

information to coordinate their inventories of raw materials with their production schedules. Most large merchandising companies—and many small ones—also use perpetual systems.

In the days when all accounting records were maintained by hand, businesses that sold many types of low-cost products had no choice but to use periodic inventory systems. A Walmart store, for example, may sell several thousand items per hour. Imagine the difficulty of keeping a perpetual inventory system up-to-date if the records were maintained by hand. But with today's computerized terminals and bar-coded merchandise, many high-volume retailers now use perpetual inventory systems. In fact, Walmart has been a leader among retailers in developing perpetual inventory systems.



### INTERNATIONAL CASE IN POINT

Walmart, referred to as the company Sam Walton built, is the world's largest retailer. By diversifying from its original discount stores to include Sam's Club and its super stores, Walmart has fueled its retail engine. International expansion includes 394 stores in Canada, 2,290 in Mexico, 592 in the United Kingdom, 690 stores in Central America, 557 stores in Brazil, 411 Chinese stores, 105 stores in Argentina, 431 Japanese stores, and 404 stores in Chile. According to a recent annual report, 28 percent of total sales came from international locations. Walmart employs approximately 1,400,000 associates in the United States and approximately 800,000 internationally.

Source: Wal-Mart Stores, Inc., 10-K, January 31, 2015.

Perpetual inventory systems are not limited to businesses with computerized inventory systems. Many small businesses with manual systems also use perpetual inventory systems. However, these businesses may update their inventory records on a weekly or a monthly basis, rather than at the time of each sales transaction.

Whether accounting records are maintained manually or by computer, most businesses use perpetual inventory systems in accounting for products with a high per-unit cost. Examples include automobiles, heavy machinery, electronic equipment, home appliances, and jewelry. Management has a greater interest in keeping track of inventory when the merchandise is expensive. Also, sales volume usually is low enough that a perpetual system can be used, even if accounting records are maintained by hand.

**Who Uses Periodic Systems?** Periodic systems are used when the need for current information about inventories and sales does not justify the cost of maintaining a perpetual system. In a small retail store, for example, the owner may be so familiar with the inventory that formal perpetual inventory records are unnecessary. Most businesses—large and small—use periodic systems for inventories that are immaterial in dollar amount, or when management has little interest in the quantities on hand. As stated previously, businesses that sell many low-cost items and have manual accounting systems sometimes have no choice but to use the periodic method.

### SELECTING AN INVENTORY SYSTEM

Accountants—and business managers—often must select an inventory system appropriate for a particular situation. Some of the factors usually considered in these decisions are listed in Exhibit 6-7.

LO6-5

**LEARNING OBJECTIVE**  
Discuss the factors to be considered in selecting an inventory system.

**The Trend in Today's Business World** Advances in technology are quickly extending the use of perpetual inventory systems to more businesses and more types of inventory. This trend is certain to continue. Throughout this textbook, you may assume that a perpetual inventory system is in use unless specifically stated otherwise.

## Transactions Relating to Purchases

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## Factors Suggesting a Perpetual Inventory System

Large company with professional management. Management and employees wanting information about items in inventory and the quantities of specific products that are selling.

Items in inventory with a high per-unit cost.

Low volume of sales transactions or a computerized accounting system.

Merchandise stored at multiple locations or in warehouses separate from the sales sites.

## Factors Suggesting a Periodic Inventory System

Small company, run by owner.

Accounting records of inventories and specific product sales not needed in daily operations; such information developed primarily for use in annual income tax returns.

Inventory with many different kinds of low-cost items.

High volume of sales transactions and a manual accounting system.

All merchandise stored at the sales site (for example, in the store).

## EXHIBIT 6-7

## Factors Influencing Choice of Inventory System

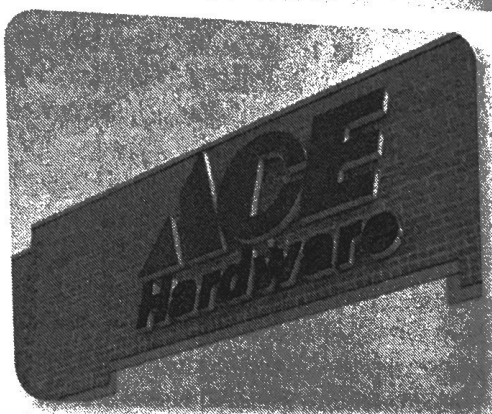


## YOUR TURN

## You as a Buyer for a Retail Business

Assume you are in charge of purchasing merchandise for Ace Hardware Stores. You are currently making a decision about the purchase of barbecue grills for sale during the upcoming summer season. You must decide how many of each brand and type of grill to order. Describe the types of accounting information that would be useful in making this decision and where this information might be found.

(See our comments in Connect.)



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## Transactions Relating to Purchases

In addition to the basic transactions illustrated and explained in this chapter, merchandising companies must account for a variety of additional transactions relating to purchases of merchandise. Examples include discounts offered for prompt payment, merchandise returns, and transportation costs. In our discussion of these transactions, we continue to assume the use of a perpetual inventory system.

