings at December 31, 2020, was \$6 million. The six-month loan originated on September 1, 2020.

- a. Prepare the journal entry for issuance of the loan on September 1, 2020, assuming that the loan is discounted at 5.7%. Hint: Discount on Note Payable is equal to 6 months of interest.
- b. Prepare the adjusting entry at December 31, 2020. Amortize the discount on the note using the straight-line method.
- c. Prepare the entry to repay the loan on February 28, 2021.
- d. Calculate the market rate of the loan.

Brief Exercise 15-33

Classifying Refinanced Debt **LO4**

Hint: See Demo 15-4C

Maple Leaf Co. has a \$50,000, 5%, 10-year note issued July 31, 2011.

- a. How will the \$50,000 be classified on the December 31, 2020, balance sheet?
- b. If the \$50,000 is refinanced into a five-year note on January 31, 2021 (before the 2020 financial statements are issued), how will the \$50,000 note payable be classified on the December 31, 2020, balance sheet?

Brief Exercise 15-34

Classifying Callable Debt **LO4**

Hint: See Demo 15-4C

On December 31, 2020, Mainstreet Inc. recognized a \$100,000 note payable due on demand or on June 30, 2025, whichever is earlier, to First Bank. The repayment of the note to First Bank is not expected at any point in 2021. How will the \$100,000 note payable be classified on Mainstreet's December 31, 2020, balance sheet?

Brief Exercise 15-35

Recording Assurance-Type Warranty Liability **LO5**

Hint: See Demo 15-5C

Finisher Inc. sells merchandise for \$250,000 in 2020 that includes a three-year limited warranty. Warranty costs are estimated to be 1% of sales. The company incurred actual costs of \$800 in 2020 related to the warranties.

- a. Record the warranty accrual at the time of sale in 2020.
- b. Record the adjustment to the warranty accrual for actual warranty costs in 2020.

Brief Exercise 15-36

Recording Service-Type Warranty Liability **LO5**

Hint: See Demo 15-5C

Madison Co. sells merchandise for \$250,000 in 2020, along with a two-year warranty (for years 2020 and 2021) for \$25 per product. Warranty costs are estimated to be 0.5% of sales. The company sold \$2,500 of warranties in 2020 and incurred actual costs of \$800 in 2020 related to the warranties. The company uses straight-line recognition of warranty revenue.

- a. Record the sale of the merchandise and warranties, ignoring the cost of goods sold entry. Assume cash sales.
- b. Record the warranty service costs for 2020. Assume cash payments.
- c. Record the warranty revenue recognized in 2020.

On November 5, 2020, a Dunn Corporation truck was in an accident with an auto driven by R. Bell. Dunn received notice on January 12, 2021, of a lawsuit for \$350,000 in damages for personal injuries suffered by Bell. Dunn Corporation’s legal counsel believes it is probable that Bell will be awarded an estimated amount in the range between \$100,000 and \$225,000, and that \$150,000 is a better estimate of potential liability than any other amount. Dunn’s accounting year ends on December 31, and the 2020 financial statements were issued on March 2, 2021.

- a. What liability should Dunn accrue on December 31, 2020?
- b. How would your answer to (a) change if Dunn Corporation’s legal counsel believes it is reasonably possible that Bell will be awarded a settlement?
- c. How would your answer to (a) change if Dunn Corporation’s legal counsel believes there is only a remote possibility that Bell will be awarded a settlement?

Pitt Company is the defendant in a lawsuit filed by Hoffman in 2020 disputing the validity of a copyright held by Pitt. At December 31, 2020, Pitt determined that Hoffman would probably be successful against Pitt for an estimated amount of \$800,000. Appropriately, an \$800,000 loss was accrued by a charge to income of Pitt for the year ended December 31, 2020. On December 15, 2021, Pitt and Hoffman agreed to a settlement providing for cash payment of \$500,000 by Pitt to Hoffman and transfer of Pitt’s copyright to Hoffman. The carrying amount of the copyright on Pitt’s accounting records was \$120,000 at December 15, 2021.

- a. What would be the effect of the settlement of this liability on Pitt’s income before income tax in 2021?
- b. Record the entry on December 15, 2021 for Pitt Company.

The following information pertains to a fire insurance policy in effect during the calendar year 2020, covering Vail Company’s inventory:

Face amount of policy	\$400,000
Deductible	25,000
Amount of premium	2,000

Vail’s inventory averages \$500,000 uniformly throughout the year. How much of a contingent liability should Vail accrue at December 31, 2020, to cover possible future fire losses?

Marathon Inc. estimates that it will be required to spend approximately \$40,000 to remove an underground storage tank in 10 years that was constructed in 2020 for \$300,000. The present value of this obligation based on the company’s discount rate of 8% is \$18,528. Record the entry in 2020 (if any) related to the removal of the storage tank in 10 years.

A manufacturer of household appliances has potential losses due to the discovery of a possible defect in one of its products. The occurrence of the loss is reasonably possible, and the costs can be reasonably estimated at \$50,000. How should this potential loss be treated for financial statement purposes?

The Occupational Safety and Health Administration (OSHA) is in the process of conducting a workplace inspection at Kenny’s Corp. to determine whether the company is in compliance with standards on health and safety in the workplace. While the investigation is currently in process, Kenny’s Corp. estimates that it is probable that an assessment will be made. The range of a reasonably possible assessment is between \$25,000 and \$100,000. How should this potential loss be treated for financial statement purposes?

During the year, a driver for Commuters Inc. was involved in an accident. Commuters Inc. brought a suit against the negligent party for \$1 million. The suit is pending on December 31, 2020. Commuters Inc. believes it is virtually certain that it will receive a settlement of \$1 million. How should this potential gain be treated for financial statement purposes on December 31, 2020?

In January 2021, an explosion occurred at Nilo Company’s plant, causing damage to area properties. In March 2021, Nilo received notification of lawsuits filed against the company. Nilo’s management and legal counsel concluded that it was reasonably possible that Nilo would be held responsible for negligence and that \$1,500,000 was a reasonable estimate of the damages. Nilo’s \$2,500,000 comprehensive public liability policy contains a

Brief Exercise 15-37
Reporting a Legal Contingency **LO5**
Hint: See Demo 15-5A

Brief Exercise 15-38
Recording and Reporting a Legal Contingency **LO5**

Brief Exercise 15-39
Reporting a Loss Contingency **LO5**

Brief Exercise 15-40
Recording Asset Retirement Obligation **LO5**

Brief Exercise 15-41
Reporting a Loss Contingency **LO5**

Brief Exercise 15-42
Reporting a Loss Contingency **LO5**

Brief Exercise 15-43
Analyzing a Gain Contingency **LO5**
Hint: See Demo 15-5D

Brief Exercise 15-44
Reporting Subsequent Events **LO5**

\$150,000 deductible clause. In Nilo's December 31, 2020, financial statements, how should this casualty be reported if the financial statements were released on March 31, 2021?

Brief Exercise 15-45

Calculating Liquidity Ratios **LO6**

Hint: See Demo 15-6

Compute the (1) current ratio and the (2) quick ratio for **Nike, Inc.** using the following excerpt from the balance sheet reported in a recent 10-K of Nike, Inc.

At May 31 (in millions)	2015	At May 31 (in millions)	2015
Current assets		Current liabilities	
Cash and equivalents	\$ 3,852	Current portion of long-term debt . . .	\$ 107
Short-term investments	2,072	Notes payable	74
Accounts receivable, net	3,358	Accounts payable	2,131
Inventories	4,337	Accrued liabilities	3,951
Deferred income taxes	389	Income taxes payable	71
Prepaid expenses and other current assets . . .	<u>1,968</u>		
Total current assets	<u>\$15,976</u>	Total current liabilities	<u>\$ 6,334</u>

Exercises

Exercise 15-46

Recording Sales Taxes Payable **LO1**

Cash sales for Zeviae Inc. in 2020 were \$9 million. The majority of sales were subject to a sales tax rate of 6%. Zeviae records sales taxes payable at the point of sale.

Required

- Record the sales and sales tax entry for 2020 assuming that \$180,000 of sales were not subject to tax.
- Now assume that cash collections for 2020 were \$9 million, which included a 6% sales tax along with the sales amount. Of the amount collected, \$180,000 of sales were *not* subject to tax. Record the sales and sales tax entry for 2020.

Exercise 15-47

Recording Inventory Purchase **LO1**

On September 1, 2020, Global Tech Inc. purchased merchandise for resale for \$8,000 on credit terms 2/15, n/60 using the gross method and a perpetual inventory system. Global Tech incurred a shipping charge of \$300 on the purchase, which was immediately paid. On September 10, 2020, Global Tech paid for half of the merchandise. On October 25, 2020, Global Tech paid the remaining balance.

Required

Record the following entries for Global Tech related to the merchandise purchase.

- Record the purchase of inventory on account and the freight payment on September 1, 2020.
- Record the payment on September 10, 2020.
- Record the payment on October 25, 2020.
- Assume that instead of making payments on September 10 and October 25, Global Tech issued a 12-month note in payment of the \$8,000 account balance on October 31, 2020. Interest on the note is 10%, due in full upon maturity of the note. Record the issuance of the note payable.

Exercise 15-48

Recording Inventory Purchases and Sales on Account **LO1**

Record the entries for the following transactions for Shoppers Inc. Shoppers uses a perpetual inventory system and records sales taxes payable at the point of sale.

- On January 1, 2020, Shoppers Inc. purchased merchandise for resale for \$35,000 on credit terms 1/15, n/30. Shoppers Inc. incurred a shipping charge of \$180 on the purchase, which was immediately paid. Shoppers Inc. uses the gross method to **record** purchases.
- Shoppers Inc. sells \$14,000 of inventory during the first week of January 2020, to customers for \$25,000, with a sales tax rate of 5%. Of the total sales for the week, 30% are cash sales, and 70% are credit sales (n/30).
- On January 14, 2020, Shoppers Inc. pays the balance for purchases on account.
- Assume instead that Shoppers Inc. sells \$15,000 of inventory during the first week of January 2020 to customers for \$28,000, which includes a 5% sales tax. Of the total sales for the week, 30% are cash sales, and 70% are credit sales. Record the sales entry.

Required

- Provide the entry for Ulta Inc. to accrue compensated absences on December 31, 2020, and for the payment of vacation days in 2021. Disregard payroll taxes.
- Compute the total amount of salaries expense for 2020 and 2021. How would the vacation time carried over from 2020 affect the December 31, 2020 balance sheet?

Exercise 15-54
Recording Payroll
and Related
Deductions **LO3**

Urban Fit Corporation paid salaries and wages of \$143,800 to its employees for the month. Of this amount, \$3,800 was paid to employees who had already exceeded wages of \$128,400. Also, \$43,800 was paid to employees who had already been paid the SUTA maximum. FICA employee withholdings consist of a social security tax of 6.20% on the first \$128,400 earned, plus a Medicare tax of 1.45% on all wages. Urban Fit pays employer taxes as follows: its required FICA contribution, plus a FUTA tax of 6.0% on wages up to the SUTA maximum. Of this amount, 5.4% is payable to the state and 0.6% is payable to the U.S. Treasury. Employee income tax withholding was \$35,000. Deductions included: union dues (in conformity with the union agreement), \$3,000, and insurance premiums, \$12,000.

Required

Provide the entries to:

- Record liabilities for payroll deductions.
- Record payroll tax expenses.
- Record remittance of the payroll obligations.

Exercise 15-55
Determining Accrued
Salaries **LO3**

Bloy Company pays all salaried employees on a biweekly basis. Overtime pay, however, is paid in the following biweekly period. Bloy accrues salaries expense only at its December 31 year-end. Data relating to salaries earned in December 2020 are:

- Last payroll was paid on December 26, 2020, for the two-week period ended on that day.
- Overtime pay earned in the two-week period ended December 26, 2020, was \$8,400.
- Remaining work days in 2020 were December 29, 30, and 31, on which days there was no overtime.
- The recurring biweekly salaries total \$150,000.

Required

Assuming a 5-day workweek, what should Bloy record as a liability at December 31, 2020, for accrued salaries?

Exercise 15-56
Recording Entries for
Interest-Bearing and
Noninterest-Bearing
Notes **LO4**

Anne Taylor Company borrowed cash on August 1, 2020, and signed a \$33,300 (face amount), one-year note payable, due on July 31, 2021. The accounting period of Anne Taylor ends December 31. Assume an effective interest rate of 11%.

Required

- How much cash should Anne Taylor Company receive on the note, assuming the note is an interest-bearing note?
- Provide the following entries.
 - August 1, 2020, date of the loan.
 - December 31, 2020, adjusting entry.
 - July 31, 2021, payment of the note.
- What liability amount(s) should be shown on the December 31, 2020, balance sheet?
- Answer (a) and (c) above assuming that the note is noninterest-bearing. Use the straight-line method to amortize any discounts on note payable.

Exercise 15-57
Analyzing Interest-
Bearing and
Noninterest-Bearing
Notes **LO4**

Consider the following three separate scenarios for a one-year, \$100,000 note payable issued on September 1, 2020. Use the straight-line method to amortize any discount on note payable.

	\$100,000 Note payable	\$100,000 Note payable	\$100,000 Note payable
	12% Interest due at maturity	10% interest due at maturity	Noninterest-bearing
	12% market rate	10% market rate	12% market rate
	Borrower's FYE*: Dec. 31	Borrower's FYE: Nov. 30	Borrower's FYE: Dec. 31
Cash received upon note issuance			
Cash paid at maturity date			
Total interest paid (cash)			

continued

continued from previous page

	\$100,000 Note payable 12% Interest due at maturity 12% market rate Borrower's FYE*: Dec. 31	\$100,000 Note payable 10% interest due at maturity 10% market rate Borrower's FYE: Nov. 30	\$100,000 Note payable Noninterest-bearing 12% market rate Borrower's FYE: Dec. 31
Interest expense in fiscal year 2020			
Interest expense in fiscal year 2021			
Amount of liabilities reported on fiscal year 2020 balance sheet:			
Note payable (net)			
Interest payable			

*FYE: Fiscal year-end

Required

Complete the table above based upon the information provided for the three *separate* scenarios.

Masy's Department Store supported its operations through short-term note financing in 2020 described as follows:

- May 10 The Company entered into a new credit agreement with certain financial institutions providing for revolving credit borrowings and letters of credit in an aggregate amount not to exceed \$1.5 million. Interest rates are adjustable.
- Sep. 30 The Company borrowed \$500,000 on the revolving credit line, payable in 6 months, at an interest rate of 7.25%, due upon maturity.
- Nov. 30 Additional cash needed during peak holiday sale period was funded through the issuance of 60-day, \$200,000 commercial paper, discounted at 4%.
- Jan. 29 Paid off the commercial paper debt on due date.
- Mar. 31 Paid off the balance of \$500,000 on the revolving credit line plus interest.

Exercise 15-58
Recording Entries
for Short-term Notes
Payable **LO4**

Required

Record the following journal entries, assuming a 360-day year for interest computations:

- a. May 10—Entering into credit line agreement.
- b. September 30—Issuance of \$500,000 note payable.
- c. November 30—Issuance of \$200,000 commercial paper. Compute the discount on note payable using 360 days as the base for prorating interest. For the \$200,000 note, compute the interest accrual based upon the exact number of days outstanding.
- d. December 31—Adjusting entries.
- e. January 29—Payment of \$200,000 commercial paper.
- f. March 31—Payment of \$500,000 note payable.

The following table includes five separate short-term note payable scenarios.

	Note Payable	Issuance Date	Term	Stated Rate	Fiscal Year-End	Accrued Interest at Fiscal Year-End
1	\$5,000 note payable	September 1, 2020	6-month	6%	December 31	\$ _____
2	\$5,000 note payable	September 30, 2020	6-month	6%	December 31	_____
3	\$2,000 note payable	November 1, 2020	3-month	8%	December 31	_____
4	\$2,000 note payable	November 30, 2020	3-month	8%	December 31	_____
5	\$10,000 note payable	May 31, 2020	12-month	10%	November 30	_____

Exercise 15-59
Calculating
Accrued Interest
Expense **LO4**

Required

For each separate scenario, complete the last column in the table by calculating interest expense accrued at the relevant fiscal year-end.

On December 31, 2020, Millers Grocery Inc. had a 10-year, 7% note payable balance of \$100,000. The note payable was originally issued on June 30, 2011. The company will issue its financial statements on March 15, 2021.

Exercise 15-60
Classifying
Debt **LO4, 5**

Required

How will the note payable in each of the following separate scenarios be classified on the balance sheet of Millers Grocery on December 31, 2020?

- The company intends to pay off the note payable when it comes due.
- The company intends to refinance the note payable and will begin discussions with the lender in February 2021.
- The company issues common stock in January 2021. \$75,000 of the proceeds of the issuance plus \$25,000 in cash are used to pay off the loan.
- The company enters into a refinancing agreement dated January 31, 2021, which allows the issuance of debt up to 50% of the company's inventory balance, which is expected to be \$175,000 during 2021. The interest rate in the refinancing agreement is 6.5% and the debt agreement expires on December 31, 2023.
- The full \$100,000 was extinguished on February 1, 2021, when it was paid off with a \$100,000, 8%, interest-bearing note payable, due February 1, 2026.
- Assume that the note payable was issued on June 30, 2020. The note payable includes a provision that allows for the lender to call the note at any time. However, the lender has indicated that it does not intend to call the note in 2021.
- Assume that the note payable was issued June 30, 2019, instead of December 31, 2020. Millers Grocery Inc. is in violation of a debt covenant that requires a current ratio of 1.5. Millers obtained a waiver of the debt covenant through September 2021 because it expects to be back at 1.5 by mid-year.

Exercise 15-61
Recording
and Reporting
Warranties **LO5**

During 2020, Ward Company introduced a new product carrying a two-year warranty against defects, which is included in the selling price of the product. The estimated warranty costs are 2% of sales within the first 12 months following the sale and 4% in the second 12 months following the sale. Sales and actual warranty expenditures for the years ended December 31, 2020, and 2021 are:

	Sales	Actual Warranty Expenditures
2020	\$ 600,000	\$ 9,000
2021	<u>1,000,000</u>	<u>30,000</u>
	<u>\$1,600,000</u>	<u>\$39,000</u>

Required

- At December 31, 2020, what would Ward report as estimated warranty liability on its balance sheet?
- Record the journal **entries** required on December 31, 2020.
- At December 31, 2021, what would Ward report as estimated warranty liability on its balance sheet?
- Record the journal **entries** required on December 31, 2021.

Exercise 15-62
Recording
and Reporting
Warranties **LO5**
Hint: See Demo 15-5C

Assume the same information in Exercise 15-61, except that the warranty is for three years and has a separate purchase price. The company collected \$20,000, and \$35,000 for this extended warranty feature in the years 2020 and 2021, respectively. The company uses straight-line recognition of warranty revenue. For simplification, assume that sales occurred at the first of the year.

Required

- Record the journal entries required for (1) the sale of the products and warranties **on credit**, (2) incurred warranty costs, and (3) recognition of warranty revenue for 2020 and 2021.
- What liability would be reported on the balance sheet at the end of 2020 and 2021?

Exercise 15-63
Recording
and Reporting
Warranties **LO5**

Macy Furniture sells a line of products that carry a three-year warranty against defects at no extra charge. Based on industry experience, the estimated warranty costs are as follows: first year following the year of sale, 1% of sales; second year following the year of sale, 3% of sales; and third year following the year of sale, 5% of sales. Sales and actual warranty expenditures for the first three-year period were:

	Cash Sales	Actual Warranty Expenditures
2020	\$ 80,000	\$1,000
2021	110,000	4,100
2022	120,000	9,800

Required

- Provide entries for the three years for (1) **credit** sales, (2) estimated warranty expense, and (3) actual expenditures.
- What amount should be reported as a liability on the balance sheet at the end of each year?

Exercise 15-67Analyzing
Contingencies **LO5**

Boston Scientific Corporation is a worldwide developer, manufacturer and marketer of medical devices that are used in a broad range of interventional medical specialties. In a recent annual report on Form 10-K, the company reported the following regarding its legal expense accrual.

Note K: Commitments and Contingencies (excerpt) Our accrual for legal matters that are probable and estimable was \$1.936 billion as of December 31, 2015 and \$1.577 billion as of December 31, 2014, and includes certain estimated costs of settlement, damages and defense.

Required

- Record the entry for Boston Scientific Corporation for the accrual of legal expense on **December 31, 2015**. Assume that no settlement payments were made in 2015.
- If legal matters unresolved at the end of 2015 were settled in 2016 for \$1.736 billion, record the related entry. What impact would this settlement have on the 2015 financial statements?

Exercise 15-68Reporting Subsequent
Event **LO5, 6**

On January 17, 2021, an explosion occurred at a Cord Company plant, causing extensive property damage to area buildings. Although no claims had yet been asserted against Cord by March 10, 2021, the company believes it is probable that claims will be asserted. Cord's management and counsel concluded that it was reasonably possible that Cord would be responsible for damages and that \$2,500,000 would be a reasonable estimate of its liability. Cord's \$10,000,000 comprehensive public liability policy has a \$500,000 deductible clause.

