

# Introduction to Accounting: The Language of Business

## Lesson 5: Sales Revenues

Supplemental Textbook



## Merchandising transactions

### Introduction to inventories and the classified income statement

#### A career as a CEO

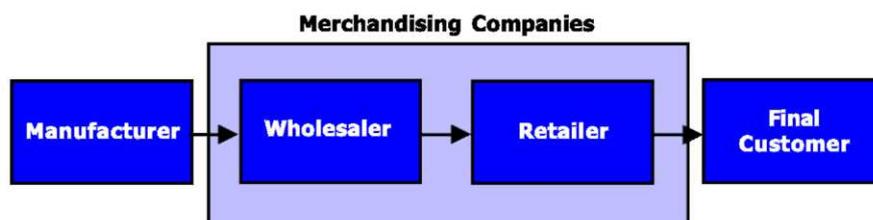
Are you a leader? Would you enjoy someday becoming the president or chief executive officer (CEO) of the company you work for? Then you should consider a degree in accounting. The accounting field greatly values individuals with leadership potential. Accounting students with the most job offers and the highest starting salaries are also likely to be the ones who best demonstrate an ability to lead others. Recruiters in public accounting (i.e. auditing, tax, consulting) and private accounting (i.e. financial reporting, cost accounting, financial analysis, internal auditing) alike demonstrate a strong preference for students with leadership potential.

Fortunately, you do not have to run a company to demonstrate leadership abilities to college recruiters. Some examples of leadership potential that would look good on a resume include organizing a successful fund-raiser, participating effectively as an officer in a student club, or taking the lead in a group project. If you do not have a resume yet, stop by the career placement center at your college and ask them to assist you in preparing one. Many students at your level already have a resume, and it takes time to refine and develop an effective one. A well-prepared resume will be important for securing internship opportunities and part-time work in the business field, as well as for landing that first job upon graduation.

Did you know that the chief executive officers (CEO) of many of the largest manufacturing, merchandising, and service organizations in the United States have degrees in accounting? James Dimon of JPMorgan Chase, Gary C. Kelly of Southwest Airlines, Phil Knight of Nike, James J. Mulva of ConocoPhillips, and Indra K. Nooyi of PepsiCo all have degrees in accounting. It is really not that surprising that accounting majors are so successful, as accounting provides an excellent foundation in business. With a strong accounting foundation and the continued development of leadership abilities over your career, you might become a CEO yourself someday.

Your study of accounting began with service companies as examples because they are the least complicated type of business. You are now ready to apply the accounting process to a more complex business—a merchandising company. Although the fundamental accounting concepts for service businesses apply to merchandising businesses, merchandise accounting requires some additional accounts and techniques to record sales and purchases.

The normal flow of goods from manufacturer to final customer is as follows:



**Manufacturers** produce goods from raw materials and normally sell them to wholesalers. After performing certain functions, such as packaging or labeling, **wholesalers** sell the goods to retailers. **Retailers** sell the goods to final customers. The two middle boxes in the diagram represent merchandising companies. These companies buy goods in finished form for resale.

This chapter begins by comparing the income statement of a service company with that of a merchandising company. Then, we describe (1) how to record merchandise-related transactions (2) a classified income statement and (3) the gross margin percentage. Finally, in the appendix we explain the work sheet and the closing process for a merchandising company.

<b>SERVICE COMPANY</b>		<b>MERCHANDISING COMPANY</b>	
<b>Income Statement</b>		<b>Income Statement</b>	
<b>For the Year Ended 2010 December 31</b>		<b>For the Year Ended 2010 December 31</b>	
Service revenues	\$13,200	Sales revenues	\$262,000
		Cost of goods sold	159,000
		Gross Margin	\$103,000
Expenses	6,510	Expenses	74,900
Net income	\$ 6,690	Net income	\$ 28,100

Exhibit 1: Condensed income statements of a service company and a merchandising company compared

### Two income statements compared— Service company and merchandising company

In Exhibit 1 we compare the main divisions of an income statement for a service company with those for a merchandising company. To determine profitability or net income, a service company deducts total expenses incurred from revenues earned. A merchandising company is a more complex business and, therefore, has a more complex income statement.

As shown in Exhibit 1, merchandising companies must deduct from revenues the cost of the goods they sell to customers to arrive at gross margin. Then, they deduct other expenses. The income statement of a merchandising company has three main divisions: (1) sales revenues, which result from the sale of goods by the company; (2) cost of goods sold, which is an expense that indicates how much the company paid for the goods sold; and (3) expenses, which are the company's other expenses in running the business.