## CREDIT TERMS AND CASH DISCOUNTS

Manufacturers and wholesalers normally sell their products to merchandisers on account. The credit terms are stated in the seller's bill, or invoice. One common example of credit terms is "net 30 days," or "n/30," meaning full payment is due in 30 days. Another common form of credit terms is "10 eom," meaning payment is due 10 days after the end of the month in which the purchase occurred.

Manufacturers and wholesalers usually allow their customers 30 or 60 days in which to pay for credit purchases. Frequently, however, sellers offer their customers a small discount to encourage earlier payment.

Perhaps the most common credit terms offered by manufacturers and wholesalers are 2/10, n/30. This expression is read "2, 10, net 30," and means that full payment is due in 30 days, but that the buyer may take a 2 percent discount if payment is made within 10 days. The period during which the discount is available is termed the *discount period*. Because the discount provides an incentive for the customer to make an early cash payment, it is called a *cash*

LO6-6

## LEARNING OBJECTIVE

Account for additional merchandising transactions related to purchases and sales.

## Chapter 6 Merchandising Activities

*discount*. Buyers, however, often refer to these discounts as *purchase discounts*, while sellers frequently call them *sales discounts*.

Most well-managed companies have a policy of taking advantage of all cash discounts available on purchases of merchandise.<sup>4</sup> These companies initially record purchases of merchandise at the *net cost*—that is, the invoice price minus any available discount. After all, this is the amount that the company expects to pay.

To illustrate, assume that Computer City purchases 100 spreadsheet programs from PC Products on November 3. The cost of these programs is \$100 each, for a total of \$10,000. However, PC Products offers credit terms of 2/10, n/30. If Computer City pays for this purchase within the discount period, it will have to pay only \$9,800, or 98 percent of the full invoice price. Therefore, Computer City will record this purchase as follows.

Inventory.....	9,800
Accounts Payable (PC Products).....	9,800
To record purchase of 100 spreadsheet programs at net cost (\$100 × 98% × 100 units).	

A-I-LOE  
Purchase recorded at net cost

If the invoice is paid within the discount period, Computer City simply records payment of a \$9,800 account payable.

Through oversight or carelessness, Computer City might fail to make payment within the discount period. In this event, Computer City must pay PC Products the entire invoice price of \$10,000, rather than the recorded liability of \$9,800. The journal entry to record payment after the discount period—on, say, December 3—is as follows.

Accounts Payable (PC Products).....	9,800
Purchase Discounts Lost.....	200
Cash.....	10,000
To record payment of invoice after expiration of the discount period.	

A-I-LOE  
Recording the loss of a cash discount

Notice that the \$200 paid above the \$9,800 recorded amount is debited to an account entitled Purchase Discounts Lost. Purchase Discounts Lost is an expense account. The only benefit to Computer City from this \$200 expenditure was a 20-day delay in paying an account payable. Thus the lost purchase discount is basically a finance charge, similar to interest expense. In an income statement, finance charges usually are classified as nonoperating expenses.

The fact that purchase discounts not taken are recorded in a separate expense account is the primary reason why a company should record purchases of merchandise at net cost. The use of a Purchase Discounts Lost account immediately brings to management's attention any failure to take advantage of the cash discounts offered by suppliers.

**Recording Purchases at Gross Invoice Price** As an alternative to recording purchases at net cost, some companies record merchandise purchases at the gross (total) invoice price. If payment is made within the discount period, these companies must record the amount of the purchase discount taken.

To illustrate, assume that Computer City followed a policy of recording purchases at gross invoice price. The entry on November 3 to record the purchase from PC Products would have been as follows.

Inventory.....	10,000
Accounts Payable (PC Products).....	10,000
To record purchase of 100 spreadsheet programs at gross invoice price (\$100 × 100 units).	

A-I-LOE  
Purchases recorded at gross price

<sup>4</sup> The terms 2/10, n/30 offer the buyer a 2 percent discount for paying 20 days prior to when the full amount is due. Saving 2 percent over only 20 days is equivalent to earning an annual rate of return of more than 36 percent ( $2\% \times 365/20 = 36.5\%$ ). Thus, taking cash discounts represents an excellent investment opportunity. Most companies take advantage of all cash discounts, even if they must borrow the necessary cash from a bank to make payment within the discount period.

Transactions Relating to Purchases

If payment is made within the discount period, Computer City will discharge this \$10,000 account payable by paying only \$9,800. The entry will be as follows.