Required

In Cord's December 31, 2020, financial statements, which were issued on March 25, 2021, how should this item be reported?

Exercise 15-69Reporting Liabilities and
Contingencies
LO1, 2, 3, 4, 5, 6

The following transactions relate to topics in this chapter.

- Purchased inventory on account, terms 2/n, n/30, accounted for using the perpetual **inventory system**.
- Collected sales taxes on a customer sale.
- Received a deposit from a customer as a down payment on a large purchase.
- Recorded a sale of gift cards to customers.
- Recognized breakage revenue on gift cards.
- Accrued weekly payroll including employee withholdings.
- Accrued payroll tax expense.
- Recorded vacation time paid that had been previously accrued.
- Accrued year-end employee bonuses.
- Accrued interest on a short-term, interest-bearing note payable.
- Reclassified long-term debt due within the next year as current.
- Accrued a loss contingency.
- Settled a loss contingency for considerably less than previously accrued.
- Recorded the sale of an extended warranty.
- Discovered as a subsequent event that a large customer unexpectedly filed for bankruptcy. As a result, the accounts receivable balance is written off before the financial statements are issued.

Required

For each transaction above, indicate the impact on assets, liabilities, and stockholders' equity.

Exercise 15-70Determining the Impact
on Liabilities of the
Balance Sheet
LO1, 2, 3, 4, 5, 6

The following transactions relate to topics in this chapter.

- Coupons published in a newspaper that may be redeemed for merchandise or service.
- Sales taxes payable.
- Probable requirements to clean up toxic wastes.
- Company contract promises to pay postretirement health benefits.
- Probable awards (gain) based on product liability suits.
- Cash dividends declared but not paid.
- Customer payments for online newsletter subscriptions not yet delivered.
- Notes payable (trade); due June 30, 2021.
- Discount on short-term notes payable.
- Bonds payable (25% installment due each April 1).
- Accounts payable.
- Accrued property taxes (estimated).

continued from previous page

d. **Derecognition of Note Payable**

Upon maturity, Frazier Inc. would record the payment of the face value of the note to Seattle Corp.

December 31, 2022—To record retirement of note at maturity

Assets	=	Liabilities	+	Equity
-1,000		-1,000		
Cash		Note Payable		
1,000		1,000		1,000

Note Payable	1,000	
Cash		1,000

Notes Payable Issued for Noncash Consideration [Property, Goods, or Services]

Although most notes represent loans, notes payable can also arise from normal purchases of goods or services or through extension of payment periods of accounts payable. Measuring the value of such transactions is more difficult because cash is not exchanged. In this case, the transaction should be recorded at the value of the asset or debt, whichever is more reliable.

If the value of the consideration given is known, the market rate can be measured by equating the present value of the cash flows called for in the note to the fair value of the consideration. **What happens when the fair value of the consideration received is not readily determinable?** The fair value of the debt can be used to measure the transaction. However, the interest rate stated in a note *may not equal* the market rate prevailing on obligations involving a similar credit rating or risk, although the stated rate is always used to determine the cash interest payments. *If the stated and market rates are different, the market rate (imputed interest rate) is used to measure the note and to measure interest expense.* The market rate is the rate accepted by two parties with opposing interests engaged in an arm’s-length transaction.

835-30-05-2 Business transactions often involve the exchange of cash or property, goods, or service for a note or similar instrument. When a note is exchanged for property, goods, or service in a bargained transaction entered into at arm’s length, there should be a general presumption that the rate of interest stipulated by the parties to the transaction represents fair and adequate compensation to the supplier for the use of the related funds. That presumption, however, must not permit the form of the transaction to prevail over its economic substance and thus would not apply if interest is not stated, the stated interest rate is unreasonable, or the stated face amount of the note is materially different from the current cash sales price for the same or similar items or from the fair value of the note at the date of the transaction.

The following three examples in **Demo 16-6B** illustrate the exchange of a note payable for noncash consideration. In the first example, a note payable is exchanged for equipment with a determinable fair value. In the second example, the fair value of the equipment and the note are not determinable; therefore, the note is measured by discounting the note using the prevailing market rate of interest of notes with similar risks (also called the **imputed interest rate**). In the third example, rather than arranging to pay off the entire principal balance at the end of the loan as in the previous examples, the contract requires the debtor to make periodic, equal payments that include both principal and interest. This is similar to a typical house or vehicle loan where payments are made up of principal and interest. This type of note is an **installment note**, which allows for the obligation to be satisfied at the end of the note term through equal periodic payments.

Demo 16-6B

LO16-6

Note Payable Issued for Noncash Consideration



Example One: Note Payable Exchanged for Equipment [Fair Value of Asset Determinable]

Frazier Inc. purchased equipment on January 1, 2020, and issued a two-year, \$1,000 note with a 5% stated rate. Interest is payable each December 31, and the entire principal is payable December 31, 2021. The equipment has a fair value of \$947. The market rate of 8% is implicit in this agreement. Record the following entries for Frazier Inc. related to the note payable.

- Record the issuance of the note on January 1, 2020.
- Prepare an amortization schedule over the term of the note payable that uses the effective interest method to amortize the discount on note payable.

continued

continued from previous page

Solution

a. Early Redemption of Bonds Payable

Frazier pays \$4,040 upon redemption of the bonds or $(\$10,000 \times 40\% \times 1.01)$. Frazier Inc. derecognizes 40% of the carrying value of the bonds on December 31, 2021. The unamortized bond discount in total is \$184. However, only 40% of this amount (as well as the bonds payable amount) is derecognized. Frazier Inc. would record the following entry on redemption.

December 31, 2021—To record bond redemption

Bonds Payable $(\$10,000 \times 40\%)$	4,000	
Loss on Redemption of Bonds $(\$4,040 - [\$4,000 - \$74])$	114	
Discount on Bonds Payable $(\$184 \times 40\%)$		74
Cash $(\$10,000 \times 40\% \times 1.01)$		4,040

Assets	=	Liabilities	+	Equity
-4,040		-4,000		-114
		74		
Cash		Bonds Payable		
4,040		4,000		10,000 Bal.
Loss on Bond Red		Discount on BP		
114		Bal. 184		74

b. Interest Payment and Retirement of Remaining Bonds Payable

Debt extinguishment does not affect the accounting for the remaining 60% of the bond issue; 60% of the values in the amortization schedule would be used to record entries over the remaining bond term.

December 31, 2022—To record interest payment on bonds

Interest Expense $(\$784 \times 60\%)$	470	
Discount on Bonds Payable $(\$184 \times 60\%)$		110
Cash $(\$600 \times 60\%)$		360

Assets	=	Liabilities	+	Equity
-360		+110		-470
Cash		Discount on BP		
4,040		184		74
360				110
		Interest Exp		
		470		

December 31, 2022—To record retirement of remaining bonds at maturity

Bonds Payable	6,000	
Cash $(\$10,000 \times 60\%)$		6,000

Assets	=	Liabilities	+	Equity
-6,000		-6,000		
Cash		Bonds Payable		
4,040		4,000		10,000
360		360		6,000
6,000				0

Example Three: Extinguishment of Debt Before Maturity with Refunding

On January 1, 2020, Frazier Inc. issues \$10,000 of 10-year, 5% bonds at face value with cash interest payable each June 30 and December 31. On January 1, 2024, Frazier Inc. retires the 5% bond issue at 86, and immediately issues at face value, \$8,600 of 20-year, 8% bonds with the same interest dates as the 5% bonds. Record Frazier's entry on January 1, 2024, to retire the 5% bonds and issue the new 8% bonds.

Solution

January 1, 2024—To record retirement of the 5% bonds payable

Bonds Payable	10,000	
Cash $(\$10,000 \times 0.86)$		8,600
Gain on Redemption of Bonds $(\$10,000 - \$8,600)$		1,400

Assets	=	Liabilities	+	Equity
-8,600		-10,000		+1,400
Cash		Bonds Payable		
8,600		10,000		10,000 Bal.
		Gain on Bond Ext		
		1,400		

January 1, 2024—To record issuance of the 8% bonds payable

Cash	8,600	
Bonds Payable		8,600

Assets	=	Liabilities	+	Equity
+8,600		+8,600		
Cash		Bonds Payable		
8,600		10,000		10,000 Bal.
		8,600		

REVIEW 16-7

LO16-7

Accounting for Extinguishment of Debt



On January 1, 2020, 5M Inc. issued \$300,000 of bonds at 95. The bonds pay 5% cash interest semi-annually on June 30 and December 31. The bonds are scheduled to mature on December 31, 2024. The company retired \$30,000 of the bonds on October 1, 2020, when the bonds were selling at 89 plus accrued interest. Assume the straight-line interest method is used to amortize the bond discount.

Required

- Record the entry for the bond issuance on January 1, 2020.
- Record the entry for the interest payment on June 30, 2020.
- Provide the entry to recognize interest expense for the portion of the bond issue retired on October 1, 2020.
- Provide the entry to record the bond retirement on October 1, 2020.

More Practice:
16-43, 16-71, 16-72, 16-73

Solution on p. 16-74.

Demo 16-10

LO16-10

Fair Value Option Accounting for Liabilities



On January 1, 2020, Frazier Inc. issued three-year bonds to Seattle Corp. at face value for \$10,000, with cash interest payable annually on December 31 at 4%. On January 1, 2020, Frazier Inc. chooses to account for the bonds using the *fair value option*. The fair value of the bonds on December 31, 2020, is \$9,200 because the stated rate is now less than the market rate due to an increase in the risk-free rate. (A market rate increase will cause comparable debt instruments to now offer a higher interest rate.)

- Record the adjusting entry on December 31, 2020, to adjust the bonds to fair value. Assume that interest expense has been recorded in 2020.
- Now assume that the bonds were originally issued at a discount to yield a market rate of 5%. Record the adjusting entry on December 31, 2020, to adjust the bonds to fair value. Assume that interest expense has been recorded in 2020. *Hint:* First compute the amortized cost of the bonds using the effective interest method.

Solution

a. Fair Value Adjustment—Bond Issued at Face Value

At December 31, 2020, the year-end adjusting entry adjusts the bonds to the fair value of \$9,200. Because the change in fair value is attributed to an increase in the risk-free rate, net income will be adjusted.

December 31, 2020—To record fair value option adjustment and the net unrealized gain

Fair Value Adjustment—Bond Payable (\$10,000 – \$9,200)	800	
Unrealized Gain <u>or Loss</u> —Income		800

Assets	=	Liabilities	+	Equity
FVA—BP		–800		+800
800				800

b. Fair Value Adjustment—Bond Issued at a Discount

The bonds originally sold at a price of \$9,728 (PV(0.05,3,–400,–10000)). On December 31, 2020, the amortized cost of the bonds is \$9,814 (\$9,728 + (\$486 – \$400)). Frazier would record an entry to adjust the bonds to fair value from amortized cost.

December 31, 2020—To record fair value option adjustment and the net unrealized gain

Fair Value Adjustment—Bond Payable (\$9,814 – \$9,200)	614	
Unrealized Gain <u>or Loss</u> —Income		614

Assets	=	Liabilities	+	Equity
FVA—BP		–614		+614
614				614



Real World—FAIR VALUE OPTION

American International Group, Inc. (AIG), an insurance organization, reported the following related to its election of the fair value method in a recent Form 10-K.

Fair Value Measurements (excerpt)—Under the fair value option, we may elect to measure at fair value financial assets and financial liabilities that are not otherwise required to be carried at fair value. Subsequent changes in fair value for designated items are reported in earnings . . . The following table presents the gains or losses recorded related to the eligible instruments for which we elected the fair value option:

Years Ended December 31 (in millions)	Gain (Loss)		
	2017	2016	2015
Liabilities:			
Long-term debt	\$(49)	\$(9)	\$(38)
Other liabilities	(2)	—	(3)

REVIEW 16-10

LO16-10

Accounting for Debt Using the Fair Value Option



On January 1, 2020, Frazier Inc. issued three-year bonds to Seattle Corp. at face value for \$10,000, with cash interest payable annually on December 31 at 4%. On January 1, 2020, Frazier Inc. chooses to account for the bonds using the *fair value option*. The fair value of the bonds on December 31, 2020, is \$8,000 because Frazier Inc. was in violation of a debt covenant. Record the adjusting entry on December 31, 2020.

More Practice:
16-46, 16-78, 16-79, 16-99
Solution on p. 16-75.

continued from previous page

Example Three: Restructuring of Debt at Less than Debt Carrying Value

Now let's assume that on January 1, 2020, Debb and Credex agree to a debt restructure agreement with the following provisions:

- Face value of note is reduced to \$400,000.
- Accrued interest for 2019 is forgiven.
- Maturity is extended to January 1, 2022 (a one-year extension).
- Interest rate is reduced to 5%; interest payments are due December 31, 2020, and 2021.

Required

Record the entries for Debb (debtor) related to the debt restructuring on January 1, 2020.

Solution

The excess of the debt book value over the restructured cash flows is calculated as follows.

Book value of debt, January 1, 2020 (\$500,000 + \$50,000)		\$550,000
Sum of restructured cash flows:		
Face value payable, January 1, 2022	\$400,000	
December 31, 2020, interest payment (5% × \$400,000)	20,000	
December 31, 2021, interest payment (5% × \$400,000)	<u>20,000</u>	<u>440,000</u>
Gain on structure for Debb (debtor)		<u>\$110,000</u>

Debb (debtor) will reduce the value of the interest payable and note payable by \$110,000.

January 1, 2020—To record troubled debt restructure for Debb (debtor)

Note Payable	500,000	
Interest Payable	50,000	
Note Payable		440,000
Gain on Restructuring of Debt (to balance)		110,000

Assets	=	Liabilities	+	Equity
		-500,000		+110,000
		-50,000		
		+440,000		
Interest Payable		Note Payable		
50,000		500,000		500,000 Bal.
				440,000
		0		440,000
				Gain—Debt Restr
				110,000

Example Four: Restructuring of Debt when Restructured Payments Exceed Debt Carrying Value

Let's assume on January 1, 2020, Debb and Credex agree to a debt restructure agreement providing the following:

- Accrued interest for 2019 is forgiven.
- Maturity is extended to January 1, 2022 (a one-year extension), and regular interest payments are required December 31, 2020, and 2021.

Required

Record the entries for Debb (debtor) related to the (1) debt restructuring on January 1, 2020, (2) the interest payments on December 31, 2020, and 2021, and (3) the payment of the note on January 1, 2022.

Solution

The excess of the restructured cash flows over the debt book value is calculated as follows.

Sum of restructured cash flows			
Face value payable, January 1, 2022	\$500,000		
December 31, 2020, interest payment (10% × \$500,000)	50,000		
December 31, 2021, interest payment (10% × \$500,000)	<u>50,000</u>	<u>\$600,000</u>	
Less book value of debt, January 1, 2020		<u>550,000</u>	
Excess of restructured cash flows over debt book value		<u>\$ 50,000</u>	

Debb, the debtor, records no gain on the debt restructure. Instead, Debb computes a new effective interest rate using the revised debt payment schedule and this rate is computed as follows.

	RATE	NPER	PMT	PV	FV	Excel Formula
Given	?	2	50,000	(550,000)	500,000	=RATE(2,50000,550000,500000)
Solution	4.6487%					

-550000

continued

Settlement of a Receivable If a receivable (such as a note receivable) is settled by the debtor making a payment of cash, or transferring asset(s) or equity, the creditor will record the amounts at fair value and record a loss on the settlement. The loss can be recorded as an offset to the allowance for doubtful accounts.

Modification of Terms of a Receivable A creditor measures the loss on a receivable by discounting the restructured future cash flows using the historical market rate of interest on the loan. (This is the same procedure that we used to account for an impairment of receivables in LO 8-9 except now we have officially modified cash flows while with an impairment we used expected future cash flows.)

310-40-35-12 The effective interest rate for a loan restructured in a troubled debt restructuring is based on the original contractual rate, not the rate specified in the restructuring agreement. It has been indicated that a troubled debt restructuring does not result in a new loan but rather represents part of a creditor’s ongoing effort to recover its investment in the original loan. Therefore, the interest rate used to discount expected future cash flows on a restructured loan shall be the same interest rate used to discount expected future cash flows on an impaired loan.

Debt Restructuring and Debt Settlement—CREDITOR Perspective

LO16-12

Demo 16-12B

Refer to the information in **Demo 16-12A**, but now record the entries from the perspective of the creditor.



Example One: Settlement of Debt through Transfer of Assets

January 1, 2020—To record troubled debt restructure for Credex (creditor)

Land	100,000	
Building	250,000	
Loss on Settlement of Debt* (to balance)	200,000	
Note Receivable		500,000
Interest Receivable (\$500,000 × 10%)		50,000

*Can also debit Bad Debt Expense or offset the Allowance for Doubtful Accounts

Assets = Liabilities + Equity	
+100,000	-200,000
+250,000	
-500,000	
-50,000	
Interest Receiv Note Receiv	
Bal. 50,000 50,000	Bal. 500,000 500,000
0	0
Land Building	
100,000	250,000
Loss—Debt Restr	
200,000	

Example Two: Settlement of Debt through Transfer of Equity Interest

January 1, 2020—To record troubled debt restructure for Credex (creditor)

Investment in Common Stock (2,500 × \$60)	150,000	
Loss on Settlement of Debt* (to balance)	400,000	
Note Receivable		500,000
Interest Receivable		50,000

*The company can also debit Bad Debt Expense or offset the Allowance for Doubtful Accounts.

Assets = Liabilities + Equity	
+150,000	-400,000
-500,000	
-50,000	
Interest Receiv Note Receiv	
Bal. 50,000 50,000	Bal. 500,000 500,000
0	0
Invest—CS Loss—Debt Restr	
150,000	400,000

Example Three: Restructuring of Debt at Less than Debt Carrying Value

The creditor will treat the debt restructure as a loan impairment, which calls for a write-down of the note to the present value of expected future cash flows discounted at the original market rate (10%). The net carrying value of the note for Credex (creditor) after the restructure is calculated as follows:

	RATE	NPER	PMT	PV	FV	Excel Formula
Given	0.10	2	20,000	?	400,000	=PV(0.1,2,20000,400000)
Solution				\$(365,289)		

Credex recognizes an immediate charge to bad debt expense of \$184,711 (\$550,000 – \$365,289) and then recognizes interest at 10% over the remaining term of the restructure agreement using the effective interest method.

January 1, 2020—To record troubled debt restructure for Credex (creditor)

Note Receivable	550,000	
Bad Debt Expense	184,711	
Allowance for Doubtful Accounts		184,711
Interest Receivable		50,000
Note Receivable		500,000

Assets = Liabilities + Equity	
+550,000	-184,711
-184,711	
-50,000	
-500,000	
Interest Receiv Note Receiv	
Bal. 50,000 50,000	Bal. 500,000 500,000
0	550,000
AFDA Bad Debt Exp	
184,711	184,711

continued

For the Yale Corporation bonds in Brief Exercise 16-34, show how the bonds and related accounts would be presented **on** the balance sheet as of June 30, 2020.

Brief Exercise 16-36
Reporting Bonds on the Balance Sheet **LO4**
Hint: See Demo 16-4A

Yale Corporation issued to Zap Corporation \$60,000, 8% (cash interest payable semiannually on June 30 and December 31) 10-year bonds dated and sold on January 1, 2020. Assume that the company uses the effective interest amortization method and bond issuance costs are \$1,500. If the bonds were sold to yield 9%, provide journal entries to be made at each of the following dates.

Brief Exercise 16-37
Recording Debt Issuance Costs **LO4**
Hint: See Demo 16-4C

- a. January 1, 2020, for issuance of bonds.
- b. June 30, 2020, for the interest payment.

Lacey Corp. issued a three-year, \$5,000 note with an 8% stated rate to Hayley Co. on January 1, 2020, and received cash of \$5,000. The note requires semiannual interest payments on June 30 and December 31. Provide journal entries to be made at each of the following dates.

Brief Exercise 16-38
Recording Entries for Note Payable **LO6**
Hint: See Demo 16-6A

- a. January 1, 2020, for issuance of the note.
- b. June 30, 2020, for the interest payment.

On January 1, 2020, Landry Inc. issued a three-year, \$5,000, zero-interest-bearing note to Dillon LLP, and received \$4,198. The implied interest rate is 6% on this note transaction. Provide journal entries to be made at each of the following dates.

Brief Exercise 16-39
Recording Entries for Zero-Interest-Bearing Note Payable **LO6**
Hint: See Demo 16-6A

- a. January 1, 2020, for issuance of the note.
- b. December 31, 2020, for accrual of interest.

Fern Company purchased goods on January 1, 2020, and issued a two-year, \$2,500 note with a 5% stated rate. The fair value of the goods is \$2,366. The note requires annual interest payments on December 31. The market rate of interest appropriate for this note is 8%. Provide journal entries to be made at each of the following dates.