In the next two sections we discuss the first two main divisions of the income statement of a merchandising company. The third division (expenses) is similar to expenses for a service company, which we illustrated in preceding chapters. As you study these sections, keep in mind how the divisions of the merchandising income statement are related to each other and produce the final figure—net income or net loss—which indicates the profitability of the company.

### Sales revenues

The sale of goods occurs between two parties. The seller of the goods transfers them to the buyer in exchange for cash or a promise to pay at a later date. This exchange is a relatively simple business transaction. Sellers make sales to create revenues; this inflow of assets in the form of cash or accounts receivable results from selling goods to customers.

In Exhibit 1, we show a condensed income statement to emphasize its major divisions. Next, we describe the more complete income statement actually prepared by accountants. The merchandising company that we use to

illustrate the income statement is Hanlon Retail Food Store. This section explains how to record sales revenues, including the effect of trade discounts. Then, we explain how to record two deductions from sales revenues—sales discounts and sales returns and allowances (Exhibit 2). The amount that remains is **net sales**. The formula for determining net sales is:

$$\text{Net sales} = \text{Gross sales} - (\text{Sales discounts} + \text{Sales returns and allowances})$$

**HANLON RETAIL FOOD STORE**

**Partial income Statement**

**For the Year Ended 2010 December 31**

Operating revenues:

Gross sales		\$282,000
Less: Sales discounts	\$ 5,000	
Sales returns and allowances	15,000	20,000
Net sales		\$262,000

**Exhibit 2: Partial income statement of merchandising company**

**BRYAN WHOLESALE CO.**  
**476 Mason Street**  
**Detroit, Michigan 48823**

**Invoice No.:** 1258 **Date:** 2010 Dec. 19,

**Customer's Order No.:** 218

**Sold to:** Baier Company

**Address:** 2255 Hannon Street

Big Rapids, Michigan 48106

**Date Shipped:** 2010 Dec. 19,

**Terms:** Net 30, FOB Destination

**Shipped by:** Nagel Trucking Co.

Description	Item Number	Quantity	Price per Unit	Total Amount
True-tone stereo radio	Model No. 5868-24393	200	\$100	\$20,000
		Total		\$20,000

**Exhibit 3: Invoice**

In a sales transaction, the seller transfers the legal ownership (title) of the goods to the buyer. Usually, the physical delivery of the goods occurs at the same time as the sale of the goods. A business document called an invoice (a sales invoice for the seller and a purchase invoice for the buyer) becomes the basis for recording the sale.

An **invoice** is a document prepared by the seller of merchandise and sent to the buyer. The invoice contains the details of a sale, such as the number of units sold, unit price, total price billed, terms of sale, and manner of shipment. A retail company prepares the invoice at the point of sale. A wholesale company, which supplies goods to retailers, prepares the invoice after the shipping department notifies the accounting department that it has shipped the goods to the retailer. Exhibit 3 is an example of an invoice prepared by a wholesale company for goods sold to a retail company.

Using the invoice as the source document, a wholesale company records the revenue from the sale at the time of the sale for the following reasons:

- The seller has passed legal title of the goods to the buyer, and the goods are now the responsibility and property of the buyer.
- The seller has established the selling price of the goods.
- The seller has completed its obligation.

- The seller has exchanged the goods for another asset, such as cash or accounts receivable.
- The seller can determine the costs incurred in selling the goods.

Each time a company makes a sale, the company earns revenue. This revenue increases a revenue account called Sales. Recall from an earlier chapter that credits increase revenues. Therefore, the firm credits the Sales account for the amount of the sale.

Usually sales are for cash or on account. When a sale is for cash, the company credits the Sales account and debits Cash. For example, it records a USD 20,000 sale for cash as follows:

Cash (+A)	20,000	
Sales (+SE)		20,000

To record the sales of merchandise for cash.

When a sale is on account, it credits the Sales account and debits Accounts Receivable. The following entry records a USD 20,000 sale on account:

Accounts Receivable (+A)	20,000	
Sales (+SE)		20,000

To record the sales of merchandise on account.

Usually, a seller quotes the gross selling price, also called the invoice price, of goods to the buyer. However, sometimes a seller quotes a list price of goods along with available trade discounts. In this latter situation, the buyer must calculate the gross selling price. The list price less all trade discounts is the **gross selling price**. Merchandising companies that sell goods use the gross selling price as the credit to sales.