Accounts Payable (PC Products).....		
Cash.....	10,000	
Purchase Discounts Taken.....		9,800
To record payment of \$10,000 invoice within the discount period; 2% purchase discount taken.		200

**A-L-LOE**  
Buyer records discounts taken

Purchase Discounts Taken is treated as a reduction in the cost of goods sold. Both the net cost and gross price methods are widely used and produce substantially the same results in financial statements.<sup>5</sup> A shortcoming of the gross price method as compared to the net cost method for valuing inventory is that it does not direct management's attention to discounts lost. Instead, these discounts are buried in the costs assigned to inventory. Management can use financial reporting policies to motivate the purchasing staff to take advantage of purchase discounts when possible. By recording inventory with the net cost method, management can highlight the success of their purchasing efforts to obtain the lowest possible costs for purchased inventory. Because of the advantage of the net cost method, it is the approach recommended by the authors of this textbook.

### RETURNS OF UNSATISFACTORY MERCHANDISE

On occasion, a buyer may find the purchased merchandise unsatisfactory and want to return it to the seller for a refund. Most sellers permit such returns.

To illustrate, assume that on November 9 Computer City returns to PC Products five of the spreadsheet programs purchased on November 3, because these programs were not properly labeled. As Computer City has not yet paid for this merchandise, the return will reduce the amount that Computer City owes PC Products. The gross invoice price of the returned merchandise was \$500 (\$100 per program). Assume that Computer City records purchases at net cost. Therefore, these spreadsheet programs are carried in Computer City's inventory subsidiary ledger at a per-unit cost of \$98, or \$490 for the five programs being returned. The entry to record this purchase return is as follows.

Accounts Payable (PC Products).....	490	
Inventory.....		490
Returned five mislabeled spreadsheet programs to supplier. Net cost of the returned items, \$490 (\$100 × 98% × 5 units).		

**A-L-LOE**  
Return is based on recorded acquisition cost

The reduction in inventory must also be recorded in the subsidiary ledger accounts.

### TRANSPORTATION COSTS ON PURCHASES

The purchaser sometimes may pay the costs of having the purchased merchandise delivered to its premises. Transportation costs relating to the acquisition of inventory, or any other asset, are not expenses of the current period; rather, these charges are part of the cost of the asset being acquired. If the purchaser is able to associate transportation costs with specific products, these costs should be debited directly to the Inventory account as part of the cost of the merchandise.

Often, many different products arrive in a single shipment. In such cases, it may be impractical for the purchaser to determine the amount of the total transportation cost applicable to each product. For this reason, many companies follow the convenient policy of debiting all transportation costs on inbound shipments of merchandise to an account entitled Transportation-in. The dollar amount of transportation-in usually is too small to show separately in the financial statements. Therefore, it is often simply added to the amount reported in the income statement as cost of goods sold.

<sup>5</sup> The net cost method values the ending inventory at net cost, whereas the gross cost method shows this inventory at gross invoice price. This difference, however, is usually immaterial.

## Chapter 6 Merchandising Activities

This treatment of transportation costs is not entirely consistent with the matching principle. Some of the transportation costs apply to merchandise still in inventory rather than to goods sold during the current period. We have mentioned, however, that transportation costs are relatively small in dollar amount. The accounting principle of materiality, therefore, usually justifies accounting for these costs in the most convenient manner.

### Transactions Relating to Sales

Credit terms and merchandise returns also affect the amount of sales revenue earned by the seller. To the extent that credit customers take advantage of cash discounts or return merchandise for a refund, the seller's revenue is reduced. Thus revenue shown in the income statement of a merchandising concern is often called net sales.

The term **net sales** means total sales revenue minus sales returns and allowances and minus sales discounts. The partial income statement in Exhibit 6-8 illustrates this relationship.

**EXHIBIT 6-8**  
Partial Income Statement

COMPUTER CITY PARTIAL INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2018			
<b>Revenue:</b>			
Sales .....			\$912,000
Less: Sales returns and allowances .....		\$8,000	
Sales discounts .....		4,000	12,000
Net sales .....			<u>\$900,000</u>

The details of this computation seldom are shown in an actual income statement. The normal practice is to begin the income statement with the amount of net sales.

### SALES RETURNS AND ALLOWANCES

Most merchandising companies allow customers to obtain a refund by returning any merchandise considered to be unsatisfactory. If the merchandise has only minor defects, customers sometimes agree to keep the merchandise if an allowance (reduction) is made in the sales price.

Under the perpetual inventory system, two entries are needed to record the sale of merchandise: one to recognize the revenue earned and the other to transfer the cost of the merchandise from the Inventory account to Cost of Goods Sold. If some of the merchandise is returned, both of these entries are partially reversed.

First, let us consider the effects on revenue of granting either a refund or an allowance. Both refunds and allowances have the effect of nullifying previously recorded sales and reducing the amount of revenue earned by the business. The following journal entry reduces sales revenue as the result of a sales return (or allowance).

Sales Returns and Allowances .....	1,000	
Accounts Receivable (or Cash) .....		1,000
Customer returned merchandise purchased on account for \$1,000. Allowed customer full credit for returned merchandise.		

Sales Returns and Allowances is a **contra-revenue account**—that is, it is deducted from gross sales revenue as a step in determining net sales.