Brief Exercise 16-40
Recording Entries for Interest-Bearing Note Payable **LO6**
Hint: See Demo 16-6B

- a. January 1, 2020, for issuance of the note.
- b. December 31, 2020, for the interest payment.

On January 1, 2020, Allen Corp. issued a 3-year, zero-interest-bearing note payable for \$10,000 to Town Corp. for a cash receipt of \$10,000. In lieu of interest payments, Allen Corp. agreed to sell merchandise to Town Corp. at a discount and provide free shipping during the 3-year period. The appropriate market rate for this transaction is 8%. Record the journal entry for Allen Corp. upon issuance of the note payable.

Brief Exercise 16-41
Recording Entries for Note Payable Exchanged for Cash and Noncash Consideration **LO6**

On January 1, 2020, a borrower signed a long-term note, face amount \$50,000 with time to maturity of 6 years. The interest rate is 7% and equal annual installment payments will pay off the loan after six years.

Brief Exercise 16-42
Computing Installment Payment on Note Payable **LO6**

- a. How much is each annual installment payment?
- b. Record the first installment payment on December 31, 2020.

Darien Inc. redeemed \$5,000 of its bonds at 102 on January 1, 2020. At this date, the unamortized discount was \$690. Prepare the journal entry on January 1, 2020, for the bond redemption. Assume Darien has a December 31 year-end and all adjusting entries were made.

Brief Exercise 16-43
Recording Bond Redemption **LO7**
Hint: See Demo 16-7

Stonewall Corporation issued \$20,000 of 5%, 10-year convertible bonds. Each \$1,000 bond is convertible to 10 shares of common stock (par \$50) of Stonewall Corporation. The bonds were sold at 105 on January 1, 2020. Provide the entry for Stonewall Corporation on January 1, 2020, to record the issuance of the bonds.

Brief Exercise 16-44
Recording the Issuance of Convertible Bonds **LO8**
Hint: See Demo 16-8

On December 1, 2020, Junction Company issued at 104, 4,000 of its 9%, 10-year, \$1,000 par value, nonconvertible bonds with detachable stock purchase warrants. Each bond carried two detachable warrants; each warrant was for one share of common stock at a specified option price of \$15 per share. Shortly after issuance, the warrants were quoted on the market for \$3 each. No fair value can be determined for the bonds without the warrants. Interest is payable on December 1 and June 1. Provide the entry to record issuance of the bonds by Junction Company on December 1, 2020.

Brief Exercise 16-45
Recording the Issuance of Bonds with Detachable Warrants **LO9**
Hint: See Demo 16-9

Josie Corporation issued 10-year, 8% interest-bearing bonds payable at face value for \$10,000 on January 1, 2020. At that time, Josie Corporation elected to account for the bonds payable using the fair value option method. At December 31, 2020, the fair value of the bonds payable was \$9,900 due to an increase in Josie Corporation's borrowing rate because of general market risk.

Brief Exercise 16-46
Adjusting Bonds Payable Under the Fair Value Option **LO10**

On May 1, 2020, Setup Inc. sold an issue of 5%, \$1,000 bonds dated January 1, 2020, to yield 5%. The bonds pay interest every June 30 and December 31, and mature December 31, 2024.

Required

- a. Provide journal entries to be made by Setup Inc. at each of the following dates.
 1. May 1, 2020, bond issuance.
 2. June 30, 2020, first interest payment.
- b. Indicate the amount of interest expense to be recorded in the income statement of Setup Inc. for the six months ended June 30, 2020.

Exercise 16-52
Recording Entries for
Bonds Sold Between
Interest Dates **LO2, 3**

On October 1, 2020, New Co. issued an eight-year, 6%, \$1,000 bond at face value, with cash interest payable semiannually on April 1 and October 1.

Required

Provide journal entries to be made by New Co. at each of the following dates.

- a. October 1, 2020—Issuance.
- b. December 31, 2020—Interest expense adjusting entry.
- c. April 1, 2021—Interest payment.

Exercise 16-53
Recording Journal
Entries for At-Par-
Bonds **LO2, 3**

On January 1, 2020, Williams Inc. issued 8-year, \$50,000, 5% bonds, priced to yield 6%, with cash interest payable semiannually on June 30 and December 31. The company amortizes the bond discount using the effective interest method.

Required

Provide an amortization schedule of interest and discount amortization for the 8-year bond term. Round amounts to two decimals.

Exercise 16-54
Preparing an
Amortization
Schedule—Effective
Interest Method **LO4**

On January 1, 2020, Williams Inc. issued 8-year, \$50,000, 5% bonds, priced to yield 6%, with cash interest payable semiannually on June 30 and December 31. The company amortizes the bond discount using the straight-line interest method.

Required

Provide an amortization schedule of interest and discount amortization for the 8-year bond term. Round amounts to two decimals.

Exercise 16-55
Preparing an
Amortization Schedule
—Straight-Line Interest
Method **LO4**
Hint: See Demo 16-4B

Mitchell Inc. issued 40, 6%, \$1,000 bonds on January 1, 2020, for \$38,950. The bonds pay cash interest annually each December 31 and were issued to yield 7%. The bonds mature December 31, 2022, and the company uses the effective interest method to amortize bond discounts or premiums.

Required

- a. Prepare an amortization schedule for the full bond term. Round amounts to the nearest dollar.
- b. Prepare journal entries on the following dates.
 1. January 1, 2020, bond issuance.
 2. December 31, 2020, interest payment.
- c. Explain why, in economic terms, the interest expense recognized each year exceeds the cash interest paid.

Exercise 16-56
Recording Bond
Entries and Preparing
an Amortization
Schedule—Effective
interest method,
Discount **LO4**

Mitchell Inc. issued 40, 6%, \$1,000 bonds on January 1, 2020. The bonds pay cash interest semiannually each July 1, and December 31, and were issued to yield 7%. The bonds mature December 31, 2022, and the company uses the effective interest method to amortize bond discounts or premiums.

Required

- a. Determine the selling price of the bonds.
- b. Prepare an amortization schedule for the full bond term.
- c. Prepare journal entries on the following dates.
 1. January 1, 2020, bond issuance.
 2. July 1, 2020, interest payment.
 3. December 31, 2020, interest payment.

Exercise 16-57
Recording Bond
Entries and Preparing
an Amortization
Schedule—Effective
interest method,
Discount **LO4**
Hint: See Demo 16-4A

Mitchell Inc., issued 70, 6%, \$1,000 bonds on January 1, 2020. The bonds pay cash interest annually each January 1 (beginning January 1, 2021), and were issued to yield 4%. The bonds mature January 1, 2030, and the company will use the straight-line interest method to amortize the bond discount or premium. Assume that the difference between the effective interest method and the straight-line interest method is not material.

Required

- Determine the selling price of the bonds.
- Prepare an amortization schedule for the full bond term.
- Prepare journal entries on the following dates.
 - January 1, 2020, bond issuance.
 - December 31, 2020, interest accrual.
 - January 1, 2021, interest payment.

Exercise 16-63
Recording Bond Entries and Preparing an Amortization Schedule—Straight-Line Interest Method, Premium **LO5**

Master Corp. issued 5%, \$300,000 bonds on January 1, 2020. The bonds pay cash interest semiannually each July 1 and January 1, and were issued to yield 6%. The bonds mature January 1, 2030, and the company uses the effective interest method to amortize bond discounts or premiums.

Required

- Prepare journal entries on the following dates.
 - January 1, 2020—Issuance of bonds.
 - July 1, 2020—Interest payment.
 - December 31, 2020—Interest accrual.
 - January 1, 2021—Interest payment.
- Answer part *a* assuming instead that the company uses the straight-line interest method to amortize discounts and premiums and the bonds were sold on March 1, 2020, for \$277,482 (excluding accrued interest).

Hint: Amortize discount on bonds payable over a 118 month bond term.

Exercise 16-64
Recording Bond Entries and Reporting Bonds—Effective Interest, Straight-Line **LO4**

Master Corp. issued 8%, \$80,000 bonds on February 1, 2020. The bonds pay interest semiannually each July 31 and January 31 and were issued to yield 7%. The bonds mature January 31, 2030, and the company uses the effective interest method to amortize bond discounts or premiums.

Required

- Prepare journal entries on the following dates.
 - February 1, 2020—Issuance of bonds.
 - July 31, 2020—Interest payment.
 - December 31, 2020—Interest accrual.
 - January 31, 2021—Interest payment.
- Indicate how the balance sheet **as of December 31, 2020, and 2020 income statement for Master Corp.** would reflect these transactions.
- What is the total cost of financing assuming that the bonds remain outstanding for the full term?
- What is the total cost of financing assuming that the bonds remain outstanding for the full term if **instead,** the straight-line interest method was used to amortize the premium?
- If the company were to have instead amortized the premium using the straight-line interest method, would interest expense recognized be lower or higher in 2020?
- If the company were to have instead amortized the premium using the straight-line interest method, would interest expense recognized be lower or higher in 2030?

Exercise 16-65
Recording Bond Entries and Reporting Bonds—Effective interest method, Straight-Line **LO5**

For the following *separate* bond issues, assume that the bonds are sold on January 1, 2020, interest is paid semiannually on July 1 and December 31, and the bond term is 5 years.

Case	Face Value of Bonds	Stated Rate	Market Rate	Amortization Method	Bond Selling Price	Interest Expense 2020	Interest Paid 2020
1	\$ 10,000	5%	6%	Effective interest			
2	40,000	4%	5%	Effective interest			
3	130,000	5%	4%	Straight-line			
4	500,000	0%	7%	Straight-line			
5	80,000	7%	6%	Effective interest			
6	100,000	6%	8%	Straight-line			

Exercise 16-66
Computing Amounts under Effective Interest and Straight-Line Interest Methods **LO2, 4, 5**

- d. Provide the entry to record the bond retirement on September 1, 2020.

On January 1, 2020, Rocket Corporation issued \$250,000 of 6%, 20-year bonds at 98. The interest is payable each December 31. Rocket uses straight-line amortization. The company's accounting period ends December 31.

On January 1, 2029, Rocket issued \$250,000, 5% 20-year, refunding bonds at par. On this date, the old 6% bonds could be purchased in the open market at 102. Rocket immediately purchased all of the 6% bonds.

Required

- Provide the entry for issuance of the 6% bonds on January 1, 2020.
- Provide the entry for issuance of the 5% bonds on January 1, 2029.
- Provide the entry to record the extinguishment of the old bonds on January 1, 2029.

Exercise 16-72
Recording the Refunding of Long-Term Debt **LO7**

Dillon Corp. issued \$100,000 of 6% (cash payable each December 31), 10-year bonds on January 1, 2020. The bonds are callable at any point after 2024 at 103. The bonds sold on January 1, 2020, at 98. Straight-line amortization of bond discounts and premiums is used. Due to a drop in interest rates, Dillon decided to call in half of the bonds and issue a new series of bonds in the amount of \$50,000 (5% cash interest annually, five-year term) on January 1, 2025, at par.

Required

- Provide the entry for issuance of the 6% bonds on January 1, 2020.
- Provide the entry for issuance of the 5% bonds on January 1, 2025.
- Provide the entry for redemption of the 6% bonds on January 1, 2025.

Exercise 16-73
Recording the Refunding of Long-Term Debt **LO7**

Stonewall Corporation issued \$20,000 of 5%, 10-year convertible bonds. Each \$1,000 bond is convertible to 10 shares of common stock (par \$50) of Stonewall Corporation. The bonds were sold at 105 on January 1, 2020.

Required

- Provide the entry for Stonewall Corporation on January 1, 2020, for the bond issuance.
- Provide entries for Stonewall Corporation assuming that the conversion privilege is subsequently exercised immediately after the end of the third year. Assume that at the date of conversion, 30% of any premium or discount has been amortized and the common stock was selling at \$125 per share. Use the book value method.

Exercise 16-74
Recording Entries for Convertible Bonds **LO8**
Hint: See Demo 16-8

On January 1, 2020, Sierra Corp. issued 500, \$1,000, 6% convertible bonds at face value. Each bond is convertible into 15 shares of \$1 par value common stock. As an inducement to convert the bonds into common stock in 2022 prompted by a drop in interest rates, the company offered \$35,000 to bondholders, payable upon conversion. All of the bondholders converted to common stock in June of 2022.

Required

- Provide the entry for issuance of bonds on January 1, 2020.
- Provide the entry for Sierra Corp. for conversion of the bonds in June of 2022, using the book value method.

Exercise 16-75
Recording Entries for Convertible Bonds **LO8**
Hint: See Demo 16-8

Harley Corporation issued \$75,000 of 6%, 10-year, nonconvertible bonds with detachable stock purchase warrants. Each \$1,000 bond carried 20 detachable warrants, each of which was for one share of Harley common stock, par \$20, at a specified exercise price of \$60. The bonds sold at 102 including the warrants (no bond price without warrants was available), and immediately after the date of issuance, the detachable stock purchase warrants were selling at \$4 each. All indicated transactions occurred in the same fiscal year.

Required

- Provide the entry for the issuer at the date of issuance of the bonds.
- Provide the entry for Harley assuming subsequent tender of all of the warrants by the investors for exercise at the specified exercise price. At this date, the stock was selling at \$75 per share.

Exercise 16-76
Recording Entries for Bonds with Warrants **LO9**

On July 1, 2020, Salem Corporation issued \$2,000,000 of 7% bonds due in 10 years. The bonds pay cash interest semiannually. Each \$1,000 bond includes a detachable stock purchase warrant. Each **warrant** gives the bondholder the right to purchase, for \$30, one share of \$1 par value common stock at any time during the next 10 years. The bonds were sold at 101. The value of the stock purchase warrants at the time of issuance was \$100,000. The bonds would sell without warrants at \$1,940,000.

Required

- Record the entry for issuance of bonds using the proportional method.
- Record the entry for issuance of bonds assuming instead that the warrants are not detachable.

Exercise 16-77
Recording Entries for Bonds with Warrants **LO9**

Assets	=	Liabilities	+	Equity
-19,056		-16,337		-2,719
Cash		Note Payable		
100,000		15,127		49,108
19,056		16,337		
19,056				Interest Exp
				3,929
				2,719

December 31, 2021—To record payment of interest plus principal

Interest Expense (\$33,981 × 8%) (amount rounded)	2,719	
Note Payable	16,337	
Cash		19,056

Assets	=	Liabilities	+	Equity
-19,056		-17,644		-1,412
Cash		Note Payable		
100,000		15,127		49,108
19,056		16,337		
19,056		17,644		0
				Interest Exp
				3,929
				2,719
				1,412

December 31, 2022—To record payment of interest plus principal

Interest Expense (\$17,644 × 8%)	1,412	
Note Payable	17,644	
Cash		19,056

*Amount rounded

Review 16-7

a. January 1, 2020—To record bond issuance

Assets	=	Liabilities	+	Equity
+285,000		-15,000		+300,000
Cash		Bonds Payable		
285,000		300,000		
		Discount on BP		
		15,000		

Cash (\$300,000 × 0.95)	285,000	
Discount on Bonds Payable (\$300,000 - \$285,000)	15,000	
Bonds Payable		300,000

b. June 30, 2020—To record payment of interest

Assets	=	Liabilities	+	Equity
-7,500		+1,500		-9,000
Cash		Discount on BP		
285,000		15,000		1,500
7,500				Interest Exp
				9,000

Interest Expense	9,000	
Discount on Bonds Payable (\$15,000/10)		1,500
Cash (\$300,000 × 5%/2)		7,500

c. October 1, 2020—To record payment of interest

Assets	=	Liabilities	+	Equity
-375		+75		-450
Cash		Discount on BP		
285,000		15,000		1,500
7,500		375		75
				Interest Exp
				9,000
				450

Interest Expense	450	
Discount on Bonds Payable (\$15,000/60 × 3 × 0.10)		75
Cash (\$30,000 × 5% × 3/12)		375

d. October 1, 2020—To record bond extinguishment

Assets	=	Liabilities	+	Equity
-26,700		-30,000		+2,025
Cash		Bonds Payable		
285,000		30,000		300,000
7,500				Discount on BP
26,700				15,000
				1,500
				75
				Gain on Bond Ext
				2,025

Bonds Payable	30,000	
Discount on Bonds Payable (\$15,000/60 × 51 × 0.10)		1,275
Cash (\$30,000 × 0.89)		26,700
Gain on <u>Redemption of Bonds</u> (\$30,000 - \$1,275) - \$26,700)		2,025

Review 16-8

a. January 1, 2020—To record bond issuance

Assets	=	Liabilities	+	Equity
+196,000		-4,000		+200,000
Cash		Bonds Payable		
196,000		200,000		
		Discount on BP		
		4,000		

Cash (\$200,000 × 0.98)	196,000	
Discount on Bonds Payable (\$200,000 - \$196,000)	4,000	
Bonds Payable		200,000

b. December 31, 2021—To record conversion of bonds to common stock

Assets	=	Liabilities	+	Equity
-100,000		+1,200		+98,300
Bonds Payable		Common Stock		
100,000		500		500
Discount on BP		Paid in Cap—CS		
4,000		1,200		98,300

Bonds Payable (\$200,000 × 0.50)	100,000	
Discount on Bonds Payable (\$4,000 × 0.60 × 0.50)		1,200
Common Stock (\$100,000/\$1,000 × 5 shares × \$1 par)		500
Paid-in Capital in Excess of Par—Common Stock (to balance)		98,300

Review 16-9

a. To record issuance of bonds with nondetachable warrants

Assets	=	Liabilities	+	Equity
+102,000		+100,000		+2,000
Cash		Bonds Payable		
102,000		100,000		
		Premium on BP		
		2,000		

Cash (\$100,000 × 1.02)	102,000	
Premium on Bonds Payable (\$102,000 - \$100,000)		2,000
Bonds Payable		100,000

	Operating Lease		Finance Lease	
	Lease Expense	Interest Expense	Amortization of Right-of-Use Asset	Total
2020 . . .	\$ 33,512	\$3,251	\$31,873	\$ 35,124
2021 . . .	33,512	1,666	31,873	33,539
2022 . . .	33,512	—	31,873	31,873
	<u>\$100,536</u>	<u>\$4,917</u>	<u>\$95,619</u>	<u>\$100,536</u>

Because the amortization of the right-of-use asset differs, the net balance in the right-of-use asset for the first two years also differs as follows.

	Operating Lease Right-of-Use Asset	Finance Lease Right-of-Use Asset
Dec. 31, 2020	\$65,358	\$63,746
Dec. 31, 2021	33,512	31,873
Dec. 31, 2022	0	0

EXPANDING YOUR KNOWLEDGE

Leases and Statement of Cash Flows

On the statement of cash flows for an operating lease, the full lease payment is classified as an outflow from operating activities. Because the full lease payment is reported as expense each period, the cash outflows related to the full lease payment are incorporated into cash flows from operating activities. However, for a finance lease, only the interest portion of the lease payment is included in expense, and thus only the cash outflows related to interest are incorporated into cash flows from operating activities. The reduction in principal is reported as an outflow for financing activities. For a lessor, lease cash receipts are treated as a cash inflow from operating activities.

Guaranteed Residual Let’s assume that the residual was guaranteed in **Demo 17-4B**. As you may recall, a guaranteed residual value is considered an additional payment by the lessee. Therefore, the present value of lease payments criterion would be reevaluated for the lease classification test.

	RATE	NPER	PMT	PV	FV	Excel Formula
Given	5%	3	(34,972.07)	?	(57,882)	=PV(0.05,3,-34972.07,-57882,1)
Solution				\$150,000		

Present value of lease payments criterion:

\$145,000 (PV of lease payments of \$150,000 less lease incentive of \$5,000) > \$135,000 (90% of the fair value of \$150,000)

Because the present value of the lease payments is greater than 90% of the fair value of the asset, the lease would be considered a finance lease, *not an operating lease*, for the lessee.

REVIEW 17-4

LO17-4

Accounting for Operating Lease by Lessee



On January 1, 2020, Lessee Inc. signed a ten-year lease for office space for \$75,000 annually, with the first payment due immediately. Lessee Inc. has the option to renew the lease for an additional four-year period on or before January 1, 2030, at market lease rates at the time of renewal. Lessee Inc. intends to evaluate rental options at the time of the option to renew. The economic life of the rental space is 30 years and the fair value of the rental space is \$1 million. Lessee Inc. is not aware of the implicit rate of the lease but has an incremental borrowing rate of 6%. Lessee Inc. paid \$1,000 on January 1, 2020, in initial direct costs.

- How would Lessee Inc. classify the lease?
- Prepare an amortization schedule for the lease liability.
- Prepare an amortization schedule for the right-of-use asset.
- Prepare the entries for Lessee Inc. for years 2020 and 2021, to record the right-of-use asset and lease liability, to record the lease payments, and to record lease expense.