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### An accounting perspective:

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#### Uses of technology

A database management system stores related data—such as monthly sales data (salespersons, customers, products, and sales amounts)—independent of the application. Once you have defined this information to the database management system, you can use commands to answer such questions as: Which products have been sold to which customers? What are the amounts of sales by individual salespersons? You could also print a customer list sorted by ZIP code, the alphabet, or salesperson.

A **trade discount** is a percentage deduction, or discount, from the specified list price or catalog price of merchandise. Companies use trade discounts to:

- Reduce the cost of catalog publication. A seller can use a catalog for a longer time by printing list prices in the catalog and giving separate discount sheets to salespersons whenever prices change.
- Grant quantity discounts.
- Allow quotation of different prices to various customers, such as retailers and wholesalers.

The seller's invoice may show trade discounts. However, sellers do not record trade discounts in their accounting records because the discounts are used only to calculate the gross selling price. Nor do trade discounts appear on the books of the purchaser. To illustrate, assume an invoice contains the following data:

List price, 200 swimsuits at \$24	\$4,800
Less: Trade discount, 30%	1,440
Gross selling price (invoice price)	\$3,360

The seller records a sale of USD 3,360. The purchaser records a purchase of USD 3,360. Thus, neither the seller nor the purchaser enters list prices and trade discounts on their books.

Sometimes the list price of a product is subject to several trade discounts; this series of discounts is a **chain discount**. Chain discounts exist, for example, when a wholesaler receives two trade discounts for services performed, such as packaging and distributing. When more than one discount is given, the buyer applies each discount to the declining balance successively. If a product has a list price of USD 100 and is subject to trade discounts of 20 per cent and 10 per cent, the gross selling price (invoice price) would be  $USD\ 100 - 0.2(USD\ 100) = USD\ 80$ ;  $USD\ 80 - 0.1(USD\ 80) = USD\ 72$ , computed as follows:

List price	\$100
Less 20%	- 20
	\$ 80
Less 10%	■ 8
Gross selling price (invoice price)	\$ 72

You could obtain the same results by multiplying the list price by the complements of the trade discounts allowed. The complement of 20 per cent is 80 per cent because  $20\ \text{per cent} + 80\ \text{per cent} = 100\ \text{per cent}$ . The complement of 10 per cent is 90 per cent because  $10\ \text{per cent} + 90\ \text{per cent} = 100\ \text{per cent}$ . Thus, the gross selling price is  $USD\ 100 \times 0.8 \times 0.9 = USD\ 72$ .

Two common deductions from gross sales are (1) sales discounts and (2) sales returns and allowances. Sellers record these deductions in contra revenue accounts to the Sales account. Contra accounts have normal balances that are opposite to the balance of the account they reduce. For example, since the Sales account normally has a credit balance, the Sales Discounts account and Sales Returns and Allowances account have debit balances. We explain the methods of recording these contra revenue accounts next.

**Sales discounts** Whenever a company sells goods on account, it clearly specifies terms of payment on the invoice. For example, the invoice in Exhibit 3 states the terms of payment as "net 30".

Net 30 is sometimes written as "n/30". Either way, this term means that the buyer may not take a discount and must pay the entire amount of the invoice (USD 20,000) on or before 30 days after 2010 December 19 (invoice date)—or 2011 January 18. In Exhibit 3, if the terms had read "n/10/EOM" (EOM means end of month), the buyer could not take a discount, and the invoice would be due on the 10th day of the month following the month of sale—or 2011 January 10. Credit terms vary from industry to industry.

In some industries, credit terms include a cash discount of 1 per cent to 3 per cent to induce early payment of an amount due. A **cash discount** is a deduction from the invoice price that can be taken only if the invoice is paid within a specified time. A cash discount differs from a trade discount in that a cash discount is a deduction from the gross selling price for the prompt payment of an invoice. In contrast, a trade discount is a deduction from the list price to determine the gross selling price (or invoice price). Sellers call a cash discount a **sales discount** and buyers call it a **purchase discount**. Companies often state cash discount terms as follows:

- **2/10, n/30**—means a buyer who pays within 10 days following the invoice date may deduct a discount of 2 per cent of the invoice price. If payment is not made within the discount period, the entire invoice price is due 30 days from the invoice date.