Why use a separate Sales Returns and Allowances account rather than merely debiting the Sales account? The answer is that using a separate contra-revenue account enables management to see both the total amount of sales and the amount of sales returns. The relationship between these amounts gives management an indication of customer satisfaction with the merchandise.

If merchandise is returned by the customer, a second entry is made to remove the cost of this merchandise from the Cost of Goods Sold account and restore it to the inventory records. This entry is as follows.

A sales return reverses recorded revenue . . .

Inventory.....	
Cost of Goods Sold.....	600
To restore in the Inventory account the cost of merchandise returned by a customer.....	600

**A-L-LOE** and the recorded cost of goods sold

Notice that this entry is based on the cost of the returned merchandise to the seller, not on its sales price. (This entry is not necessary when a sales allowance is granted to a customer who keeps the merchandise.)

### SALES DISCOUNTS

We have explained that sellers frequently offer cash discounts, such as 2/10, n/30, to encourage customers to make early payments for purchases on account.

Sellers and buyers account for cash discounts quite differently. To the seller, the cost associated with cash discounts is not the discounts *lost* when payments are delayed, but rather the discounts *taken* by customers who do pay within the discount period. Therefore, sellers design their accounting systems to measure the sales discounts taken by their customers. To achieve this goal, the seller records the sale and the related account receivable at the gross (full) invoice price.

To illustrate, assume that Computer City sells merchandise to the Highlander Pub for \$1,000, offering terms of 2/10, n/30. The sales revenue is recorded at the full invoice price, as follows.

Accounts Receivable (Highlander Pub).....	1,000
Sales.....	1,000
Sold merchandise on account. Invoice price, \$1,000; terms, 2/10, n/30.	

**A-L-LOE** Sales are recorded at the gross sales price

If the Highlander Pub makes payment after the discount period has expired, Computer City records the receipt of \$1,000 cash in full payment of this account receivable. If it pays within the discount period, however, the pub will pay only \$980 to settle its account. In this case, Computer City will record the receipt of the pub's payment, as follows.

Cash.....	980
Sales Discounts.....	20
Accounts Receivable (Highlander Pub).....	1,000
Collected a \$1,000 account receivable from a customer who took a 2% discount for early payment.	

**A-L-LOE** Seller records discounts taken by customers

Sales Discounts is another contra-revenue account. In the computing of net sales, sales discounts are deducted from gross sales along with any sales returns and allowances. (If the customer has returned part of the merchandise, a discount may be taken only on the gross amount owed after the return.)

Contra-revenue accounts have much in common with expense accounts; both are deducted from gross revenue in determining net income, and both have debit balances. Thus contra-revenue accounts (Sales Returns and Allowances and Sales Discounts) are closed to the Income Summary account in the same manner as expense accounts.

### DELIVERY EXPENSES

If the seller incurs any costs in delivering merchandise to the customer, these costs are debited to an expense account entitled Delivery Expense. In an income statement, delivery expense is classified as a regular operating expense, not as part of the cost of goods sold.

### ACCOUNTING FOR SALES TAXES

Sales taxes are levied by many states and cities on retail sales.<sup>6</sup> Sales taxes actually are imposed on the consumer, not on the seller. However, the seller must collect the tax, file tax returns at times specified by law, and remit to governmental agencies the taxes collected.

<sup>6</sup> Sales taxes are applicable only when merchandise is sold to the final consumer; thus no sales taxes are normally levied when manufacturers or wholesalers sell merchandise to retailers.

For cash sales, sales tax is collected from the customer at the time of the sales transaction. For credit sales, the sales tax is included in the amount charged to the customer's account. In a computerized accounting system, the liability to the governmental unit for sales taxes is recorded automatically at the time the sale is made, as shown in the following journal entry.

A-1-10E  
Sales tax recorded at time of sale

Cash (or Accounts Receivable) .....	1,070	
Sales Tax Payable .....		70
Sales .....		1,000
To record sales of \$1,000, subject to 7% sales tax.		

## Modifying an Accounting System

LO6-7

**LEARNING OBJECTIVE**  
Define *special journals* and explain their usefulness.

Throughout this textbook we illustrate the effects of many transactions using the format of a two-column general journal. This format is ideal for textbook illustrations, as it allows us to concisely show the effects of any type of business transaction.

But while general journal entries are useful for our purposes, they are not the most efficient way for a business to record routine transactions. A supermarket, for example, may sell 10,000 to 15,000 items per hour. Clearly, it would not be practical to make a general journal entry to record each of these sales transactions. Therefore, most businesses use special journals, rather than a general journal, to record routine transactions that occur frequently.

### SPECIAL JOURNALS PROVIDE SPEED AND EFFICIENCY

A **special journal** is an accounting record or device designed to record a specific type of routine transaction quickly and efficiently.

Some special journals are maintained by hand. An example is the check register in your personal checkbook. If properly maintained, this special journal provides an efficient record of all cash disbursements made by check.