More Practice:
17-44, 17-45, 17-46, 17-47,
17-76, 17-77, 17-78, 17-79
Solution on p. 17-84.

continued from previous page

c. Merill's journal entry—December 31, 2020

On December 31, 2020, Merill Inc. records the following entries related to the first lease payment obtained from the partial amortizations schedules included below.

December 31, 2020—To record lease expense

Lease Expense	16,890	
Lease Liability		5,395
Right-of-Use Asset		11,495

Assets	=	Liabilities	+	Equity
-11,495		+5,395		-16,890
67,437		11,495		67,437
55,942				5,395
				16,890

December 31, 2020—To record lease payment

Lease Liability	16,980	
Cash		16,980

Assets	=	Liabilities	+	Equity
-16,980		-16,980		
95,000		16,980		67,437
				5,395
				55,942

Lease Liability Amortization Schedule (Partial)

Date	Lease Payment	Interest on Liability	Lease Liability Reduction	Net Lease Liability
Jan. 1, 2020 . . .				\$67,437
Dec. 31, 2020 . . .	\$16,890	\$5,395	\$11,495	55,942

Right-of-Use Asset Amortization Schedule (Partial)

Date	Lease Expense Straight-Line	Interest on Liability	Right-of-Use Asset Amortization	Net Right-of-Use Asset
Jan. 1, 2020 . . .				\$67,437
Dec. 31, 2020 . . .	\$16,890	\$5,395	\$11,495	55,942

Example Two—To Record a Failed Sale

Let's assume the same circumstances as Example One, except that the lease term is 8 years and the payments are now \$16,531.40. Answer the following questions from the perspective of Merill Co.

- Determine the appropriate lease classification.
- Prepare Merill's journal entry at January 1, 2020.
- Prepare Merill's journal entry at December 31, 2020.

Solution

a. Lease Classification

Lease Classification Criteria	Analysis	Lease Criteria Met																		
1 Ownership transfer	Asset reverts to the lessor at the end of the five-year period.																			
2 Purchase option	Lease does not contain a purchase option.																			
3 Lease term length	Length of the lease is 80% of the economic life of warehouse.	✓																		
4 PV of lease payments	\$95,000 (PV of lease payments) > \$85,500 (90% of fair value of \$95,000).																			
	<table border="1"> <thead> <tr> <th></th> <th>RATE</th> <th>NPER</th> <th>PMT</th> <th>PV</th> <th>Excel Formula</th> </tr> </thead> <tbody> <tr> <td>Given</td> <td>8%</td> <td>8</td> <td>(16,531.40)</td> <td>?</td> <td>=PV(0.08,8,-14651)</td> </tr> <tr> <td>Solution</td> <td></td> <td></td> <td></td> <td>\$95,000</td> <td></td> </tr> </tbody> </table>		RATE	NPER	PMT	PV	Excel Formula	Given	8%	8	(16,531.40)	?	=PV(0.08,8,-14651)	Solution				\$95,000		<div style="border: 1px solid red; width: 20px; height: 20px; display: inline-block; margin: 0 auto;"></div>
	RATE	NPER	PMT	PV	Excel Formula															
Given	8%	8	(16,531.40)	?	=PV(0.08,8,-14651)															
Solution				\$95,000																
5 Alternative use	There are alternative uses for the warehouse.																			

The lease qualifies as a finance lease because two lease criteria are met. This qualification as a finance lease precludes the recording of a sale of the warehouse to Leasing Solutions Inc. Thus, this transaction will be recorded similarly to a loan.

b. Merill's journal entry—January 1, 2020

For a failed sale, the transaction results in the recording of a note payable by Merill.

continued

- 17-13. How does a lessee derecognize a right-of-use asset and lease liability over the term of a finance lease?
- 17-14. If a lessee records a right-of-use asset related to a finance lease, over what period would the lessee recognize amortization expense? What conditions impact your answer?
- 17-15. How does a lessor account for an operating lease?
- 17-16. How does a lessor account for a sales-type lease?
- 17-17. If a lessor determines that payments from a lessee pertaining to a sales-type lease are not probable, how would the lessor account for the lease?
- 17-18. What qualifies as a short-term lease and how would a lessee account for a short-term lease?
- 17-19. What determines whether a lease modification results in a separate lease or in a modification of an existing lease?
- 17-20. What types of qualitative information should be disclosed about a company's leases?

Brief Exercises

On January 1, 2020, Lessee Company leases equipment with a fair value of \$2,000 from Lessor Company for 3 years, with no renewal options. The estimated life of the equipment is 5 years and there is no purchase option at the end of the lease term. The annual lease payment is \$700, which includes a \$50 charge for an annual maintenance contract. The first payment is due immediately. Lessee Company's incremental borrowing rate is 6% and the lessee is not readily able to determine the lessor's implicit interest rate. Title to the equipment remains with the lessor at lease end and the lessee does not guarantee the residual value at lease end.

- a. Determine the classification of the lease for Lessee Company.
- b. Determine the classification of the lease for Lessor Company.

Brief Exercise 17-21
Classifying Leases
LO1

On January 1, 2020, Lessee Company leases a vehicle with a fair value of \$30,000 from Lessor Company for 3 years, with no renewal options. The estimated life of the vehicle is 6 years and Lessee Company has an option to purchase the vehicle at lease end at the vehicle's fair value which the lessee is not expected to exercise. The monthly lease payment is \$520, with the first payment due immediately. Lessee Company's incremental borrowing rate is 6% and the lessee is not readily able to determine the lessor's implicit interest rate. Title to the equipment remains with the lessor at lease end and the lessee does not guarantee the residual value at lease end. Lessee Company will pay for the maintenance of the vehicle separately from the lease.

- a. Determine the classification of the lease for Lessee Company.
- b. Determine the classification of the lease for Lessor Company.

Brief Exercise 17-22
Classifying Leases
LO1

A lessee is evaluating whether a lease term is a major part of the remaining life of an asset in order to determine the proper lease classification. The lessee leases office space through a lease with a 10-year term. The lease has a renewal option for an additional 5 years at a rental price that is adjusted to market at time of renewal. The office building has a remaining useful life of 20 years from the commencement of the lease. The lessee plans to make a significant investment in leasehold improvements (useful life of 15 years) at the commencement of the lease. Based on this information only, how would the lessee classify this lease?

Brief Exercise 17-23
Classifying Leases
LO1

For each of the following four *separate* finance lease scenarios, determine the lease payment that the lessee should use to determine the appropriate lease classification.

- a. Lease payments are \$3,000 per month plus 5% of lessee net sales. Lessee sales for year one are estimated to be \$100,000.
- b. Lease payments are computed as the *greater of* (a) 5% of lessee net sales or (b) \$3,000. Lessee sales for year one are estimated to be \$100,000.
- c. Annual lease payments are 10% of lessee annual sales, with no fixed portion. Lessee sales for year one are estimated to be \$100,000.
- d. Lease payments total \$5,000 in year one and increase each year based on the annual increase in the CPI at the end of the preceding year. The CPI at the end of the current year is expected to be 2%.

Brief Exercise 17-24
Identifying Lease Payments
LO1

For each of the following **three** *separate* finance lease scenarios, determine the lease payment that the lessee should use to determine the appropriate lease classification.

- a. An annual lease payment for equipment was \$50,000 and included a fee of \$5,000 for maintenance of the equipment.

Brief Exercise 17-25
Identifying Lease Payments
LO1

Brief Exercise 17-44
Reporting Operating
Lease **LO4**
Hint: See Demo 17-4A

Solutions Inc. signs a 10-year lease for a building owned by Property Inc. that is appropriately classified as an operating lease by both the lessee and lessor. Lease payments are \$150,000 per year. The building has an estimated useful life of 30 years with no salvage value. What amount would Solutions Inc. report in its income statement (ignoring taxes) for the year ended December 31, 2020?

Brief Exercise 17-45
Recording Operating
Lease Journal Entries—
Lessee **LO4**
Hint: See Demo 17-4A

Gomez Inc. leases a vehicle from CareMax Inc. on January 1, 2020, for a three-year period, appropriately classified by Gomez Inc. as an operating lease. Gomez agrees to make \$6,000 annual payments beginning on January 1, 2020. Prepare the journal entries for Gomez in 2020 assuming that Gomez is aware of the rate implicit in the lease of 6%.

- January 1, 2020—Record the right-of-use asset.
- January 1, 2020—Record the lease payment.
- December 31, 2020—Record the adjusting entry.

Brief Exercise 17-46
Recording Operating
Lease Journal Entries—
Lessee **LO4**
Hint: See Demo 17-4A

Lessor Co. enters into an operating lease of property with Lessee Co. on January 1, 2020, for a five-year term at an annual fixed lease payment of \$10,000 (beginning of period payments). Prepare the journal entries in 2020 for the lessee assuming that the lessee is aware of the rate implicit in the lease of 5%.

- January 1, 2020—Record the right-of-use asset.
- January 1, 2020—Record the lease payment.
- December 31, 2020—Record the adjusting entry.

Brief Exercise 17-47
Determining Amounts in
Operating Lease **LO4**
Hint: See Demo 17-4B

Kulver's Inc. leases equipment from Equip Inc. on January 1, 2020, under a 3-year *operating lease*. Kulver's agrees to pay Equip Inc. \$15,000 annually with the first payment due on January 1, 2020. As an incentive for Kulver's to sign the lease by January 1, Equip Inc. paid Kulver's Inc. \$700. Kulver's also incurred legal fees for the review of the lease agreement (\$200) and salaries for employees involved in negotiating the lease (\$1,300). Assuming an incremental borrowing rate of 7% for Kulver's Inc., determine the value of the lease liability and the right-of-use asset on January 1, 2020, for Kulver's.

Brief Exercise 17-48
Reporting Operating
Lease—Lessor **LO5**
Hint: See Demo 17-5

Referring to the information in Brief Exercise 17-44, and assuming that the building has a fair value of \$2,000,000 at the commencement of the lease, what **amounts** would Property Inc. recognize in its income statement (ignoring taxes) for the year ended December 31, 2020? Assume that Property Inc. is using the straight-line method to depreciate buildings.

Brief Exercise 17-49
Recording Operating
Lease—Lessor **LO5**
Hint: See Demo 17-5

Referring to the information in Brief Exercise 17-45, prepare the journal entries in 2020 for CareMax Inc. assuming that the fair value of the vehicle is \$28,000 and it has a useful life of 6 years with no salvage value (depreciated using the straight-line method).

Brief Exercise 17-50
Remeasuring a Lease
Liability **LO6**
Hint: See Demo 17-6

Universal Inc. signed a contract to lease equipment for a 4-year term on January 1, 2020, for \$20,000 annually beginning immediately. The lease included a purchase option at the end of the lease for \$8,000, that at the commencement of the lease, Universal did not believe would exercise. However, on December 31, 2021, two years later, circumstances had changed causing Universal to now reasonably expect to exercise the option. Universal's incremental borrowing rate changes from 5% at the lease commencement date to 7% currently. The incremental borrowing rate at lease commencement did not reflect the purchase option. On December 31, 2021, the lease liability and right-of-use asset had balances of \$37,188 and \$37,233, respectively. What is the adjusted lease liability on December 31, 2021?

Brief Exercise 17-51
Recording Entries for
Short-Term Leases
LO7
Hint: See Demo 17-7

On January 1, 2020, Baker Inc. enters into an operating lease of equipment for one year for \$1,000 per month on January 1, 2020. The equipment cost \$200,000 and has a useful life of 10 years. Assuming that Baker Inc. elects to account for the lease under the short-term lease option, prepare Baker's monthly entry for 2020 assuming payments are made at the end of each month.

Exercises

Exercise 17-52
Classifying Leases
LO1

Tropical Products Inc. is in the process of negotiating a lease of equipment with a fair value of \$50,000, and it must determine the proper lease classification. The following table describes four scenarios under negotiation.

Exercise 17-56

Recording Entries for Finance Lease—No Residual, Payments Increase at a Defined Rate **LO2**

On December 30, 2019, Drew Company leased equipment under a lease for a period of 5 years. Drew contracted to pay \$90,000 on December 31, 2019, with an annual increase of 3% (calculated on the previous year's lease payment) for each of the next four years due on December 31. The leased equipment has a useful life of 7 years, a fair value of \$450,000, and the interest rate implicit in the lease is 8% and is known to Drew Company.

Required

- How would Drew Company classify the lease?
- Prepare an amortization schedule of the lease liability.
- Prepare the entries for Drew Company for years 2019, 2020, and 2021.

Exercise 17-57

Reporting Finance Lease, Unguaranteed Residual—Lessee **LO2**

On January 1, 2020, Alex Company signed a 5-year lease contract for equipment with Abel Company. The equipment had a normal selling price of \$55,000 and an estimated useful life of 6 years. Five annual payments of \$11,815 are payable by Abel on January 1, beginning in 2020. The asset reverts to Alex at the end of the lease term, December 31, 2024, and is estimated to have an unguaranteed residual value on that date of \$3,000. Alex's implicit interest rate is 6%, which is known to Abel.

Required

- How would Abel Company classify the lease?
- Prepare an amortization schedule of the lease liability.
- Prepare the entries for Abel Company for 2020.

Exercise 17-58

Recording Finance Lease, Unguaranteed Residual, Initial Direct Costs—Lessee **LO2**

Assume the same information in Exercise 17-57 except that the lessee also paid legal fees in the execution of the lease of \$1,800 on January 1, 2020.

Required

- How would Abel Company classify the lease?
- Prepare an amortization schedule of the lease liability.
- Prepare the entries for Abel Company for 2020.

Exercise 17-59

Reporting Finance Lease, Guaranteed Residual—Lessee **LO2**

Hint: See Demo 17-2B

Mac Leasing Company (lessor) and Ash Corporation (lessee) signed a four-year lease on January 1, 2020. The underlying asset has an estimated life of six years, and the property reverts to Mac at the end of the lease term. Lease payments of \$11,923 are payable on January 1 of each year and were set to yield Mac a return of 8%, which was known to Ash. The estimated residual value at the end of the lease term is \$10,000 and is guaranteed by Ash Corporation. Ash expects the estimated residual value at the end of the lease term to be \$10,000. The lease contains no purchase option.

Required

- How would Ash Corporation classify the lease?
- Prepare an amortization schedule of the lease liability.
- Prepare the entries for Ash Corporation for 2020.
- Let's now assume that Ash Corporation expects the estimated residual value at the end of the lease term to be \$3,500 instead. Prepare the entries for Ash Corporation for 2020.

Exercise 17-60

Reporting Finance Lease, Guaranteed Residual—Lessee **LO2**

Hint: See Demo 17-2B

On the first day of its accounting year, January 1, 2020, Lessee Inc. leased a building at an annual payment of \$138,847.84 to be paid at the beginning of each year for 10 years. The first payment was paid immediately. The building, which is new, cost \$1,100,000 and has an estimated useful life of 12 years. The lessor's implicit rate is 6% and is known to Lessee Inc. The residual value of the building of \$30,000 was guaranteed by Lessee Inc. who expects the residual value to approximate \$20,000. Lessee Inc. incurred the following additional costs and received the following incentives pertaining to the lease.

- Paid legal fees of \$1,000 related to the execution of the lease.
- Paid a fixed lease payment of \$138,847.84 plus a \$3,500 recurring payment to the lessor for hazard insurance on the building.
- Received a lease incentive of \$1,500 to sign the lease.

Required

- How would Lessee Inc. classify the lease?
- Prepare an amortization schedule of the lease liability.
- Compute the value of the right-of-use asset as of January 1, 2020.
- Prepare the entries for Lessee Inc. for years 2020 and 2021. Assume legal fees were paid and the lease incentive was received in 2019.

- e. What would be the value of the lease liability if the lessor charged a market price for hazard insurance, which changed from year to year?

On January 1, 2020, lessor Marcy and lessee Lenox contract for the lease of a machine for five payments of \$7,000 each. The \$7,000 payments are to be paid at the end of each year. They also agree that at the time of the fifth payment, for an added \$6,000 purchase option payment, Lenox can buy the property. Lenox reasonably expects to exercise the purchase option as the amount is well under the expected fair value at that time. Lenox's incremental borrowing rate is 6% per year and Lenox is unaware of the implicit rate of the lease. The economic life of the asset is six years.

Required

- How would Lenox classify the lease?
- Compute the value of the lease liability.
- Prepare an amortization schedule of the lease liability.
- Prepare the entries for Lenox for years 2020 and 2021.

Exercise 17-61
Reporting Finance
Lease, Purchase
Option—Lessee **LO2**

On the first day of its accounting year, Lessee Inc. leased certain property at a semiannual payment of \$60,000 receivable at the beginning of each period for 8 years. The first payment was paid immediately. The leased property, which is new, cost \$1,100,000 and has an estimated useful life of 10 years and no guaranteed residual value. The lessee's incremental borrowing rate is 7% and the lessee is not aware of the lessor's implicit rate.

Required

- How would Lessee Inc. classify the lease?
- What balances (account titles, amounts) appear on Lessee Inc.'s balance sheet at the end of the first year, related to the lease?
- What balances (account titles, amounts) appear on Lessee Inc.'s income statement for the first year, related to the lease?

Exercise 17-62
Reporting Finance
Lease—Lessee **LO2**
Hint: See Demo 17-2A

Flint Company leased equipment to Land Company for a five-year period. Flint paid \$46,965 for the equipment, its current carrying value (estimated useful life five years). The lease started on January 1, 2020. Flint uses a target rate of return of 8% in all lease contracts. The first payment was on January 1, 2020, and the accounting periods end on December 31. The equipment reverts to the lessor at the end of the lease term at which time the lessor estimates that the equipment will have an unguaranteed residual value of \$2,000.

Required

- Compute the annual payment for the lessor.
- Prepare an amortization schedule of the lease receivable for the lessor.
- Provide journal entries for 2020 and 2021 for the lessor assuming that the equipment is held in the lessor's Inventory account.
- Record the entry on January 1, 2025, for the return of the equipment assuming the equipment had a fair value of \$2,000.

Exercise 17-63
Recording Sales-Type
Lease, Unguaranteed
Residual Value—Lessor
LO3

Use the same information from Exercise 17-63 but assume instead that the lease contract contains a purchase option stating that Land Company can purchase the equipment for \$4,000 on January 1, 2025, at which time its estimated residual value is \$6,500. It is reasonably certain that Land Company will exercise the purchase option at the end of the lease term.

Required

- Compute the annual payment for the lessor.
- Prepare an amortization schedule of the lease receivable for the lessor.
- Prepare journal entries for 2020 and 2021 for the lessor.

Exercise 17-64
Recording Sales-Type
Lease, Purchase
Option—Lessor **LO3**

Dunlap Company leased a large copier to Rust Company for a three-year period. Dunlap paid \$30,000 for the copier and immediately leased it on January 1, 2020 (estimated useful life is four years, and Dunlap expects the residual value at the end of the lease term to be \$6,000). Dunlap used an expected rate of return of 6% (known by Rust). The lessee agreed to guarantee two-thirds (\$4,000) of the residual value. The first lease payment is due on January 1, 2020, and the accounting periods for both entities end on December 31. At the lease termination date,

Exercise 17-65
Recording Sales-Type
Lease, Residual
Value—Lessor **LO3**

an independent appraiser provided an estimated residual value of \$3,000. The lessee immediately paid the difference of \$1,000 (\$4,000 guaranteed residual value minus \$3,000, the actual residual value).

Required

- a. Compute the lease payment for the lessor and the lease receivable to be capitalized by the lessor.
- b. Provide the entries for the lessor on January 1, 2020.
- c. Provide the entries for the lessor through the lease term.
- d. Instead assume that the collectibility of the lease payments by Rust Company was not probable. How would your answer to part (b) change?

Exercise 17-66
Reporting Sales-Type Lease, Initial Direct Costs—Lessor **LO3**

Rex Corporation (lessor) and Lee Company (lessee) agreed to a lease with the following information:

- Rex’s carrying value of the underlying asset (inventory item) was \$400,000.
- Lease term is four years, beginning January 1, 2020. Lease payments are made each January 1, beginning January 1, 2020.
- Estimated useful life of the underlying asset is four years. Estimated residual value at the end of the lease is zero.
- Sales price of the underlying asset on January 1, 2020, was \$460,000.
- Rex’s implicit interest rate is 8% on retail price (known to Lee).
- Rex paid commission and legal fees in securing the lease of \$5,000 on January 1, 2020.
- Rex expects to collect all payments from Lee.

Required

- a. Compute the lease payment for the lessor and the lease receivable to be capitalized by the lessor.
- b. Provide the entries for the lessor during 2020.

Exercise 17-67
Reporting a Sales-Type Lease—Lessor **LO3**
Hint: See Demo 17-3A

On January 1, 2020, the first day of its accounting year, Lessor Inc., leased certain equipment at an annual payment of \$10,254.19, receivable at the beginning of each year for 10 years. The first payment was received immediately. The equipment has an estimated useful life of 12 years and no residual value. Lessor’s implicit rate is 6%. Lessor had no other costs associated with this lease and properly classified the lease as a sales-type lease. The leased equipment was carried on Lessor Inc.’s books at \$65,000.