- **2/EOM, n/60**—means a buyer who pays by the end of the month of purchase may deduct a 2 per cent discount from the invoice price. If payment is not made within the discount period, the entire invoice price is due 60 days from the invoice date.

- **2/10/EOM, n/60**—means a buyer who pays by the 10th of the month following the month of purchase may deduct a 2 per cent discount from the invoice price. If payment is not made within the discount period, the entire invoice price is due 60 days from the invoice date.

Sellers cannot record the sales discount before they receive the payment since they do not know when the buyer will pay the invoice. A cash discount taken by the buyer reduces the cash that the seller actually collects from the sale of the goods, so the seller must indicate this fact in its accounting records. The following entries show how to record a sale and a subsequent sales discount.

Assume that on July 12, a business sold merchandise for USD 2,000 on account; terms are 2/10, n/30. On July 21 (nine days after invoice date), the business received a USD 1,960 check in payment of the account. The required journal entries for the seller are:

July	12	Accounts Receivable (+A)	2,000	
		Sales (+SE)		2,000
		To record sale on account; terms 2/10, n/30		
	21	Cash (+A)	1,960	
		Sales Discounts (-SE; Contra-Revenue Account)	40	
		Accounts Receivable (-A)		2,000
		To record collection on account, less a discount.		

The **Sales Discounts account** is a contra revenue account to the Sales account. In the income statement, the seller deducts this contra revenue account from gross sales. Sellers use the Sales Discounts account (rather than directly reducing the Sales account) so management can examine the sales discounts figure to evaluate the company's sales discount policy. Note that the Sales Discounts account is not an expense incurred in generating revenue. Rather, the purpose of the account is to reduce recorded revenue to the amount actually realized from the sale.

**Sales returns and allowances** Merchandising companies usually allow customers to return goods that are defective or unsatisfactory for a variety of reasons, such as wrong color, wrong size, wrong style, wrong amounts, or inferior quality. In fact, when their policy is satisfaction guaranteed, some companies allow customers to return goods simply because they do not like the merchandise. A **sales return** is merchandise returned by a buyer. Sellers and buyers regard a sales return as a cancellation of a sale. Alternatively, some customers keep unsatisfactory goods, and the seller gives them an allowance off the original price. A **sales allowance** is a deduction from the original invoiced sales price granted when the customer keeps the merchandise but is dissatisfied for any of a number of reasons, including inferior quality, damage, or deterioration in transit. When a seller agrees to the sales return or sales allowance, the seller sends the buyer a credit memorandum indicating a reduction (crediting) of the buyer's account receivable. A credit memorandum is a document that provides space for the name and address of

the concerned parties, followed by a space for the reason for the credit and the amount to be credited. A credit memorandum becomes the basis for recording a sales return or a sales allowance.

In theory, sellers could record both sales returns and sales allowances as debits to the Sales account because they cancel part of the recorded selling price.

However, because the amount of sales returns and sales allowances is useful information to management, it should be shown separately. The amount of returns and allowances in relation to goods sold can indicate the quality of the goods (high-return percentage, equals low quality) or of pressure applied by salespersons (high-return percentage, equals high-pressure sales). Thus, sellers record sales returns and sales allowances in a separate Sales Returns and Allowances account. The **Sales Returns and Allowances account** is a contra revenue account (to Sales) that records the selling price of merchandise returned by buyers or reductions in selling prices granted. (Some companies use separate accounts for sales returns and for sales allowances, but this text does not.)

Following are two examples illustrating the recording of sales returns in the Sales Returns and Allowances account:

- Assume that a customer returns USD 300 of goods sold on account. If payment has not yet been received, the required entry is:

Sales Returns and Allowances (-SE)	300	
Accounts Receivable (-A)		300

To record a sales return from a customer.

- Assume that the customer has already paid the account and the seller gives the customer a cash refund. Now, the credit is to Cash rather than to Accounts Receivable. If the customer has taken a 2 per cent discount when paying the account, the company would return to the customer the sales price less the sales discount amount. For example, if a customer returns goods that sold for USD 300, on which a 2 per cent discount was taken, the following entry would be made:

Sales Returns and Allowances (-SE)	300	
Cash (-A)		294
Sales Discount (+SE)		6

To record a sales return from a customer who had taken a discount and was sent a cash refund.

The debit to the Sales Returns and Allowances account is for the full selling price of the purchase. The credit of USD 6 reduces the balance of the Sales Discounts account.