But many special journals are highly automated. Consider the **point-of-sale (POS) terminals** that you see in supermarkets and large retail stores. These devices record sales transactions and the related cost of goods sold as quickly as the bar-coded merchandise can be passed over the scanner.

Relative to the general journal, special journals offer the following advantages.

- Transactions are recorded faster and more efficiently.
- Many special journals may be in operation at one time, further increasing the company's ability to handle a large volume of transactions.
- Automation may reduce the risk of errors.
- Employees maintaining special journals generally do not need expertise in accounting.
- The recording of transactions may be an automatic side effect of other basic business activities, such as collecting cash from customers.

Most businesses use separate special journals to record repetitive transactions such as sales of merchandise, cash receipts, cash payments, purchases of merchandise on account, and payrolls. There are no rules for the design or content of special journals. Rather, they are tailored to suit the needs, activities, and resources of the particular business organization.

Let us stress that the accounting principles used in special journals are the same as those used for transactions recorded in a general journal. The differences lie in the recording techniques, not in the information that is recorded.

Remember also that special journals are highly specialized in terms of the transactions they can record. Thus every business still needs a general journal to record transactions that do not fit into any of its special journals, including, for example, adjusting entries, closing entries, and unusual events such as a loss sustained from a fire.

Management uses information about departments and products for many purposes. These include setting prices, deciding which products to carry and to advertise, and evaluating the performance of departmental managers. By concentrating sales efforts on the products and departments with the highest margins, management usually can increase the company's overall gross profit rate.



## PATHWAYS CONNECTION

In evaluating the performance of a merchandising business, managers and investors look at more than just net income. Two key measures of past performance and future prospects are trends in the company's net sales and gross profit.

### NET SALES

LO6-8

**LEARNING OBJECTIVE**  
Measure the performance of a merchandising business.

Most investors and business managers consider the trend in net sales to be a key indicator of both past performance and future prospects. Increasing sales suggest the probability of larger profits in future periods. Declining sales, on the other hand, may provide advance warning of financial difficulties.

As a measure of performance, the trend in net sales has some limitations, especially when the company is adding new stores. For these companies, an increase in overall net sales in comparison to the prior year may have resulted solely from sales at the new stores. Sales at existing stores may even be declining. Business managers and investors often focus on measures that adjust for changes in the number of stores from period to period, and on measures of space utilization. These measures include:

1. **Comparable store sales.** Net sales at established stores, excluding new stores opened during the period. Indicates whether customer demand is rising or falling at established locations. (Also called *same-store sales*.)
2. **Sales per square foot of selling space.** A measure of how effectively the company is using its physical facilities (such as floor space or, in supermarkets, shelf space).

### GROSS PROFIT MARGINS

Increasing net sales is not enough to ensure increasing profitability. Some products are more profitable than others. In evaluating the profitability of sales transactions, managers and investors keep a close eye on the company's **gross profit margin** (also called *gross profit rate*).

Gross profit margin is the dollar amount of gross profit, expressed as a *percentage* of net sales revenue. Gross profit margins can be computed for the business as a whole, for specific sales departments, and for individual products.

To illustrate the computation of gross profit margin, consider selected income statement data for Lowe's, Tiffany & Co., and Walmart. The sales, cost of sales, and gross profit for these companies are as follows (in thousands of dollars).

#### The Overall Gross Profit Margin

The average gross profit margin (gross profit rate) is a measure of relative profitability. The gross profit rate is calculated by dividing gross profit (in dollars) by net sales. The gross profit rates for Lowe's, Tiffany & Co., and Walmart are (see the numbers for each company in billions of dollars at the bottom of this exhibit).

- Lowe's: 34.79 percent ( $\$19,558/\$56,223$ )
- Tiffany & Co.: 59.69 percent ( $\$2,537/\$4,250$ )
- Walmart: 24.29 percent ( $\$117,143/\$482,229$ )

#### Using Information about Gross Profit Margins

There are big differences between these three companies in their gross profit rates, reflecting the fundamentally different strategies being pursued by each company. Walmart largely competes by offering low prices on many commodity-like products; therefore, it has the lowest gross profit rate. Walmart's pricing enables it to sell products to many customers. It makes money on volume—a large amount of sales at a modest gross margin. Tiffany & Co. sells luxury products at a high price to a wealthy customer and, as a result, has the highest profit margin. But Tiffany's pricing limits the size of its market. It makes money on margin—a modest amount of sales at a high margin. Lowe's falls in between Walmart and Tiffany in terms of both the amount of sales and the gross profit rate.