Required

- a. Calculate the value of the lease receivable at the commencement of the lease.
- b. What amounts would be presented in the balance sheet as of December 31, 2020, related to this lease?
- c. What amounts would be presented in the income statement for the year ended December 31, 2020, related to this lease?

Exercise 17-68
Reporting a Sales-Type Lease—Lessor **LO3**

On January 1, 2020, the first day of its accounting year, Lessor Inc., leased certain property at an annual payment of \$20,000 receivable at the beginning of each year for 5 years. The first payment was received immediately. The leased property, ~~which is new,~~ has an estimated useful life of 8 years and an estimated residual value of \$15,000 (expected to be received by lessor but not guaranteed by the lessee). Lessor’s implicit rate is 6%. Lessor had no other costs associated with this lease and properly classified the lease as a sales-type lease.

The leased equipment was carried on Lessor Inc.'s books at \$65,000.

Required

- a. Calculate the value of the lease receivable at the commencement of the lease
- b. What amounts would be presented in the balance sheet as of December 31, 2020, related to this lease?
- c. What amounts would be presented in the income statement for the year ended December 31, 2020, related to this lease?

Exercise 17-69
Computing Lease Payment—Lessor; Computing Right-of-Use Asset and Lease Liability—Lessee **LO2, 3**

Information for four *separate* finance/sales-type lease scenarios is provided as follows:

	A	B	C	D
Lessor’s desired rate of return	6%	7%	8%	7.5%
Implicit rate known by the lessee	yes	no	yes	no
Lessee’s incremental borrowing rate	7%	6%	7%	8%
Lease term	5	8	5	8
Fair value of underlying asset.	\$100,000	\$45,000	\$275,000	\$18,000
Beginning or end of year payments	Beginning	Beginning	Beginning	End

Required

Answer the following questions for each separate scenario, ~~assuming that the lessee is aware of the lessor's implicit lease rate.~~

- Compute the lessor's lease payment.
- Compute the lessee's balance of the lease liability at the commencement of the lease.
- Compute the lessee's balance of the right-of-use asset at the commencement of the lease.

Information for four *separate* finance/sales-type lease scenarios is provided as follows:

	A	B	C	D
Lessor's desired rate of return	6%	7%	6%	8%
Lease term	5	10	8	4
Fair value of underlying asset.	\$35,000	\$140,000	\$18,000	\$230,000
Beginning or end of year payments	Beginning	Beginning	Beginning	End
Guaranteed residual value	—	12,000	—	80,000
Residual value <i>expected</i> by lessee	—	—	—	30,000
Unguaranteed residual value expected by lessor.	—	—	3,500	—
Initial direct costs paid by lessee	250	1,000	—	1,200
Prepaid lease payment.	—	1,500	—	—

Required

Answer the following questions for each separate scenario assuming that the lessee is aware of the lessor's implicit lease rate.

- Compute the lessor's lease payment.
- Compute the balance of the lessee's lease liability at the commencement of the lease, prior to the first payment.
- Compute the balance of the lessee's right-of-use asset at the commencement of the lease.

A lessor entered into a 5-year lease appropriately classified as a sales-type lease. The cost of the underlying asset was \$40,000 and the fair value of the asset was \$50,000. The lease included a purchase option that allowed the lessee to purchase the underlying asset for \$5,000 at the end of the lease. Because of the discount offered in the purchase option from the expected residual value of \$7,000, the lessor is reasonably certain that the lessee will exercise the purchase option. The first lease payment will be made immediately, with annual payments due throughout the lease term.

Required

- Assuming that the lessor had a desired rate of return of 6%, compute the annual lease payment.
- Assume the same facts (original scenario) except that the exercise of the option is not reasonably certain. Compute the annual lease payment.
- Assume the same facts (original scenario) except that lessor's desired rate of return is 8%. Compute the annual lease payment.
- Assume the same facts (original scenario) except that the lease allows the ownership of the leased asset to revert to the lessee at lease end. Compute the annual lease payment.

Try-Star Leasing Company enters into a contract with LLX Corporation for equipment under lease for a three-year period. The equipment will have no residual value when the lease term ends and has an economic life of 3 years. Try-Star expects to collect all payments from LLX Corporation. The carrying value of the equipment was \$120,000 at the inception of the lease, but the fair value was \$140,000. The three equal annual payments (amount to be determined) are to be paid each January 1, starting January 1, 2020, (at which time the equipment was delivered). In addition to the fixed lease payment, LLX Corporation has agreed to pay Try-Star \$1,000 annually for taxes and insurance throughout the lease term, at the time fixed lease payments are due. Try-Star expects an 8% return (known to LLX Corporation). LLX incurred \$1,000 in legal fees for the execution of the lease on January 1, 2020, to be paid in 30 days. The accounting year of both companies ends December 31.

Required

- Determine the annual lease payment.
- Determine the classification of the lease to LLX Corporation.
- Provide all journal entries relating to the lease for LLX Corporation for 2020–2022.

Exercise 17-70

Computing Lease Payment—Lessor; Computing Right-of-Use Asset and Lease Liability—Lessee

LO2, 3

Exercise 17-71

Recording Entries for Sales-Type Lease: Lease Payment Calculation

LO3

Exercise 17-72

Recording Entries for Finance Lease: Lessee

LO2, 3

continued from previous page

e. Income Tax Journal Entry—2021

As the warranty costs are actually paid, the deferred tax asset reverses. The entry that is made to reflect this includes a credit to the Deferred Tax Asset Account and a Debit to Deferred Tax Expense of \$5,000. Along with the entry to reflect the current income tax expense and income tax payable of \$5,000 for 2021, the combined entry follows.

December 31, 2021—To record income tax expense

Income Tax Expense (\$5,000 + \$5,000) . . .	10,000	
Deferred Tax Asset (\$5,000 – \$0)		5,000
Income Tax Payable		5,000

Pretax GAAP income	\$40,000
Tax rate	× 25%
Income tax expense	<u>\$10,000</u>

Taxable income	\$20,000
Tax rate	× 25%
Income tax (tax return)	<u>\$ 5,000</u>

Assets	=	Liabilities	+	Equity
-5,000		+5,000		-10,000
Def Tax Asset		Inc Tax Payable		
5,000		5,000		5,000
				Income Tax Exp
				2,500
				10,000

COCA COLA

Real World—DEFERRED TAX ASSETS

Coca Cola Company provided the following summary of deferred tax assets in a recent Form 10-K. The most significant difference between GAAP and tax reporting in 2017 is due to benefit plans. The funding deductions on a cash basis were less than amounts recorded as pension expense. In later periods, this will reverse where the funding tax deductions will be greater than pension expense.

Note 14: Income Taxes (excerpt) The tax effects of temporary differences and carryforwards that give rise to deferred tax assets and liabilities consist of the following:

December 31 (In millions)	2017	2016
Deferred tax assets:		
Property, plant and equipment	\$ 99	\$ 144
Trademarks and other intangible assets	98	114
Equity method investments (including foreign currency translation adjustment)	300	684
Derivative financial instruments	387	193
Other liabilities	861	1,141
Benefit plans	977	1,599
Net operating/capital loss carryforwards	520	461
Other	163	135
Gross deferred tax assets	3,405	4,471
Valuation allowances	(501)	(530)
Total deferred tax assets	<u>\$2,904</u>	<u>\$3,941</u>

COCA COLA [KO]

Deductible Temporary Difference Leading to Deferred Tax Asset

L018-2

REVIEW 18-2

On January 1, 2020, Staples Corporation collected \$200,000 cash in advance of the satisfaction of performance obligations of a revenue contract and recognized \$200,000 in deferred revenue. Staples Corporation recognized GAAP revenue of \$50,000, \$50,000, \$50,000, and \$50,000 in December 2020, 2021, 2022, and 2023, respectively. For tax purposes, the full \$200,000 was recognized as taxable income in 2020. The accounting and tax periods both end December 31. There were no deferred tax account balances at the beginning of 2020. The tax rate for each year was 25%.

Pretax GAAP income amounts for each of the four years were as follows.

2020	\$145,000	2021	\$155,000	2022	\$150,000	2023	\$148,000
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- Compute the increase in income tax payable on December 31, 2020, 2021, 2022, and 2023.
- Prepare a schedule to compute the deferred tax asset balance on December 31, 2020, 2021, 2022, and 2023.
- Record the income tax journal entry required for the years 2020 through 2023.



More Practice:
18-24, 18-25, 18-26,
18-27, 18-28, 18-49

Solution on p. 18-62.

- 18-13. With respect to NOL carryforwards, how does uncertainty affect the accounting treatment?
- 18-14. Is deferred tax arising from an NOL carryforward classified as current or noncurrent?
- 18-15. Explain the limitation on the carrying value of deferred income tax assets.
- 18-16. How does a company account for a change in tax rates?
- 18-17. Describe the two-step process required when uncertain tax positions are taken.

Brief Exercises

4M Inc. showed income tax on its tax return of \$4,800 on December 31, 2020, and had a tax rate of 25%. If taxable income were equal to pretax GAAP income for 2020, determine the amount of net income that 4M Inc. recognized in 2020 on its financial statements.

Brief Exercise 18-18
Computing Net Income
LO1

Aquafena Inc. recognized taxable income of \$100,000 for the year ended December 31, 2020. Aquafena calculated a deferred tax asset and a deferred tax liability of \$12,000 and \$8,000, respectively, on December 31, 2020. The tax rate is 25%. Assume zero beginning balances in deferred tax accounts.

Brief Exercise 18-19
Recording Income Tax Expense
LO1, 2

- Determine the increase in income tax payable on December 31, 2020.
- Prepare the income tax expense journal entry on December 31, 2020.

Alexa Inc. recorded the following deferred tax amounts.

	December 31, 2019	December 31, 2020
Deferred tax liability	\$ 5,000	\$8,500
Deferred tax asset	13,000	6,000

Brief Exercise 18-20
Recording Income Tax Expense
LO1, 2

If the company had current tax expense of \$26,000 in 2020, determine total income tax expense for 2020.

On December 31, 2020, Lexus Inc. recorded an unrealized gain in income of \$5,000 related to its trading debt securities originally purchased on December 15, 2020, for \$20,000. Lexus recognized pretax GAAP income of \$80,000 in 2020 and had a tax rate of 25%.

Brief Exercise 18-21
Reporting a Deferred Tax Liability
LO1

- Determine the reported amount of trading securities in the financial statements of Lexus on December 31, 2020.
- Determine the tax basis of the trading securities on December 31, 2020.
- Calculate the deferred tax balance and show how it would be reported in the December 31, 2020, balance sheet of Lexus.

Assuming the same information from Brief Exercise 18-21, record the income tax journal entry on December 31, 2020. Assume zero beginning balances in deferred tax accounts.

Brief Exercise 18-22
Recording Income Tax Expense
LO1

Alexa Inc. purchased equipment in 2018 for \$50,000 with no residual value. On December 31, 2020, accumulated depreciation using the straight-line method for financial reporting was \$15,000. For tax purposes, Alexa uses MACRS depreciation resulting in \$35,600 in accumulated depreciation for tax purposes on December 31, 2020. Taxable income was \$100,000 for 2020 and the company's tax rate is 25%.

Brief Exercise 18-23
Recording Income Tax Expense
LO1

- Determine the GAAP basis of equipment (net) on December 30, 2020.
- Determine the tax basis of equipment on December 30, 2020.
- Assuming a deferred tax liability balance of \$4,900 on December 31, 2019, record income tax expense for 2020.

Underwood Co. had current tax expense of \$20,000 for the year ended December 31, 2020. The ending deferred tax asset balance was \$6,000, which was a \$4,000 increase from January 1, 2020. The tax rate is 25%. Calculate income tax expense for 2020.

Brief Exercise 18-24
Calculating Income Tax Expense
LO2

On December 31, 2020, Delta Inc. recorded \$28,000 of deferred revenue (a liability) on customer deposits received in advance of the satisfaction of performance obligations. However, this amount is taxable in 2020 when cash was received. Assume a tax rate of 25% and pretax GAAP income of \$160,000 for 2020.

Brief Exercise 18-25
Calculating Deferred Tax Asset Balance
LO2

- Determine the GAAP basis of deferred revenue on December 31, 2020.
- Determine the tax basis of deferred revenue on December 31, 2020.
- Determine Delta Inc.'s deferred tax asset balance on December 31, 2020.

The company had one temporary difference due to the GAAP basis of equipment exceeding the tax basis of the equipment. Record the income tax journal entry for 2020, assuming an enacted tax rate of 25%. Assume that the December 31, 2019, deferred tax liability balance was \$5,000.

In 2020, Explorers Inc. completed installment sales of \$80,000, recorded in full as accounts receivable and as revenue. For tax purposes, it recognizes income when cash is received. Cash related to the installment sales is expected to be received in the following years: 2021 of \$10,000; 2022 of \$40,000; 2023 of \$30,000. The enacted tax rate for 2020, 2021, and 2022 is 25%. The newly enacted tax rate for 2023 is 40%. Compute the value of the deferred tax liability on December 31, 2020.

The Jets Company recorded a deferred tax liability in the amount of \$18,750 in December 2020, due to the book value of equipment exceeding the tax basis of equipment by \$75,000. The difference will reverse equally over the next three years. In late 2020, the enacted tax rate increased to 42.5% beginning 2022.

- Determine the income tax rate that is the enacted rate for 2020.
- What journal entry should the Jets record to adjust the deferred tax liability, if any?

In 2020, Lambeau Inc. suffered a loss of \$100,000. The enacted tax rate is 25%. Prepare Lambeau's entry for the loss carryforward on December 31, 2020, assuming that management determined that it was *more likely than not* that the deferred tax asset would be realized.

In 2020, Cardinals Company operated at a tax loss, totaling \$88,000 during its first year of business. Assuming a tax rate of 25%, and that income is expected in 2021, record the entry to reflect the tax benefit of the net operating loss on December 31, 2020. Cardinals Company determined that it was *more likely than not* that 75% of the deferred tax asset would not be realized.

Springs Inc. has taken a tax position in 2020 that it believes is based on fairly clear tax law for the payment of \$80,000 in salaries and benefits to employees. There are no limits on deductibility and all amounts were fully paid within the statutory time limit, although there is some question on the company's policies for capitalization of a portion of the salaries. Management has a fairly high confidence level in the technical merits of this position. It is clear that it is greater than 50% likely that the full amount of the tax position will be ultimately realized, but it is less than 100%. Springs estimates the probability of sustaining the entire tax position with taxing authorities at 60%. Springs Inc. taxable income is \$100,000, which includes the salary deduction of \$80,000 referenced above. If the Springs Inc. tax rate is 25% (with no other deferred items), record the income tax journal entry required on December 31, 2020.

Kate Club Inc. has determined that there are four temporary differences between the tax basis and the GAAP book value of assets and liabilities that resulted in the following deferred taxes: (a) deferred tax liability related to accelerated tax depreciation over straight-line depreciation: \$20,000; (b) deferred tax asset related to deferred contract (one-year contracts) revenue collected in advance, \$24,000; (c) deferred tax asset related to bad debt expense recognized on an allowance basis, \$10,000; and (d) deferred tax liability related to prepaid automobile insurance, \$8,000. Prepare the balance sheet presentation of deferred taxes.

The following information was obtained from recent annual reports on 10-K for **American Eagle Outfitters, Inc.** Compute the debt-to-equity ratio (a) including deferred tax liabilities as part of total liabilities, and (b) excluding deferred tax liabilities as part of total liabilities.

\$ thousands	Jan. 28, 2017	Jan. 30, 2016	Jan. 31, 2015
Deferred tax liabilities	\$ 71,468	\$ 67,332	\$ 36,289
Total liabilities	578,091	560,870	557,162
Total stockholders' equity	1,204,569	1,051,376	1,139,746

Brief Exercise 18-37
Calculating a Deferred Tax Liability Balance
LO1, 5

Brief Exercise 18-38
Recording Income Tax with Changing Tax Rates
LO1, 5
Hint: See Demo 18-5

Brief Exercise 18-39
Recording Net Operating Loss Carryforward
LO6

Brief Exercise 18-40
Recording Net Operating Loss Carryforward
LO6

Brief Exercise 18-41
Recording Income Tax Expense with Tax Uncertainty
LO7

Brief Exercise 18-42
Reporting Deferred Taxes in Balance Sheet
LO8
Hint: See Demo 18-8

Brief Exercise 18-43
Computing Ratios
LO8

Exercises

Staples Corporation would have had identical income before taxes on both its income tax returns and its income statements for the years 2020 through 2023 except for a depreciable asset that cost \$120,000. The asset was depreciated for income tax purposes using the following amounts: 2020, \$48,000; 2021, \$36,000; 2022, \$24,000;

Exercise 18-44
Recording and Reporting Temporary Difference
LO1
Hint: See Demo 18-1

Additional information

- Environmental fines are not deductible for income tax purposes.
- The amount collected in 2020 related to deferred service revenue (\$10,000) was taxable in 2020.
- Accrued warranty costs of \$8,000 are not deductible for income tax purposes until 2021 when the expenditures are made.
- Income tax rate is 25% for both years.
- At the beginning of 2020, deferred tax asset and liability balances were zero.

Required

- a. Prepare a schedule to determine deferred tax balances on December 31, 2020.
- b. Prepare a schedule to determine income tax payable on December 31, 2020, and 2021.
- c. Record the income tax journal entry on December 31, 2020.
- d. Record the income tax journal entry on December 31, 2021.
- e. Show how the tax accounts would be reported **(excluding income taxes payable)** on the income statement and balance sheet for 2020 and 2021. Include the disclosure of current and deferred tax expense.
- f. Compute the effective tax rate for 2020.

Exercise 18-59
Identifying Tax
Differences **LO1,**
2, 4

Listed below are ten separate situations. For each item indicates whether the difference is (1) temporary creating a deferred tax asset or a deferred tax liability or (2) permanent.

Item	Deferred Income Tax Account Would Be		
	Asset	Liability	Permanent
1. Pension fund contributions are less than pension expense for the current year, resulting in a pension liability on the company's balance sheet.	___	___	___
2. Dividend revenue recognized for accounting while a portion is deductible for taxes (dividends received deduction).	___	___	___
3. Estimated warranty costs: accrual basis for accounting and cash basis for income tax.	___	___	___
4. Fines expensed for accounting but not deductible for tax purposes.	___	___	___
5. Straight-line depreciation for accounting and accelerated depreciation for income tax.	___	___	___
6. Unrealized gain on investments: FV-NI recognized for accounting, but gain recognized only on disposal of the asset for income tax.	___	___	___
7. Rent revenue collected in advance: accrual basis for accounting, cash basis for income tax.	___	___	___
8. Unrealized loss on investments: FV-NI recognized for accounting, but loss recognized only on disposal of the asset for income tax.	___	___	___
9. Probable and estimable litigation contingency: accrual basis for accounting and cash basis for income tax.	___	___	___
10. Interest received on investments in municipal bonds is not taxable.	___	___	___

Exercise 18-60
Recording Income
Tax Journal Entry:
Temporary and
Permanent Differences
LO1, 2, 4, 5

Fox Corporation purchased a machine on January 1, 2020, that cost \$40,000. The machine had an estimated service life of five years and no residual value. Fox uses straight-line depreciation for accounting purposes and accelerated depreciation for the income tax return as follows: 2020, 30%; 2021, 25%; 2022, 20%; 2023, 15%; and 2024, 10%. Taxable income on the tax return for 2020 was \$150,000. The 2020 income statement also showed a \$15,000 expense for premiums paid for life insurance policies on company executive officers. The income tax rate is 25% in 2020 and 35% in all subsequent years.

Required

- a. Prepare a schedule to determine deferred tax balances on December 31, for the years 2020 through 2024.
- b. Record the income tax journal entry on December 31, 2020.
- c. Repeat requirements *a* and *b* assuming instead that the machine is 100% expensed in 2020 for tax purposes.

Required

- a. Compute the increase to income tax payable on December 31, 2020, 2021, and 2022.
- b. Prepare a schedule to compute deferred tax accounts on December 31, 2020.
- c. Prepare the journal entry to record income taxes in the following years: 2020, 2021, and 2022.

Tyson Corporation reported pretax income from operations in 2020 of \$80,000 (the first year of operations). In 2021, the corporation experienced a \$40,000 NOL (pretax loss from operations). Management is confident the company will have taxable income in excess of \$50,000 in 2022. Assume an income tax rate of 25% in 2020 and thereafter. Tyson has no other temporary differences.

Exercise 18-70
Recording NOL
Carryforward **LO6**

Required

- a. Provide the 2020 and 2021 income tax entries that Tyson should make.
- b. Show how all tax-related items would be reported on the 2020 and 2021 income statements and balance sheets.

Decker Corporation experienced a loss in 2020. Additional information for Decker Corporation follows.

2020	
Taxable income (loss)	\$(65,000)
Income tax rate	25%

Exercise 18-71
Recording and Reporting NOL
Carryforward **LO6**

There were no temporary differences in 2020 other than any related to a net operating loss carryforward.