In addition to computing the gross profit rate at a moment in time, investors usually compute companies' overall gross profit rates from one period to the next. High—or increasing—margins generally indicate popular products and successful marketing strategies. A standard or declining profit margin, on the other hand, often indicates weak customer demand or intense price competition.<sup>7</sup>

	Lowe's	Tiffany & Co.	Walmart
Net sales.....	\$ 56,223	\$ 4,250	\$ 482,229
Cost of sales.....	36,665	1,713	365,086
Gross profit.....	<u>\$ 19,558</u>	<u>\$ 2,537</u>	<u>\$ 117,143</u>

<sup>7</sup> We discuss the interpretation of gross profit in greater depth in Chapter 14.



## ETHICS, FRAUD, & CORPORATE GOVERNANCE

As discussed previously in this chapter, sales discounts and allowances are contra-revenue accounts. Sales discounts and allowances reduce gross sales. As such, net income will be incorrect if discounts and allowances are not properly recorded. The Securities and Exchange Commission (SEC) brought an enforcement action against **Pepsi-Cola Puerto Rico (Pepsi PR)** alleging that Pepsi PR understated its sales discounts and allowances. Pepsi PR produces, distributes, and markets **PepsiCo** beverages throughout Puerto Rico. Pepsi PR is a separate company and its stock was listed on the New York Stock Exchange at the time of the SEC enforcement action.

The Coca-Cola bottler in Puerto Rico attempted to gain market share by cutting prices. Pepsi PR responded by offering more generous sales discounts and allowances. However, offering these additional discounts and allowances would have reduced Pepsi PR's net income. The Pepsi PR general manager instructed the company's finance staff not to record some of the sales discounts and allowances given to customers. Pepsi PR's failure to record discounts and allowances resulted in net income for the first quarter being overstated by \$3.3 million and net income for the second quarter being overstated by \$5.7 million. Pepsi PR consented to an SEC cease-and-desist order without either admitting or denying guilt.

Although Pepsi PR's general manager initiated the scheme that led to the misstatement of Pepsi PR's financial statements, the failure to record sales discounts and allowances was carried out by the company's director of finance and other finance department staffers. The individuals who carried out this scheme knew that Pepsi PR's financial results would be misstated if sales discounts and allowances were not recorded correctly. However, these individuals were unwilling to defy their superior, even when their superior was asking them to engage in unethical and illegal behavior. In cases of fraudulent financial reporting, subordinates being pressured by superiors to implement the fraud scheme is relatively common.

The pressure brought to bear on subordinates to implement fraudulent schemes developed by top management can often be intense. Top management can threaten employees with termination if they fail to participate in the fraud. Unfortunately, employees who acquiesce to such pressure face tremendous legal risks. Unlike their superiors, the fingerprints of lower-level employees who actually implemented the fraudulent scheme are all over the incriminating documents. For example, a midlevel tax manager who was convicted of participating in a scheme to misstate **Dynegy's** financial statements was sentenced to 24 years in federal prison (although this sentence was substantially reduced on appeal). This individual's bosses, who were equally complicit in the scheme, pled guilty and testified against their former employee. They received less than five years in prison.

The Sarbanes-Oxley Act provides some protection for lower-level employees who are pressured to participate in an accounting fraud. Public company audit committees must establish procedures (typically company "hotlines") that can be used by employees reporting concerns related to questionable accounting or auditing matters. In addition, Sarbanes-Oxley includes certain "whistleblower" protections. No public company may discharge, demote, suspend, threaten, harass, or in any other manner discriminate against an employee if the employee provides information or assistance in an investigation involving securities fraud. In addition, under the Dodd-Frank Act of 2010, Congress authorized the SEC to pay monetary awards to whistleblowers who provide original information that leads to an SEC action where penalties of \$1 million or more are assessed. The whistleblower is entitled to a reward of between 10 and 30 percent of the SEC penalty. Dodd-Frank also strengthened the whistleblower protections in SOX.

### Concluding Remarks

The Overnight Auto Service illustration presented in Chapter 2 through Chapter 5 addressed measurement and reporting issues pertaining to a service-type business. Throughout this chapter, we have had an opportunity to see how merchandising companies measure and report the results for their operations. Many of the illustrations and assignments throughout the remainder of this textbook are based upon merchandising enterprises.

In Chapter 7, we examine accounts receivable and other liquid assets common to merchandisers. In Chapter 8, we focus upon issues related to merchandise inventories. Measurement and reporting issues that pertain primarily to manufacturing companies are generally covered in a subsequent course.

# END-OF-CHAPTER REVIEW

## SUMMARY OF LEARNING OBJECTIVES

**LO6-1 Describe the operating cycle of a merchandising company.** The operating cycle is the repeating sequence of transactions by which a company generates revenue and cash receipts from customers. In a merchandising company, the operating cycle consists of the following transactions: (1) purchases of merchandise, (2) sale of the merchandise—often on account, and (3) collection of accounts receivable from customers.

**LO6-2 Understand the components of a merchandising company's income statement.** In a merchandising company's income statement, sales (or net sales) represent the total revenue generated by selling merchandise to its customers. As items are sold from inventory, their costs are transferred from the balance sheet to the income statement, where they appear as the cost of goods sold. The cost of goods sold is subtracted from sales to determine the company's gross profit. Other expenses (such as wages, advertising, utilities, and depreciation) are subtracted from gross profit in the determination of net income. Only if a company's gross profit exceeds the sum of its other expenses will it be profitable.

**LO6-3 Account for purchases and sales of merchandise in a perpetual inventory system.** In a perpetual inventory system, purchases of merchandise are recorded by debiting the Inventory account. Two entries are required to record each sale: one to recognize sales revenue and the second to record the cost of goods sold. This second entry consists of a debit to Cost of Goods Sold and a credit to Inventory.

**LO6-4 Explain how a periodic inventory system operates.** In a periodic system, up-to-date records are not maintained for inventory or the cost of goods sold. Thus less recordkeeping is required than in a perpetual system. The beginning and ending inventories are determined by taking a complete physical count at each year-end. Purchases are recorded in a Purchases account, and no entries are made to record the cost of individual sales transactions. Instead, the cost of goods sold is determined at year-end by a computation such as the following (dollar amounts are provided only for purposes of example).

Beginning inventory	\$ 30,000
Add: Purchases	<u>180,000</u>
Cost of goods available for sale	\$210,000
Less: Ending inventory	<u>40,000</u>
Cost of goods sold	<u>\$170,000</u>

The amounts of inventory and the cost of goods sold are recorded in the accounting records during the year-end closing procedures.

**LO6-5 Discuss the factors to be considered in selecting an inventory system.** In general terms, a perpetual system should be used when (1) management and employees need timely

information about inventory levels and product sales, and (2) the company has the resources to develop this information at a reasonable cost. A periodic system should be used when the usefulness of current information about inventories does not justify the cost of maintaining a perpetual system.

Perpetual systems are most widely used in companies with computerized accounting systems and in businesses that sell high-cost merchandise. Periodic systems are most often used in small businesses that have manual accounting systems and that sell many types of low-cost merchandise.

**LO6-6 Account for additional merchandising transactions related to purchases and sales.** Buyers should record purchases at the net cost and record any cash discounts lost in an expense account. Sellers record sales at the gross sales price and record in a contra-revenue account all cash discounts taken by customers.

Assuming a perpetual inventory system, the buyer records a purchase return by crediting the Inventory account for the net cost of the returned merchandise. In recording a sales return, the seller makes two entries: one to record Sales Returns and Allowances (a contra-revenue account) for the amount of the refund and the other to transfer the cost of the returned merchandise from the Cost of Goods Sold account back into the Inventory account.

Buyers record transportation charges on purchased merchandise either as part of the cost of the merchandise or directly as part of the cost of goods sold. Sellers view the cost of delivering merchandise to customers as an operating expense.

Sales taxes are collected by retailers from their customers and paid to state and city governments. Thus collecting sales taxes increases the retailer's assets and liabilities. Paying the sales tax to the government is payment of the liability, not an expense.

**LO6-7 Define special journals and explain their usefulness.** Special journals are accounting records or devices designed to record a specific type of transaction in a highly efficient manner. Because a special journal is used only to record a specific type of transaction, the journal may be located at the transaction site and maintained by employees other than accounting personnel. Thus special journals reduce the time, effort, and cost of recording routine business transactions.

**LO6-8 Measure the performance of a merchandising business.** There are numerous measures used to evaluate the performance of merchandising businesses. In this chapter, we introduced three of these measures: (1) comparable store sales, which helps determine whether customer demand is rising or falling at established locations, (2) sales per square foot of selling space, which is a measure of how effectively a merchandising business is using its facilities to generate revenue, and (3) gross profit percentages, which help users of financial statements gain insight about a company's pricing policies and the demand for its products.

## Key Terms Introduced or Emphasized in Chapter 6

**comparable store sales** (p. 269) A comparison of sales figures at established stores with existing "track records." (Also called *same-store sales*).

**contra-revenue account** (p. 266) A debit balance account that is offset against revenue in the income statement. Examples include Sales Discounts and Sales Returns and Allowances.

**control account** (p. 254) A general ledger account that summarizes the content of a specific subsidiary ledger.

**cost of goods sold** (p. 253) The cost to a merchandising company of the goods it has sold to its customers during the period.

**gross profit** (p. 254) Net sales revenue minus the cost of goods sold.

**gross profit margin** (p. 269) Gross profit expressed as a percentage of net sales. Also called *gross profit rate*.

**inventory** (p. 252) Merchandise intended for resale to customers.

**inventory shrinkage** (p. 257) The loss of merchandise through such causes as shoplifting, breakage, and spoilage.

**net sales** (p. 266) Gross sales revenue less sales returns and allowances and sales discounts. The most widely used measure of dollar sales volume; usually the first figure shown in an income statement.

**operating cycle** (p. 252) The repeating sequence of transactions by which a business generates its revenue and cash receipts from customers.