Required

- a. Record income taxes for 2020 and 2021 assuming the following.
 - For 2021, the company computed taxable income of \$45,000 and recognized a deferred tax liability balance of \$2,250 related to acquisition of depreciable assets in its year-end financial statements. These amounts were consistent with management’s expectations.
 - The income tax rate enacted in 2020 and effective for 2021 and thereafter is 30%.
 - Management estimates the valuation allowance on the deferred tax asset related to its 2020 NOL to be zero.
- b. List the amounts that should be reported on the income statements and balance sheets for 2020 and 2021.

Toner Corporation computed the following taxable income and loss: 2020 taxable income, \$10,000 and 2021 taxable loss, \$40,000. At the end of 2021, Toner made the following estimates: 2022 taxable income, \$4,000, 2023 taxable income, \$11,000, and 2024 taxable income, \$50,000. On the basis of these estimates, Toner believes the full amount of tax loss carryforward benefit is *more likely than not* to be realized. There are no other temporary differences. The tax rates are 25% for years 2020, 2021, and 2022; and 30% for years 2023 and 2024.

Exercise 18-72
Recording NOL
Carryforward **LO6**

Required

- a. Provide the income tax entry for 2021.
- b. Provide the income tax entry for 2022, assuming that the actual taxable income was \$6,000 (tax rate, 25%).
- c. Provide the income tax entry for 2023, assuming that 2022 results were as described in (b) and that the actual 2023 taxable income was \$13,000.
- d. Provide the entry for 2024, assuming results for 2022 and 2023 as described above and assuming that the actual 2024 taxable income was \$45,000.

DNSE Inc. began operations in 2019. In its first year the company had a net operating loss of \$10,000, which was carried forward and used to reduce income tax payable in 2020. In 2020, DNSE had taxable income of \$40,000 before the use of the NOL carryforward. At December 31, 2020, DNSE Inc. determines that it should have a deferred tax asset ending balance of \$25,000 related to 2020 deferred revenue. The income tax rate is 25%. No valuation allowance has been established.

Exercise 18-73
Recording NOL
Carryforward, Valuation Allowance **LO6**

Required

- a. Provide the journal entry to record income taxes in 2020, assuming that no valuation allowance is required.
- b. Now assume DNSE has encountered stiff competition and is uncertain whether it will have any taxable income in the foreseeable future. DNSE determined that it was *more likely than not* that none of the deferred tax asset would be realized. Assume that the temporary differences that give rise to the deferred tax asset are expected to reverse in 2021 and 2022. Determine what amount, if any, should be recorded as a valuation

LO 19-6

Describe the reporting of pensions in financial statements

LO 19-6 Overview

Pension Reporting

- Income statement
- Statement of comprehensive income
- Stockholders' equity statement
- Balance sheet
- Disclosure requirements

The entries in the prior section result in account balances that are reported in a company's financial reports and note disclosures. We summarize how pensions are reported in the income statement, statement of comprehensive income, stockholders' equity statement, and the balance sheet. We then continue with the Taser Inc. example to illustrate how accounts are shown on its financial statements in **Demo 19-6**.

Income Statement

Components of pension expense are recognized in the income statement as follows: service cost is included with other employee compensation costs within operations (if the subtotal is presented) while the remaining components of pension expense are included outside of operating income.

Sales
Operating expenses (includes service costs)
Operating income
Other revenue (expenses), net
Other components of net periodic pension cost
Net income

715-20-45-3A An employer shall report in the income statement:

- a. The service cost component of net periodic pension cost and net periodic postretirement benefit cost in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period (except for the amount being capitalized, if appropriate, in connection with the production or construction of an asset such as inventory or property, plant, and equipment).
- b. The other components. . . separately from the service cost component and outside a subtotal of income from operations, if one is presented. If a separate line item or items are used to present the other components, that line item or items shall be described appropriately.

Statement of Comprehensive Income and Statement of Stockholders' Equity

Other comprehensive income is affected by the following pension related items (net of tax) within a statement of comprehensive income.

Net income
Other comprehensive income
(Deferral of pension loss)
Amortization of pension loss
Deferral of pension gain
(Amortization of pension gain)
(Prior service cost adjustment for additional benefits)
Amortization of prior service cost
Comprehensive income

The other comprehensive income (OCI) accounts are accumulated in accumulated OCI accounts. Both the activity during the period and the balances in the accumulated OCI accounts are shown on the statement of stockholders' equity. The ending balances of the accumulated OCI accounts are carried over to the balance sheet.

Balance Sheet

The net pension asset or net pension liability is recognized on the balance sheet. A net pension asset is presented as a noncurrent asset labeled **Prepaid pension cost, net**. A net pension liability is presented

Clark Kent Co. approved a prior service obligation of \$120,000 on January 1, 2020, which granted retroactive benefit to employees. Assuming an average remaining service period of 10 years for all active plan participants, what is the effect on pension expense of the prior service cost?

Brief Exercise 19-30
Analyzing Prior Service Cost **LO4**
Hint: See Demo 19-4

On June 1, 2018, West Corporation established a defined benefit pension plan for its employees. The following information was available in 2020:

Brief Exercise 19-31
Amortizing Pension Gain/Loss **LO4**
Hint: See Demo 19-4

Balance	Jan. 1, 2020
Projected Benefit Obligation	\$3,625,000 Cr.
Plan Assets	3,750,000 Dr.
Accumulated OCI—Pension Gain/Loss	637,500 Cr.

For 2021, compute the amortization of the account, Accumulated OCI—Pension Gain/Loss, assuming that the company uses the corridor approach in determining the minimum amortization to recognize. Assume that the average remaining service life of employees is 10 years.

Kidman Inc. sponsors a defined benefit plan and determined that for the current year of 2020, service cost was \$10,000, interest cost was \$2,100, and the expected (and actual) return on plan assets was \$2,000. Kidman will contribute \$1,800 to the plan on December 31, 2020. Record the journal entries for pension expense and to fund the plan for 2020, assuming no benefits are paid during the year.

Brief Exercise 19-32
Recording Pension Expense and Plan Funding **LO5**
Hint: See Demo 19-5

LetsGo Inc. sponsors a defined benefit plan and determined that for the current year of 2020, service cost was \$250,000, amortization of prior service cost was \$1,800, interest cost was \$21,100, and the expected (and actual) return on plan assets was \$18,000. LetsGo will contribute \$45,000 to the plan for 2020 and payments to retirees totaled \$15,000 in 2020. Record the journal entries for pension expense, to fund the plan, and to pay benefits for 2020.

Brief Exercise 19-33
Recording Pension Expense, Plan Funding, Benefit Payments **LO5**
Hint: See Demo 19-5

The following pension-related values are determined on December 31, 2020, for BNW Inc. Compute the net pension asset (liability) to be recorded on the balance sheet on December 31, 2020.

Brief Exercise 19-34
Computing Net Pension Asset (Liability) **LO6**

Projected benefit obligation	\$100,000
Accumulated benefit obligation	80,000
Plan assets at fair value	90,000
Accumulated OCI—Prior Service Cost (Dr.)	12,000

At the end of 2020, after recording pension expense, Talent Co. has the following balances: Accumulated OCI—Pension Gain/Loss \$6,000 (debit) and Projected Benefit Obligation \$100,000 (credit). During the year 2021, Talent Co. experienced a \$500 actuarial gain on its PBO and an unexpected loss on plan assets of \$80. Net income for the year totaled \$3,800. Talent Co. did not record amortization expense on the pension gain/loss because the beginning balance in Accumulated OCI—Pension Gain/Loss did not exceed the corridor. The company has no other items affecting OCI besides pension related items.

Brief Exercise 19-35
Reporting the Impact of Pension Fund **LO6**

- What is Talent’s other comprehensive income for 2021, reported in the financial statements?
- What is Talent’s comprehensive income for 2021, reported in the financial statements?
- What is the balance of accumulated other comprehensive income as of December 31, 2021, reported in the financial statements?

Pharrell Inc. sponsored a defined pension plan for its employees. For the year ended December 31, 2020, Pharrell recorded pension expense of \$2,500 (including service cost of \$1,500) and a \$200 unexpected loss on plan assets. Pharrell calculated the December 31, 2020, balance in Accumulated OCI—Gain/Loss account to be \$400 (debit) and calculated a net pension asset/liability of \$250 (credit). Assuming no amortization of pension gain/loss, what is the impact of this plan on the (a) balance sheet, (b) income statement, and (c) statement of comprehensive income?

Brief Exercise 19-36
Reporting the Impact of Pension Fund **LO6**
Hint: See Demo 19-6

Levine Co. sponsored a defined benefit plan, which included January 1, 2020, balances of \$5,000 and \$4,800 in Plan Assets and Projected Benefit Obligation, respectively. During 2020, the company incurred \$1,000 in service cost, made plan contributions of \$210, and paid benefits to retirees for \$150. The discount rate is 9% and the expected and actual rate of return on plan assets is 10%. Prepare a pension worksheet for 2020.

Brief Exercise 19-37
Preparing a Pension Worksheet **LO7**
Hint: See Demo 19-7

App—Brief Exercise 19-98

Amortizing Prior Service Costs **LO10**
Hint: See Demo 19-10

On January 1, 2020, Allied Co. amended its postretirement benefit plan to grant retroactive benefits for services already performed in prior years. The present value of the benefits on January 1, 2020, is \$50,000 and it relates to two employees with the following expected years of service: Jeff, 2 years and Eric, 4 years. Determine the amortization to be recognized in 2020 by allocating an equivalent amount of prior service cost to each service year.

Appendices—Exercises

App—Exercise 19-99

Recording Postretirement Benefit Expense and Determining Funded Status **LO9**
Hint: See Demo 19-9

The following information pertains to YNCA Inc.

APBO: Jan. 1, 2020	\$100,000
Plan Assets: Jan. 1, 2020	\$75,000
Actual (and expected) return on plan assets	\$7,500
Discount rate	12%
Service cost, 2020	\$25,000
Contribution to asset fund, Dec. 31, 2020	\$35,000
Benefit payments, Dec. 31, 2020	\$10,000

Required

- Provide the entry to record 2020 postretirement benefit expense.
- Prepare a presentation of funded status on December 31, 2020.

App—Exercise 19-100

Recording Postretirement Benefit Expense and Determining Funded Status **LO9**
Hint: See Demo 19-9

The December 31, 2020, presentation of funded status and accrued postretirement benefit cost for Aude Inc. with a postretirement benefit plan is as follows.

Balance	Dec. 31, 2020	Activity	2021
APBO	\$(224,000)	Service cost	\$50,000
Plan Assets	203,000	Actual return on plan assets	20,000
Underfunded APBO (funded status)	\$ (21,000)	Contributions (end of year)	75,000
		Benefit payments (end of year)	85,000

At the beginning of 2021, the plan was amended to increase future health-care benefits for retirees. The increase is attributable to service performed before 2021. As a result, the APBO increased \$56,000. The discount rate is 12%, and the expected rate of return on plan assets is 10%. The average remaining years of service to full eligibility for active plan participants is 15 years.

Required

- Provide the entry for Aude Inc. to record 2021 postretirement benefit expense.
- Provide a presentation of funded status at December 31, 2021.

App—Exercise 19-101

Calculating Postretirement Benefit—Gain/Loss and Postretirement Benefit Expense **LO9**

Information for the Krysler Company postretirement health care plan is available as follows.

APBO, Jan. 1, 2020	\$300,000	Discount rate	8%
Plan Assets, Jan. 1, 2020	100,000	Expected rate of return on plan assets	7%
Accumulated OCI—Postretirement Benefit Gain/Loss, Jan. 1, 2020	80,000*	Average service period	10 years
Actual return on plan assets, 2020	6,000		
Service cost, 2020	60,000		

* Amount represents an accumulated loss.

Required

- Calculate the amount of amortization related to Accumulated OCI—Postretirement Benefit Gain/Loss (if any) for 2020. Krysler uses the corridor approach for the amortization of postretirement gains and losses.
- Compute postretirement benefit expense for 2020.

App—Exercise 19-102

Calculating EPBO and APBO **LO8**
Hint: See Demo 19-8

A plan provides life insurance benefits to employees who serve 20 years, at which time the employees become fully eligible. The benefit equals \$50,000. On December 31, 2020, a 45-year-old employee has worked 15 years for the company. He is expected to retire at age 65. The discount rate is 7%.

Review 19-8

- a. 14 years
- b. Present value benefit stream \$55,201 (PV of annuity of \$7,500, 10 years, 6%)
 Present value on January 1, 2020 23,033 (PV of \$55,201, 15 years, 6%)
- c. APBO ($\$23,033 \times \frac{4}{14}$) **\$6,581**



Review 19-9

Measurement of Postretirement Benefit Expense (2020)	
Service cost	\$320,000
Interest cost	15,000
Expected return on plan assets ($0.06 \times \$125,000$)	(7,500)
Amortization of prior service cost	10,000
Total postretirement benefit expense	\$337,500

December 31, 2020—To record postretirement benefit plan expense

Postretirement Benefit Expense	337,500	
Plan Assets	7,500	
Accumulated Postretirement Benefit Obligation		335,000
OCI—Prior Service Cost		10,000

December 31, 2020—To record funding of plan assets

Plan Assets	150,000	
Cash		150,000

December 31, 2020—To record benefits paid

Accumulated Postretirement Benefit Obligation	50,000	
Plan Assets		50,000

Assets	=	Liabilities	+	Equity
+7,500		+335,000		-337,500
				+10,000
Plan Assets		Postret Benefit Exp		
Bal. 125,000		337,500		
7,500				
APBO		OCI—PSC		
250,000 Bal.		60,000		10,000
335,000				

Assets	=	Liabilities	+	Equity
+150,000				
-150,000				
Cash		Plan Assets		
150,000		Bal. 125,000		7,500
				150,000

Assets	=	Liabilities	+	Equity
-50,000		-50,000		
Plan Assets		APBO		
Bal. 125,000		50,000		250,000 Bal.
7,500				335,000
150,000				
232,500				535,000

Review 19-10

Year	Service Years	Annual Amortization
2020	2	$\$80,000 \times 2/7 = \$22,857$
2021	2	$\$80,000 \times 2/7 = 22,857$
2022	1	$\$80,000 \times 1/7 = \mathbf{11,429}$
2023	1	$\$80,000 \times 1/7 = 11,429$
2024	1	$\$80,000 \times 1/7 = 11,428$
		<u>\$80,000</u>

20 Stockholders' Equity

Consolidated Statement of Equity

PepsiCo, Inc. and Subsidiaries
~~Consolidated Balance sheet (excerpt)~~
 Fiscal years ended December 30, 2017,
 December 31, 2016 and December 26, 2015
 (in millions)

	2017		2016		2015	
	Shares	Amount	Shares	Amount	Shares	Amount
Preferred Stock	0.8	\$ 41	0.8	\$ 41	0.8	\$ 41
Repurchased Preferred Stock						
Balance, beginning of year	(0.7)	(192)	(0.7)	(186)	(0.7)	(181)
Redemptions	—	(5)	—	(6)	—	(5)
Balance, end of year	(0.7)	(197)	(0.7)	(192)	(0.7)	(186)
Common Stock	1,428	24	1,448	24	1,488	25
Balance, beginning of year	—	(8)	(20)	—	(40)	(1)
Change in repurchased common stock	1,420	24	1,428	24	1,448	24
Balance, end of year	1,428	24	1,448	24	1,488	25
Capital in Excess of Par Value		4,091		4,076		4,115
Balance, beginning of year		290		289		299
Share-based compensation expense		(236)		(138)		(182)
Stock option exercises, RSUs, PSUs and PEPunits converted ^(a)		(145)		(130)		(151)
Withholding tax on RSUs, PSUs and PEPunits converted		(4)		(6)		(5)
Other		3,996		4,091		4,076
Balance, end of year		3,996		4,091		4,076
Retained Earnings		52,518		50,472		49,092
Balance, beginning of year		4,857		6,329		5,452
Net income attributable to PepsiCo		(4,536)		(4,282)		(4,071)
Cash dividends declared - common		—		(1)		(1)
Cash dividends declared - preferred		52,839		52,518		50,472
Balance, end of year		52,839		52,518		50,472
Accumulated Other Comprehensive Loss		(13,919)		(13,319)		(10,669)
Balance, beginning of year		862		(600)		(2,650)
Net (loss) attributable		(13,057)		(13,919)		(13,319)
Balance, end of year		(13,057)		(13,919)		(10,669)
Shareholders' Equity		11,045		11,246		12,068
Balance, beginning of year		104		107		110
Share-based compensation expense		51		50		49
Share-based compensation expense - noncontrolling interests		(62)		(55)		(48)
Share-based compensation expense - noncontrolling interests		—		4		(2)
Share-based compensation expense - noncontrolling interests		(1)		(2)		(2)
Share-based compensation expense - noncontrolling interests		92		104		107
Balance, end of year		92		104		107
Total Equity		\$10,981		\$11,199		\$12,030

PepsiCo, Inc. and Subsidiaries
 Consolidated Balance sheet (excerpt)
 December 31

	2017	2016
Preferred Stock, no par value	41	41
Repurchased Preferred Stock	(197)	(192)
PepsiCo Common Shareholders' Equity	24	24
Common stock, par value 12/3¢ per share (authorized 3,600 shares, issued, net of repurchased common stock at par value: 1,420 and 1,428 shares, respectively)	24	24
Capital in excess of par value	3,996	4,091
Retained earnings	52,839	52,518
Accumulated other comprehensive loss	(13,057)	(13,919)
Repurchased common stock, in excess of par value (446 and 438 shares, respectively)	(32,757)	(31,468)
Total PepsiCo Common Shareholders' Equity	11,045	11,246
Noncontrolling interests	92	104
Total Equity	10,981	11,199
Total Liabilities and Equity	\$79,804	\$73,490

^(a) Includes total tax benefits of \$110 million in 2016 and \$107 million in 2015. See accompanying notes to the consolidated financial statements.

Chapter Preview

In this chapter, we identify five main components of stockholders' equity and illustrate how these components are reported in the stockholders' equity statement. We then examine in more detail common stock, preferred stock, and the related additional paid-in capital accounts, as well as treasury stock, which is a contra equity account. We examine the effect on retained earnings from different kinds of dividends: cash, property, liquidating, and stock. We also examine stock splits. Accumulated comprehensive income, a segment of stockholders' equity, is discussed, as well as the required reporting of the statement of comprehensive income. We wrap up the topic of equity with a discussion of required financial statement disclosures and the use of equity-based ratio analyses.

This authoritative standard does not come without controversy because of evidence of market adjustments for small stock dividends coupled with the fact that the company does not receive any new assets upon distribution of a stock dividend. Nonetheless, this is the basis of the accounting treatment of stock dividends which treats a small stock dividend differently from a large stock dividend: **the accounting standards require *small stock dividends* to be recorded at fair value and *large stock dividends* to be recorded at par value.**

Small Stock Dividends

If the proportion of the additional shares issued is small in relation to the shares previously outstanding (**small stock dividend**), the *fair value* of the additional shares is capitalized. Small in the accounting standards is generally defined as less than 20% to 25% of the outstanding shares.

505-20-25-3 The point at which the relative size of the additional shares issued becomes large enough to materially influence the unit market price of the stock will vary with individual entities and under differing market conditions and, therefore, no single percentage can be established as a standard for determining when capitalization of retained earnings in excess of legal requirements is called for and when it is not. Except for a few instances, the issuance of additional shares of less than 20 or 25 percent of the number of previously outstanding shares would call for treatment as a [small] stock dividend.

A small common stock dividend is recorded by a debit to Retained Earnings (at fair value) and a credit to Common Stock Dividends Distributable (at par value) and Paid-in Capital in Excess of Par—Common Stock (for the remainder). When the shares are officially issued, the company debits Common Stock Dividends Distributable and credits Common Stock. **With offsetting increases and decreases to stockholders' equity accounts, the net balance in stockholders' equity remains unchanged.**

505-20-30-3 In accounting for a stock dividend, the corporation shall transfer from retained earnings to the category of capital stock and additional paid-in capital an amount equal to the fair value of the additional shares issued. Unless this is done, the amount of earnings that the shareholder may believe to have been distributed to him or her will be left, except to the extent otherwise dictated by legal requirements, in retained earnings subject to possible further similar stock issuances or cash distributions.

When a stock dividend is issued, not all shareholders may own exactly the number of shares needed to receive whole shares. For example, if a company issues a 10% stock dividend and a shareholder owns 15 shares, the stockholder is entitled to 1.5 shares (15 shares × 10%). The shareholder has a right to 1 full share plus a **fractional share** of ½ share. A company often pays cash to shareholders for the fair value of the fractional shares to which they are entitled.

Demo 20-6A

L020-6

Accounting for Small Stock Dividends



Example One— Small Stock Dividend

WayMart Inc. issued a 10% common stock dividend on 100,000 shares of \$1 par common stock issued and outstanding on May 1, 2020. The market price of the common stock is \$5 per share. The small stock dividend will be distributed on May 25, 2020, to stockholders of record on May 10, 2020. Record the entry on (1) the date of declaration and (2) the date of distribution.

Solution

The small stock dividend is recorded at fair value, with the excess of the fair value of \$50,000 over the par value of \$10,000 recorded as an increase to additional paid-in capital for \$40,000.

May 1, 2020—To record small stock dividend on date of declaration

Retained Earnings (100,000 × 10% × \$5)	50,000	
Common Stock Dividends Distributable (100,000 × 10% × \$1)		10,000
Paid-in Capital in Excess of Par—Common Stock (to balance)		40,000

May 25, 2020—To record distribution of small stock dividend

Common Stock Dividends Distributable	10,000	
Common Stock		10,000

Assets	=	Liabilities	+	Equity
				-50,000
				+10,000
				+40,000
Ret Earnings		CS Div Distrib		
50,000		10,000		
Paid-in Cap—CS				
				40,000

Assets	=	Liabilities	+	Equity
				-10,000
				+10,000
CS Div Distrib		Common Stock		
10,000		10,000		

continued

Refer to the information in Brief Exercise 20-49. Instead Landry announces a 2-for-1 stock split *not* effected through a stock dividend.

- a. Prepare the journal entry for the declaration of the stock split on September 30, 2020.
- b. Prepare the journal entry for the distribution of the stock split on October 15, 2020.
- c. What is the total par value of common stock before and after the stock split?
- d. What is the par value per share before and after the stock split?
- e. What are the total number of shares before and after the stock split?

Brief Exercise 20-50
Analyzing a Stock Split **LO6**

Fastco Corp. reports net income of \$20,000, and other comprehensive income of \$5,000 (net of tax) for the year ended December 31, 2020. The December 31, 2019, balance in accumulated other comprehensive income is \$18,000 (credit balance) and the balance in retained earnings is \$100,000 (credit balance). What is the ending balance in accumulated other comprehensive income on December 31, 2020?

Brief Exercise 20-51
Determining the Balance in Accumulated OCI **LO7**
Hint: See Demo 20-7

Identify whether the following items *a* through *j* are part of (1) net income or (2) other comprehensive income.

- ___ a. Sales revenue
- ___ b. Bad debt expense
- ___ c. Loss from foreign currency translation adjustment
- ___ d. Gain on sale of an available-for-sale debt investment
- ___ e. Unrealized gain on an available-for-sale debt investment
- ___ f. Unrealized gain on an equity investment where investor lacks significant influence
- ___ g. Prior service cost amortization expense for a defined benefit plan
- ___ h. Unrealized loss on cash flow hedge
- ___ i. Loss on impairment of investment
- ___ j. Loss on sale of land

Brief Exercise 20-52
Identifying Net Income and Other Comprehensive Income Amounts **LO7**

Bucky's Apparel Inc. is considering paying a dividend on December 31, 2020. A loan covenant stipulates that the payout ratio must be less than or equal to 10%. If the company has no preferred stock outstanding, and net income is expected to be \$80,000, what is the maximum value that Bucky may pay out in dividends to the common shareholders?

Brief Exercise 20-53
Analyzing Payout Ratio **LO8**

The following information is provided for the **Coca-Cola Company** (\$ millions).

Total common stockholders' equity on Dec. 31, 2017	\$17,072
Total common stockholders' equity on Dec. 31, 2016	23,062
Net income, 2017	1,248

Brief Exercise 20-54
Computing Equity Ratios **LO8**
Hint: See Demo 20-8

Compute the following ratios for 2017, assuming total number of 2017 common shares outstanding of 4.259 billion.

- a. Book value per share
- b. Return on equity

Exercises

The following data are from the accounts of Mitar Corporation at December 31, 2020 (\$ thousands).

Retained earnings, beginning balance	\$ 900
Common stock, \$__ par, 100,000 shares authorized, 50,000 shares issued	1,000
Treasury stock, 1,000 shares	20
Paid-in capital in excess of par	400
Bonds payable	200
Net income for 2020 (not included in retained earnings above)	190
Dividends declared and paid during 2020 (not included in retained earnings above)	80

Exercise 20-55
Reporting Stockholders' Equity **LO1**

Required

- a. Determine the value of the following items.
 1. Total retained earnings at end of 2020
 2. Par value per share
 3. Number of shares outstanding

Brief Exercise 20-40

Preparing Entry for Direct Retirement of Reacquired Shares **LO3**

Hint: See Demo 20-3B

Brief Exercise 20-41

Preparing Entries for Treasury Stock Transactions **LO3**

Hint: See Demo 20-3A

Brief Exercise 20-42

Preparing Entries for Treasury Stock Transactions **LO3**

Hint: See Demo 20-3A

Brief Exercise 20-43

Preparing Entry to Issue Preferred Stock **LO4**

Hint: See Demo 20-4

Brief Exercise 20-44

Determining Dividend Distributions **LO5**

Brief Exercise 20-45

Preparing Dividend Entries **LO5**

Hint: See Demo 20-5A

Brief Exercise 20-46

Preparing Entry for Property Dividends **LO5**

Hint: See Demo 20-5B

Brief Exercise 20-47

Preparing Entry for Liquidating Dividend Declaration **LO5**

Hint: See Demo 20-5C

Brief Exercise 20-48

Preparing Entries for Small Stock Dividends **LO6**

Hint: See Demo 20-6A

Brief Exercise 20-49

Preparing Entries for Stock Split Effectuated in the Form of a Dividend **LO6**

Hint: See Demo 20-6B

par

On June 30, 2020, Pier5 Inc. issued 500 shares of \$1 common stock for \$15 per share. On June 30, 2020, Pier5 Inc. reacquired 50 shares of common stock at \$12 per share and immediately retired the shares. On December 15, 2020, Pier5 Inc. reacquired 100 shares of common stock at \$17 per share and immediately retired the shares. By what amount did retained earnings decrease as a result of the reacquisition of common stock on December 15, 2020?

Harlee Inc. has 60,000 shares of \$5 par common stock outstanding at the beginning of the year 2020. Prepare entries for the following transactions affecting stockholders' equity. Assume Paid-in Capital—Treasury Stock has a zero beginning balance.

- January 15, 2020: Purchased common stock as treasury shares, 2,000 shares at \$20 per share.
- June 15, 2020: Sold common treasury stock, 800 shares at \$14 per share.

Charter Inc. has 600,000 shares of \$1 par common stock outstanding at the beginning of the year 2020. Prepare entries for the following transactions affecting stockholders' equity. Assume Paid-in Capital—Treasury Stock has a zero beginning balance.

- January 31, 2020: Purchased common stock as treasury shares, 1,200 shares at \$15 per share.
- September 15, 2020: Sold common treasury stock, 200 shares at \$17 per share.
- December 20, 2020: Sold common treasury stock, 250 shares at \$13 per share.

Regency Inc. issued 800 shares of \$20 par value, 8%, cumulative preferred stock for \$48,000 on June 30, 2020. Prepare Regency's journal entry on June 30, 2020.

Urban Inc. had the following capital outstanding. In 2020, Urban Inc. distributes \$80,000 in cash dividends to shareholders.

Common, \$1 par, 30,000 shares issued and outstanding	\$ 30,000
8% Preferred, \$10 par, 20,000 shares issued and outstanding . . .	200,000

- If the preferred stock is cumulative and dividends are in arrears for the past three years, what is the cash distribution to common shareholders and preferred shareholders?
- What is the cash distribution to common shareholders and preferred shareholders if the preferred stock is noncumulative?

On September 1, 2020, Fox Corporation declared a cash dividend of \$1 per share on its 800,000 outstanding shares of common stock (\$1 par). The dividend is payable on October 15, 2020, to stockholders of record on October 1, 2020. Provide all journal entries directly related to this dividend.

Zerizon Inc. holds 6,000 shares of Cable Co. common stock, which it acquired for \$25 per share in May of 2020. On June 1, 2020, Zerizon Inc. declares a property dividend of 500 shares of Cable Co. common stock when the shares are selling at \$28 per share. Provide the journal entry on June 1, 2020, for the declaration of the property dividend.

Wellington Corp. declared a dividend on common stock of \$250,000 on May 18, 2020. Wellington announced to shareholders that \$175,000 of the dividend amount was a return of capital. Provide the journal entry on May 18, 2020, for the dividend declaration.

Landry Inc. has 10,000 shares of common stock, \$1 par outstanding. On September 30, 2020, Landry declares a 10% stock dividend when the fair value of its common stock is \$30 per share. Distribution of the dividend will be on October 15, 2020.

- Prepare the journal entry for the declaration of the stock dividend on September 30, 2020.
- Prepare the journal entry for the distribution of the stock dividend on October 15, 2020.

Landry Inc. has 10,000 shares of common stock, \$1 par outstanding. On September 30, 2020, Landry declares a stock split effected in the form of a 100% stock dividend when the fair value of its common stock is \$30 per share. Distribution of the dividend will be on October 15, 2020.

- Prepare the journal entry for the declaration of the stock dividend on September 30, 2020.
- Prepare the journal entry for the distribution of the stock dividend on October 15, 2020.

4. Total stockholders' equity
 5. Average original selling price per share
 6. Cost per share of treasury stock
- b. Prepare the stockholders' equity section of the balance sheet at December 31, 2020.

Exercise 20-56Reporting Stockholders' Equity **LO1**

Hint: See Demo 20-1

On December 31, 2020, Nakoma Inc. had the following account balances.

Preferred stock, \$100 par, 5,000 shares authorized	\$ 20,000 Cr.
Paid in capital in excess of par—Preferred stock	80,000 Cr.
Common stock, \$1 par, 250,000 shares authorized	35,000 Cr.
Paid in capital in excess of par—Common stock	480,000 Cr.
Retained earnings	360,000 Cr.
Accumulated other comprehensive income	48,000 Cr.
Treasury stock, 1,200 shares	55,000 Dr.
Noncontrolling interests	5,000 Cr.

Prepare the stockholders' equity section of the balance sheet for Nakoma Inc. on December 31, 2020. State the par value per share, and the number of shares authorized, issued, and outstanding for common stock and preferred stock on the face of the statement.

Exercise 20-57Recording Entries for Common Stock Issuance **LO2**

Record journal entries for the following separate transactions.

- a. Max Inc. issued 5,000 shares of \$1 par value common stock for \$20 per share on January 1, 2020.
- b. Max Inc. issued 1,000 shares of no-par common stock for \$25 on January 1, 2020. The state of incorporation requires a minimum value per share of \$2.
- c. Max Inc. issued 500 shares of no-par common stock for \$18 per share on January 1, 2020.
- d. Max Inc. issued 5,000 shares of \$1 par value common stock for \$18 per share on January 1, 2020, and incurred \$1,000 in legal fees related to the stock issuance.
- e. Max Inc. issued 10,000 shares of common stock (\$1 par) in exchange for equipment with a fair value of \$178,000.
- f. Max Inc. issued 3,000 shares of Class A common stock (\$1 par) and 4,000 shares of Class B common stock (\$2 par) at a price of \$80,000. At the time of issuance, the market price of the Class A common stock is \$15 per share, and the market price of the Class B common stock is \$10 per share.
- g. Max Inc. issued 3,000 shares of Class A common stock (\$1 par) and 4,000 shares of Class B common stock (\$2 par) at a price of \$85,000. At the time of issuance, the market price of the Class A common stock is \$16 per share, and the market price of the Class B common stock is unknown.

Exercise 20-58Recording Entries for Common Stock Issuance **LO2**

Tridint Corporation is authorized to issue 100,000 shares of \$5 par value common stock. The shares of stock are not publicly traded. During 2020, the company completed the following transactions.

- Jan. 8, 2020 Issued 40,000 shares of common stock at \$12 per share.
 Jan. 30, 2020 Issued 10,500 shares of common stock in exchange for equipment with an appraised value of \$136,500.

Required

- a. Prepare the journal entry on January 8, 2020.
- b. Prepare the journal entry on January 30, 2020.
- c. Would the answer to part b change if the stock were traded on a registered stock exchange at \$14 per share on January 30, 2020? If yes, prepare the journal entry on January 30, 2020.

Exercise 20-59Recording Entry for Stock Issuance **LO2**

In May of 2012, **Facebook** raised over \$16 billion in its initial public offering. Approximately 421.2 million shares of Class A common stock, \$0.000006 par value were sold for \$38 a share.

Required

Ignoring stock issue costs, record the journal entry for this stock issuance.

Exercise 20-60Recording Entries for Multiple Securities Issuance **LO2**

Gilmore Company has 20,000 authorized shares of common stock, \$2 par, and 20,000 authorized shares of preferred stock, \$10 par. On April 10, 2020, Gilmore sold 600 shares of common stock and 400 shares of preferred stock in one transaction for a total cash price of \$20,000. The common stock recently had been selling at \$26 per share while the preferred stock recently had been selling at \$16 per share.

continued from previous page

The weighted-average common shares of 152,250 is used to calculate basic EPS.

	Net Income Available to Common Stockholders	Weighted-Average Common Shares Outstanding	Per Share
Basic EPS	\$300,000	152,250	<u>\$1.97</u>

b. Stock Split

If the stock dividend were instead a 2-for-1 stock split on October 31, 2020, the retroactive restatement factor would be 2.0. (Had the stock dividend been instead a reverse, 1-for-2 stock split on October 31, 2020, the retroactive restatement factor would be 0.5.)

Inclusive Dates	Actual Shares Outstanding	Retroactive Restatement for Stock Split	A Equivalent Shares Outstanding*	Months Outstanding	B Fraction of Year	(A × B) Weighted- Average Shares Outstanding
Jan.–Mar.	100,000	2.0	200,000	3	3/12	50,000
Apr.–Sept.	95,000	2.0	190,000	6	6/12	95,000
Oct.	145,000	2.0	290,000	1	1/12	24,167
Nov.–Dec.	290,000		290,000	<u>2</u>	<u>2/12</u>	<u>48,333</u>
				<u>12</u>	<u>100.0%</u>	<u>217,500</u>

* Shares outstanding × Retroactive restatement.

The weighted-average common shares of 217,500 is used to calculate basic EPS.

	Net Income Available to Common Stockholders	Weighted-Average Common Shares Outstanding	Per Share
Basic EPS	\$300,000	217,500	<u>\$1.38</u>

Example Four—Basic EPS Calculation with Cash Dividends (Noncumulative Preferred)

Madison Co. has 100,000 common shares outstanding during 2020, and net income of \$300,000 for 2020. During the year, the company also has 20,000 shares of 4%, \$10 par value preferred stock outstanding. The preferred stock is *noncumulative* and preferred dividends of \$6,000 were declared and paid in 2020. Calculate Madison Co.'s basic EPS for 2020.

Solution

The preferred dividends of \$6,000 are subtracted from net income in calculating basic earnings per share. With noncumulative preferred stock, dividends are subtracted in the current year when dividends are declared in the current year. (Had the company declared no dividends on noncumulative preferred stock, no adjustment for dividends would have been required.)

December 31, 2020—To calculate basic EPS with noncumulative preferred stock

	Net Income Available to Common Stockholders	Weighted-Average Common Shares Outstanding	Per Share
Basic EPS	\$294,000 ¹	100,000	<u>\$2.94</u>

¹ \$300,000 (net income) – \$6,000 (preferred dividends).

Example Five—Basic EPS Calculation with Cash Dividends (Cumulative Preferred)

Let's now assume Madison Co. has 100,000 common shares outstanding during 2020, and net income of \$300,000 for 2020. During the year, the company also had 20,000 shares of 4%, \$10 par value preferred stock outstanding. The preferred stock is *cumulative* and no preferred stock dividends were declared in 2020. Calculate Madison Co.'s basic EPS for 2020.

continued

future that were not included in the computation of diluted EPS because to do so would have been antidilutive for the period(s) presented. Full disclosure of the terms and conditions of these securities is required even if a security is not included in diluted EPS in the current period.

EXPANDING YOUR KNOWLEDGE

Convertible Bonds Sold at a Discount or Premium

If a convertible bond is sold at a discount or premium, interest expense on the income statement factors into the amortization of the discount or premium for the reporting period. This means the adjustment to the numerator described above should reflect *effective interest*. For example, let's assume that a \$50,000, 10-year, 5% bond, is sold at \$48,000 on January 1, 2020, and that the company's tax rate is 25%. What is the adjustment to the numerator in the diluted EPS calculation assuming that the discount is amortized using the straight-line method? *Answer:* The after-tax interest expense adjustment including the amortization of the discount of \$200 $[(\$50,000 - \$48,000)/10 \text{ years}]$ is: \$2,025, computed as $([\$50,000 \times 5\%] + \$200) \times 0.75$.

EPS Calculations—Convertible Bonds

LO21-6

Demo 21-6A

Net income for 2020 for Gridley Inc. is \$600,000. During the entire year, 1,000, 6%, \$1,000 bonds, issued at par, were outstanding, each convertible into 20 common shares. The weighted-average shares outstanding before considering potentially dilutive securities is 200,000, and the tax rate is 25%.



- Compute basic EPS for Gridley Inc. for 2020.
- Compute diluted EPS for 2020 using the *if-converted* method. Indicate the EPS amount(s) that the company would report in its 2020 income statement.
- Compute diluted EPS for 2020 using the *if-converted* method, assuming instead that the convertible bonds were issued on October 1, 2020. Indicate the EPS amount(s) that the company would report in its 2020 income statement.
- Repeat the requirements of parts *a* and *b*, but now assume that the company reported a net loss of \$600,000.

Note: This is a new scenario where net income of \$600,000 takes into account the bonds being issued on October 1.

Solution

a. Basic EPS Calculation

	Net Income Available to Common Stockholders	Weighted-Average Common Shares Outstanding	Per Share
Basic EPS	\$600,000	200,000	<u>\$3.00</u>

b. Diluted EPS Calculation with Convertible Bond

The impact on EPS assuming that all of the bonds were converted into common stock as of January 1, 2020, follows.

- Adjustment to numerator:** After-tax interest of \$45,000 is added, computed as $(1,000 \text{ bonds} \times \$1,000 \text{ par} \times 6\%) \times (1 - 25\%)$. Had the bonds been converted at the beginning of the year, no interest would have been paid, causing earnings after tax to increase \$45,000.
- Adjustment to denominator:** 20,000 new common shares are added based on the assumed conversion $(1,000 \text{ bonds} \times 20 \text{ shares per bond})$.

The impact on diluted EPS follows.

	Net Income Available to Common Stockholders	Weighted-Average Common Shares Outstanding	Per Share
Basic EPS	\$600,000	200,000	<u>\$3.00</u>
Effect of convertible bonds:			
Add back interest, net of tax	45,000		
Add new common shares		<u>20,000</u>	
Diluted EPS	<u>\$645,000</u>	<u>220,000</u>	<u>\$2.93</u>

continued

- 21-18.** A dilutive convertible bond was issued at a premium. Explain how to compute the numerator effect for such a bond when computing dilutive EPS.
- 21-19.** Explain in general how to handle actual conversions of convertible dilutive securities for basic and diluted EPS purposes (denominator effect only).
- 21-20.** Shares of a parent corporation will be issued in the future based on the number of retail outlets opened by a recently acquired subsidiary. The subsidiary predicts that 10 new outlets will be opened in the next three years. However, to date, no outlets have been opened. Describe how the contingent shares would be calculated for the parent company's diluted EPS in this situation.
- 21-21.** Would antidilutive securities be included in the calculation of diluted earnings per share?
- 21-22.** Are the following items required to be disclosed on the face of the financial statements, or either on the face or in the notes to the financial statements?
1. Income (loss) from continuing operations
 2. Net income (loss)
 3. Income (loss) from discontinued operations

Brief Exercises

Brief Exercise 21-23
Recording Entries
for Restricted
Shares **LO1**
Hint: See Demo 21-1A

On January 1, 2020, Alaska Inc. issued a total of 1,000 shares of \$10 par, restricted common stock to five executives. The fair value of the shares of stock on January 1, 2020, is \$60,000. The restricted shares require a vesting period of 3 years, which is the requisite service period, and no forfeitures are anticipated.

- a. Prepare the journal entry (if any) required on January 1, 2020.
- b. Prepare the adjusting journal entry required on December 31, 2020.

Brief Exercise 21-24
Recording Entries
for Restricted Stock
Units **LO1**
Hint: See Demo 21-1B

On January 1, 2020, Alaska Inc. granted restricted stock units to five executives for a total of 1,000 shares of \$10 par common stock. The fair value of the shares of stock on January 1, 2020, is \$60,000. The restricted shares require a vesting period of 3 years, which is the requisite service period, and no forfeitures are anticipated.

- a. Prepare the journal entry (if any) required on January 1, 2020.
- b. Prepare the adjusting journal entry required on December 31, 2020.