**periodic inventory system** (p. 258) An alternative to the perpetual inventory system. It eliminates the need for recording the cost of goods sold as sales occur. However, the amounts of inventory and the cost of goods sold are not known until a complete physical inventory is taken at year-end.

**perpetual inventory system** (p. 255) A system of accounting for merchandising transactions in which the Inventory and Cost of Goods Sold accounts are kept perpetually up-to-date.

**point-of-sale (POS) terminals** (p. 268) Electronic cash registers used for computer-based processing of sales transactions. The POS terminal identifies each item of merchandise from its bar code and then automatically records the sale and updates the computer-based inventory records. These terminals permit the use of perpetual inventory systems in many businesses that sell a high volume of low-cost merchandise.

**sales per square foot of selling space** (p. 269) A measure of efficient use of available space.

**special journal** (p. 268) An accounting record or device designed for recording large numbers of a particular type of transaction quickly and efficiently. A business may use many different kinds of special journals.

**subsidiary ledger** (p. 254) A ledger containing separate accounts for each of the items making up the balance of a control account in the general ledger. The total of the account balances in a subsidiary ledger are equal to the balance in the general ledger control account.

**taking a physical inventory** (p. 257) The procedure of counting all merchandise on hand and determining its cost.

## Demonstration Problem

STAR-TRACK sells satellite tracking systems for receiving television broadcasts from communications satellites in space. At December 31, 2018, the company's inventory amounted to \$44,000. During the first week in January 2019, STAR-TRACK made only one purchase and one sale. These transactions were as follows.

- Jan. 3** Sold a tracking system to Mystery Mountain Resort for \$20,000 cash. The system consisted of seven different devices, which had a total cost to STAR-TRACK of \$11,200.
- Jan. 7** Purchased two Model 400 and four Model 800 satellite dishes from Yamaha Corp. The total cost of this purchase amounted to \$10,000; terms 2/10, n/30.

STAR-TRACK records purchases of merchandise at net cost. The company has full-time accounting personnel and uses a manual accounting system.

### Instructions

- Briefly describe the operating cycle of a merchandising company.
- Prepare journal entries to record these transactions, assuming that STAR-TRACK uses a perpetual inventory system.
- Explain what information in part **b** should be posted to subsidiary ledger accounts.
- Compute the balance in the Inventory control account at January 7.
- Prepare journal entries to record the two transactions, assuming that STAR-TRACK uses a periodic inventory system.
- Compute the cost of goods sold for the first week of January, assuming use of the periodic system. As the amount of ending inventory, use your answer to part **d**.
- Which type of inventory system do you think STAR-TRACK should use? Explain your reasoning.
- Determine the gross profit margin on the January 3 sales transaction.

**Solution to the Demonstration Problem**

- a. The operating cycle of a merchandising company consists of purchasing merchandise, selling that merchandise to customers (often on account), and collecting the sales proceeds from those customers. In the process, the business converts cash into inventory, the inventory into accounts receivable, and the accounts receivable into cash.
- b. Journal entries assuming use of a perpetual inventory system.

GENERAL JOURNAL			
Date	Account Titles and Explanation	Debit	Credit
2019			
Jan. 3	Cash.....	20,000	
	Sales .....		20,000
	Sold tracking system to Mystery Mountain Resort.		
3	Cost of Goods Sold.....	11,200	
	Inventory.....		11,200
	To record cost of merchandise sold.		
7	Inventory.....	9,800	
	Accounts Payable (Yamaha Corp.).....		9,800
	Purchased merchandise. Terms, 2/10, n/30; net cost, \$9,800 (\$10,000, less 2%).		

- c. The debits and credits to the Inventory account should be posted to the appropriate accounts in the inventory subsidiary ledger. The information posted would be the costs and quantities of the types of merchandise purchased or sold. The account payable to Yamaha also should be posted to the Yamaha account in STAR-TRACK's accounts payable ledger. No postings are required to the accounts receivable ledger, as this was a cash sale. If STAR-TRACK maintains more than one bank account, however, the debit to cash should be posted to the proper account in the cash subsidiary ledger.
- d. \$42,600 (\$44,000 beginning balance, less \$11,200, plus \$9,800).
- e. Journal entries assuming use of a periodic inventory system.

GENERAL JOURNAL			
Date	Account Titles and Explanation	Debit	Credit
2019			
Jan. 3	Cash.....	20,000	
	Sales .....		20,000
	Sold tracking system to Mystery Mountain Resort.		
7	Purchases .....	9,800	
	Accounts Payable (Yamaha Corp.).....		9,800
	Purchased merchandise. Terms, 2/10, n/30; net cost, \$9,800 (\$10,000, less 2%).		

- f. Computation of the cost of goods sold.

Inventory, January 1 .....	\$44,000
Add: Purchases .....	9,800
Cost of goods available for sale .....	\$53,800
Less: Inventory, January 7 (per part d).....	42,600
Cost of goods sold .....	<u>\$11,200</u>