Brief Exercise 21-25
Recording Stock
Options: Compensation
Expense,
Exercise **LO2**
Hint: See Demo 21-2

On January 1, 2020, Holiday Inc. offered a stock option incentive plan to a top executive. The plan provided the executive 300 stock options for Holiday Inc. \$1 par value, common stock at an option price of \$15 per share through the expiration date of January 1, 2026. The fair value of the options based upon an option-pricing model on January 1, 2020, is \$9,000. The market price at year-end of Holiday Inc. stock is \$15 per share on January 1, 2020, and \$18 on December 31, 2020. The requisite service period is 3 years. The options were exercised on March 1, 2023, when the market price of the stock was \$20 per share.

- a. Prepare the journal entry (if any) required on January 1, 2020.
- b. Prepare the adjusting journal entry required on December 31, 2020, the company's year-end.
- c. Prepare the journal entry required on March 1, 2023.

Brief Exercise 21-26
Recording Forfeiture of
Stock Options **LO2**

Refer to the information in Brief Exercise 21-25. The options were granted as described, but instead the executive left the company on January 1, 2022. Prepare the journal entry required on January 1, 2022, assuming that the company's policy is to record forfeitures as incurred.

Brief Exercise 21-27
Determining
Compensation Expense
Considering Forfeitures
of Options **LO2**

On January 1, 2020, Spring Co. awards 10,000 stock options to acquire 10,000 shares of common stock (\$1 par value) to executives at an exercise price of \$30 per share. The market price of Spring Co. common stock on the grant date is \$30 per share. The options are exercisable after January 1, 2024, and expire when the employee leaves the company or on December 31, 2026, whichever is first. Management estimates through a fair value option-pricing model that total compensation expense is \$130,000. The requisite service period is considered to be 4 years. Spring Co.'s policy is to record forfeitures as they are incurred. Determine compensation expense in 2021 considering 1,500 shares were forfeited in that year.

Brief Exercise 21-28
Recording Expiration of
Stock Options **LO2**
Hint: See Demo 21-2

Assume the same information in Brief Exercise 21-25, except that the employees did *not* exercise the stock options due to the stock price remaining below \$15 per share after the vesting period. Record the entry on January 1, 2026, for the expiration of the stock options.

Required

Compute the required EPS amounts.

At the end of 2020, the records of Block Corporation reflected the following.

Common stock, \$5 par, authorized 500,000 shares	
Outstanding January 1, 2020, 400,000 shares	\$2,000,000
Sold and issued April 1, 2020, 2,000 shares	10,000
Issued 5% stock dividend, September 30, 2020; 20,100 shares	100,500
Preferred stock, 6%, \$10 par, nonconvertible, noncumulative, authorized 50,000 shares,	
outstanding during year, 20,000 shares	200,000
Paid-in capital in excess of par, common stock	180,000
Paid-in capital in excess of par, preferred stock	100,000
Retained earnings (after the effects of current preferred dividends declared during 2020)	640,000
Bonds payable, 6.5%, nonconvertible, issued at par January 1, 2020	1,000,000
Net income	164,000
Income tax rate, 25%	

Exercise 21-55
 Calculating EPS:
 Simple Capital
 Structure **LO5, 6**

Required

- What EPS presentation is required—basic, diluted, or both?
- Compute the required EPS amounts.
- Compute the required EPS amounts, assuming that the preferred stock is cumulative.

C-Bay Inc.’s accounting year ends on December 31. During the following three years, its common shares outstanding changed as follows.

	2022	2021	2020
Shares outstanding, January 1	150,000	120,000	100,000
Sales of shares, April 1, 2020			20,000
25% stock dividend, July 1, 2021		30,000	
2-for-1 stock split, July 1, 2022	150,000		
Shares sold, October 1, 2022	<u>50,000</u>		
Shares outstanding, December 31	<u>350,000</u>	<u>150,000</u>	<u>120,000</u>

Exercise 21-56
 Calculating EPS:
 Simple Capital
 Structure and 3
 years **LO5**
Hint: See Demo 21-5

Required

- For purposes of calculating EPS at the end of each year, determine the number of shares outstanding. *Hint:* Consider each reporting year separately.
- For purposes of calculating EPS at the end of 2022, when comparative statements are being prepared on a three-year basis, determine the number of shares outstanding for each year.
- Compute EPS for each year based on computations in part b. Assume net income is \$375,000, \$330,000, and \$299,000, for years 2022, 2021, and 2020, respectively.

Select Corporation was incorporated on January 2, 2020. The following information pertains to Select Corporation’s 2020 common stock transactions.

Jan. 2	Number of shares authorized	250,000
Jan. 2	Number of shares issued	85,000
Jul. 1	Number of shares reacquired but not canceled	5,000
Sept. 1	Two-for-one stock split	
Dec. 1	Reissued shares of treasury stock	5,000

Exercise 21-57
 Calculating EPS:
 Simple Capital
 Structure **LO5**
Hint: See Demo 21-5

Required

- Determine the weighted-average number of shares of Select Corporation’s common stock outstanding.
- Compute earnings per share for 2020 considering the following additional information:
 - Net income: \$330,000
 - Preferred stock, 5%, cumulative, 5,000 shares, \$10 par value per share
 - Preferred dividends declared in 2020: \$0 outstanding

Exercise 21-58

Calculating EPS:
Simple Capital
Structure **LO5**

On December 31, 2020, Americana Inc. had 175,000 shares of common stock issued and outstanding. Americana Inc. issued a 40% stock dividend on July 1, 2020. On October 1, 2020, the company purchased 20,000 shares of its common stock for the treasury, and declared a 2-for-1 stock split on December 31, 2020. Americana also had 10,000 shares of 5%, \$20 par value cumulative preferred stock outstanding. No dividends were declared on either the preferred or the common stock in 2019 or 2020. Net income for 2020 was \$1,000,000.

Required

- Compute the required EPS amount.
- Compute the required EPS amount assuming instead that Americana Inc. declared and paid the current year preferred dividend and one year of dividends in arrears in December 2020.
- Compute the required EPS amount assuming instead that the preferred stock is noncumulative.

Exercise 21-59

Computing EPS: Simple
Capital Structure and
Net Loss **LO5**

Grace Corp. suffered a net loss in 2020 of \$100,000. The company has 100,000 common shares outstanding as of January 1, 2020, and declared a 1-for-2 reverse stock split on March 31. In addition, the company bought 5,000 shares for the treasury on August 31, 2020, and 2,000 shares of stock were issued on November 1, 2020, in exchange for legal services. The company had 1,000 shares of 5%, \$10 par, cumulative, nonconvertible preferred stock for the year 2020. No common or preferred stock dividends were declared in 2020. ~~Weighted average shares outstanding in 2020 were 110,000 shares for common stock and 10,000 shares for preferred stock.~~

Required

Compute the required EPS amount.

Exercise 21-60

Computing Diluted
EPS: Convertible
Bonds and Convertible
Preferred Stock **LO9**

Jones Corporation's capital structure follows.

December 31	2020
Outstanding shares of stock	
Common stock, outstanding shares	110,000
Convertible preferred stock, outstanding shares	10,000
8% Convertible bonds	\$1,000,000

During 2020, Jones declared and paid dividends of \$3.00 per share on its preferred stock. The preferred shares are convertible into 20,000 shares of common stock. The 8% bonds are convertible into 30,000 shares of common stock. Net income for 2020 is \$850,000. Assume that the income tax rate is 25%.

Required

- Compute basic EPS for 2020.
- Compute diluted EPS for 2020.

Exercise 21-61

Computing EPS:
Convertible
Debt **LO6**

Hint: See Demo 21-6A

Shaffer Corporation issued 100, \$1,000, 10% convertible bonds in 2019 at face value. Each bond is convertible into 100 shares of common stock. Shaffer's net income for 2020 is \$1,824,000 (\$2,432,000 before tax). Considering all factors except convertible bonds, average common shares outstanding for 2020 are 1,010,000.

Required

- Compute basic EPS.
- Compute diluted EPS.
- How do the answers to parts *a* and *b* change if the bonds were issued on July 1, 2020?
- Ignoring part *c*, how do the answers to parts *a* and *b* change if *one-half* of the bonds were converted on July 1, 2020?

Exercise 21-62

Computing EPS:
Convertible
Preferred with Partial
Conversion **LO6**

Bridgeman Company, headquartered in San Francisco, reported the following data for the current year.

- Net income, \$2,220,000.
- Common shares outstanding at the beginning of the year, 800,000.
- Nonconvertible cumulative preferred stock, \$100 par, \$8 dividend per share per year, 100,000 shares outstanding all year.
- Issued 200,000 shares of common stock on October 1.
- Convertible cumulative preferred stock, \$100 par, \$7 dividend per share per year, 50,000 shares outstanding at the beginning of the year. On March 31, 20,000 shares of preferred stock converted to 40,000 common shares.
- For both preferred stock issues, assume dividends are paid for time held.

Required

- a. Compute basic EPS.
- b. Compute diluted EPS.

Rand Inc. had a net income of \$800,000. During the year, 200,000 shares were outstanding on average and Rand’s common stock sold at an average market price of \$50. In addition, Rand had 20,000 stock options outstanding to purchase a total of 20,000 common shares at \$25 for each option exercised.

Exercise 21-63
Computing Diluted EPS: Stock Options **LO7**
Hint: See Demo 21-7A

Required

per share.

- a. Compute basic EPS.
- b. Compute diluted EPS.

Spencer Inc.’s 2020 earnings of \$500,000 reflect a tax rate of 25%. During the entire year, Spencer had the following securities outstanding:

Exercise 21-64
Computing EPS with Multiple Potentially Dilutive Securities **LO9**
Hint: See Demo 21-9

- 120,000 shares of common stock.
- 5,000 shares of 6%, \$100 par, nonconvertible, cumulative preferred stock.
- 5,000 shares of 6%, \$100 par, cumulative preferred stock, each convertible into 1.75 shares of common stock.
- 500 bonds, \$1,000 face value, 8% interest, each convertible into 30 shares of common stock (issued at face value).
- 200 bonds, \$1,000 face value, 6% interest, each convertible into 20 shares of common stock (issued at face value).

Required

- a. Compute basic EPS.
- b. Compute diluted EPS.

Zolar Corporation reported basic earnings per share of \$2.18 (\$22,875,000/10,500,000) based on the following data.

Net income	\$22,875,000
Common shares	
January 1, 2020	12,000,000
December 31, 2020	9,000,000
Average number of shares outstanding	10,500,000

Exercise 21-65
Correcting EPS Calculation **LO5**

After examining Zolar’s records, we note that Zolar acquired and retired 4 million shares on April 1, 2020, and issued 1,000,000 shares on September 30, 2020. No equity securities besides common stock are outstanding, and Zolar has no convertible securities or stock options outstanding.

Required

- a. Is Zolar’s basic EPS calculation of \$2.18 per share accurate?
- b. Revise the EPS calculation if you believe it is incorrect.
- c. Now assume that in addition to the information provided above, Zolar has outstanding 100,000 shares of \$100 par, 5% cumulative preferred, issued on September 9, 2014. The annual dividend was declared and paid in 2020. Revise the EPS calculation.

At the end of 2020, the records of Wolverine Corporation reflected the following.

Common stock, \$10 par; authorized 100,000 shares: issued and outstanding throughout the year, 50,000 shares	\$500,000
Preferred stock, \$50 par, 7%, cumulative, convertible into common stock, share for share; authorized, 10,000 shares; issued and outstanding throughout year, 2,000 shares.	100,000
Contributed capital in excess of par, common stock	80,000
Retained earnings (no dividends declared during the year)	470,000
Bonds payable, 10% nonconvertible, issued at par in 2016.	150,000
Net income	120,000
Stock options outstanding (all year for 10,000 shares of common stock at \$15 per share).	
Income tax rate, 25%.	
Average market price of the common stock during 2020, \$25 per share.	

Exercise 21-66
Calculating EPS with Multiple Securities **LO5, 6, 7, 9**

Required

- a. Is this a simple or a complex capital structure?
- b. Compute the required EPS amounts.

Exercise 21-67
Calculating EPS
with Convertible
Debt **LO5, 6**

At the end of 2020, the records of Ruso Corporation reflected the following.

Common stock, no-par, authorized 250,000 shares: issued and outstanding throughout the period to December 1, 2020, 60,000 shares. A 2-for-1 stock split was issued on December 1, 2020.	\$840,000
Preferred stock, 5%, \$10 par, nonconvertible, cumulative, nonparticipating, shares authorized, issued, and outstanding during year, 10,000 shares	100,000
Contributed capital in excess of par, preferred stock	30,000
Retained earnings (no cash or property dividends during year)	570,000
Bonds payable, 8%, issued January 1, 2020; each \$1,000 bond is convertible into 60 shares of common stock after the stock split on December 1, 2020 (bonds initially sold at par)	200,000
Net income	72,000
Income tax rate, 25%.	

Required

- Is this a simple or a complex capital structure?
- Compute the required EPS amounts.

Exercise 21-68
Calculating EPS with
Restricted Stock **LO7**
Hint: See Demo 21-7B

StarStruck Inc. granted 500 shares of restricted stock (common shares, \$1 par) to its president on January 1, 2020, when the stock was trading at \$40 per share. Net income for 2020 was \$250,000 and 40,000 shares were outstanding throughout 2020. On average, the fair value of common shares in 2020 was \$40 per share. The restricted shares vest after 3 years if the president remains with the company.

Required

- Compute basic EPS.
- Compute diluted EPS

Exercise 21-69
Calculating Diluted
EPS: Contingent
Shares **LO8**
Hint: See Demo 21-8

In 2020, Xonacs acquired Realtest Service. The acquisition agreement included a commitment by Xonacs to the shareholders of Realtest that if 2021 net income exceeded \$250,000, an additional 50,000 shares of Xonacs stock would be issued to the shareholders in 2022. Realtest's net income in 2020 was \$255,000.

Required

- How many contingent shares would Xonacs recognize in its calculation of 2020 diluted EPS?
- Suppose Realtest's earnings in 2020 were \$200,000. How many contingent shares would Xonacs recognize in its calculation of 2020 diluted EPS?

Exercise 21-70
Analyzing EPS **LO5,**
6, 7, 8

Match each term, 1 through 12 with its impact on the EPS calculation, *a* through *e*. A scenario may have more than one impact on the EPS calculation. Assume a simple capital structure unless the scenario indicates otherwise. Ignore the possibility of antidilutive securities and the initial impact on net income of a particular transaction.

Scenario

- Noncumulative, 7% preferred stock dividend with no dividend declaration.
- Cumulative, 7% preferred stock dividend with no dividend declaration.
- Issuance of stock options.
- Retirement of common shares.
- Stock dividend declared during the year.
- Stock dividend declared after the calendar year but before financial statements are issued.
- Stock split.
- Issuance of convertible noncumulative preferred stock with no dividend declaration.
- Issuance of convertible bonds.
- Conditions for issuance are met for unissued contingent shares.
- Purchase of shares for the treasury.
- Granting of restricted common stock (not vested).

Impact on EPS Calculation

- Effects numerator in basic EPS calculation.
- Effects denominator in basic EPS calculation.
- Effects numerator in diluted EPS calculation.
- Effects denominator in diluted EPS calculation.
- No impact on EPS calculation.

Problem 21-80

Presenting Earnings per Share: Convertible Bonds **LO5, 6, 9**

At the end of 2020, the records of Luholtz Corporation showed the following.

Common stock, no-par, authorized 500,000 shares; issued and outstanding throughout period, 100,000 shares	\$680,000
Stock dividend issued, December 31, 2020, 50,000 shares (not included in the 100,000 shares above)	340,000
Retained earnings (after effect of dividends on all shares)	500,000
Bonds payable, 4.5%; each \$1,000 bond is convertible to 80 shares of common stock after the stock dividend (bonds issued at par in 2018)	100,000
Bonds payable, 6.5%; each \$1,000 bond is convertible to 90 shares of common stock after the stock dividend (bonds issued at par in 2018)	300,000
Net income	222,000
Income tax rate, 25%.	

Required

Prepare the required EPS presentation for 2020.

Problem 21-81

Computing Earnings per Share with a Net Loss **LO5, 6, 7**

Wilson Corporation's financial statements at December 31, 2020, reported the following.

Accrued interest payable	\$ 1,000
Long-term notes payable, 10%, due 2023	50,000
Bonds payable, 7%; each \$1,000 of face value is convertible into 90 shares of common stock; bonds mature in 2030, issued at par in 2018	800,000
Preferred stock, 5%, nonconvertible, cumulative, \$100 par, issued in 2011	300,000
Common stock, \$5 par, outstanding all year	700,000
Common stock options outstanding all year entitling holders to acquire 40,000 shares of common stock at \$9 per share	200,000
Net loss for 2020	(125,000)

Additional data

- 1,000 shares of preferred stock were issued at par on July 1, 2020. Dividends were declared and paid semi-annually, on May 31 and November 30. On newly issued shares, dividends are prorated from issue date.
- Average market price of common stock during 2020 was \$10.
- Wilson's income tax rate is 25%.

Required

- a. Compute the basic EPS amount that Wilson must report on the income statement for 2020.
- b. Compute the diluted EPS amount that Wilson must report on the income statement for 2020.

Problem 21-82

Computing EPS: Contingently Issuable Shares **LO8**

PellCo is subject to an agreement whereby it must issue shares to shareholders of a company it acquired in 2020, if certain conditions are met. These shares are issuable the year following the year in which the relevant conditions are met. The agreement specifies:

1. PellCo will issue 20 shares for each \$1,000 in net income of the combined enterprise in excess of \$100,000.
2. PellCo will issue 1,000 shares for each new patent awarded to the recently acquired subsidiary (a research enterprise) during the year.
3. PellCo will issue 50 shares for each \$5 increase in the market price of PellCo's stock above the price at the beginning of the year.

Data for 2020 follows.

Year	Patents Awarded	Beginning Stock Price	Ending Stock Price	Earnings
2020	3	\$30	\$41	\$190,000

Required

- a. Determine the contingent shares to be included in basic EPS for 2020.
- b. Determine the contingent shares to be included in diluted EPS for 2020.

and paid dividends of \$8,000. As of December 31, 2020, common shares of Towne Corporation were trading at \$20 per share.

Required

- Assume that Allen Corporation had significant influence over Towne Corporation. Record the entries for 2020 for Allen Corporation.
- Indicate how the investment transactions would affect the statement of cash flows for 2020, assuming that the company uses the indirect method in reporting cash flows from operating activities.

United Company signed an 8% installment note with Bank One on January 1, 2020, for \$100,000. The installment note calls for 5 equal payments at the end of 5 years beginning on December 31, 2020.

Required

- Calculate the amount of each installment payment.
- Indicate how the installment note transactions would affect the statement of cash flows for 2020, assuming that the company uses the indirect method in reporting cash flows from operating activities.

Yale Corporation issued a \$60,000 5-year bond dated January 1, 2020, at 8% with 6% interest payable annually on December 31. Assume that the company uses the effective interest amortization method.

Required

- Provide journal entries to be made on January 1, 2020, and December 31, 2020.
- Indicate how the bond transactions would affect the statement of cash flows for 2020, assuming that the company uses the indirect method in reporting cash flows from operating activities.

On January 1, 2020, Lessee Inc. signs a three-year non-cancelable agreement to lease equipment (no residual value) from Lessor Inc. Lessee Inc. accounts for the lease as a finance lease, which requires three lease payments of \$34,972 each, payable January 1, 2020, December 31, 2020, and December 31, 2021. The lessor's implicit rate is 5%, which is known to the lessee, resulting in the recording of right-to-use asset and lease liability of \$100,000 (or $=PV(0.05, 3, 34972.07, 0, 1)$) at the inception of the lease. As a result, the lessee recorded the following entries in 2020 (amounts rounded).

January 1, 2020—To record right-of-use asset and lease liability

Right-of-Use Asset	100,000	
Lease Liability		100,000

January 1, 2020—To record lease payment

Lease Liability	34,972	
Cash		34,972

December 31, 2020—To record lease payment

Interest Expense	3,251	
Lease Liability	31,721	
Cash		34,972

December 31, 2020—To record amortization on right-of-use asset

Amortization Expense	33,333	
Right-of-Use Asset (\$100,000/3)		33,333

Required

Determine the effects on the statement of cash flows of Lessee Inc. for 2020 assuming that the company follows the indirect method in reporting cash flows from operating activities.

The following items are relevant to the preparation of a statement of cash flows for Pier Imports Inc.

- Comparative balance sheets show a decrease of \$6,000 in accrued utilities payable for the current year.
- Nontrade short-term notes payable to banks increased \$80,000 during the current year due to new borrowings.

Exercise 22-47
Presenting Installment
Note on Statement of
Cash Flows **LO2, 4**

Exercise 22-48
Presenting Bond
Payable on Statement
of Cash Flows **LO4**

Exercise 22-49
Classifying Lessee
Transactions in
Statement of Cash
Flows **LO2, 4, 5**

Exercise 22-50
Determining Investing
and Financing
Activities **LO3, 4**