Next, we illustrate the recording of a sales allowance in the Sales Returns and Allowances account. Assume that a company grants a USD 400 allowance to a customer for damage resulting from improperly packed merchandise. If the customer has not yet paid the account, the required entry would be:

Sales Returns and Allowances (-SE)	400	
Accounts Receivable (-A)		400

To record a sales allowance granted for damaged merchandise.

If the customer has already paid the account, the credit is to Cash instead of Accounts Receivable. If the customer took a 2 per cent discount when paying the account, the company would refund only the net amount (USD 392). Sales Discounts would be credited for USD 8. The entry would be:

Sales Returns and Allowances (-SE)	400	
Cash (-A)		392
Sales Discount (+SE)		8

To record a sales allowance when a customer has paid and taken a 2% discount.

**HANLON RETAIL FOOD STORE**

**Partial income Statement**

**For the Year Ended 2010 December 31,**

Operating revenues:		
Gross sales		\$282,000
Less: Sales discounts	\$ 5,000	
Sales returns and allowances 15,000		20,000
Net sales		\$262,000

\*This illustration is the same as Exhibit 2, repeated here for your convenience.

**Exhibit 4: Partial income statement\***

Exhibit 4 shows how a company could report sales, sales discounts, and sales returns and allowances in the income statement. More often, the income statement in a company's annual report begins with "Net sales" because sales details are not important to external financial statement users.

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**An accounting perspective:**

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**Business insight**

When examining a company's sales cycle, management and users of financial data should be aware of any seasonal changes that may affect its reported sales. A national retailer of personal computers and related products and services, for example, should include wording similar to that in the following paragraph in its Annual Report describing seasonality.

**Seasonality**

*Based upon its operating history, the company believes that its business is seasonal. Excluding the effects of new store openings, net sales and earnings are generally lower during the first and fourth fiscal quarters than in the second and third fiscal quarters.*

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## An accounting perspective:

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### Business insight

For many retailers a large percentage of their annual sales occurs during the period from Thanksgiving to Christmas. They attempt to stock just the right amount of goods to meet demand. Since this is a difficult estimate to make accurately, many retailers end up with a large amount of unsold goods at the end of this season. The only way they can unload these goods is to offer huge discounts during the following period.

### Cost of goods sold

The second main division of an income statement for a merchandising business is cost of goods sold. **Cost of goods sold** is the cost to the seller of the goods sold to customers. For a merchandising company, the cost of goods sold can be relatively large. All merchandising companies have a quantity of goods on hand called merchandise inventory to sell to customers. **Merchandise inventory** (or inventory) is the quantity of goods available for sale at any given time. Cost of goods sold is determined by computing the cost of (1) the beginning inventory, (2) the net cost of goods purchased, and (3) the ending inventory.

Look at the cost of goods sold section of Hanlon Retail Food Store's income statement in Exhibit 5. The merchandise inventory on 2010 January 1, was USD 24,000. The net cost of purchases for the year was USD 166,000. Thus, Hanlon had USD 190,000 of merchandise available for sale during 2010. On 2010 December 31, the merchandise inventory was USD 31,000, meaning that this amount was left unsold. Subtracting the unsold inventory (the ending inventory), USD 31,000, from the amount Hanlon had available for sale during the year, USD 190,000, gives the cost of goods sold for the year of USD 159,000. Understanding this relationship shown on Hanlon Retail Food Store's partial income statement gives you the necessary background to determine the cost of goods sold as presented in this section.

Cost of goods sold:

Merchandise inventory, 2010 January 1		\$ 24,000
Purchases		\$167,000
Less: Purchase discounts	\$3,000	
Purchase returns and allowances	8,000	11,000
Net Purchases		\$156,000
Add: Transportation-in		10,000
Net cost of purchases		166,000
Cost of goods available for sale		\$190,000
Less: Merchandise inventory, 2010 December 31		31,000
Cost of goods sold		\$159,000

#### Exhibit 5: Determination of cost of goods sold for Hanlon Retail Food Store

## Receivables and payables

### A career in litigation support

What is litigation support? It does not mean working in an attorney's office. It involves assisting legal counsel in attempting to gain favorable verdicts in a court of law. Persons involved in litigation support generally work for a public accounting firm, a consulting firm, or as a sole proprietor or in partnership with others. An experienced litigation support person can expect to earn an income well into six figures.

Litigation support in a broad sense encompasses fraud auditing, valuation analysis, investigative accounting, and forensic accounting. The practice of litigation support involves assisting legal counsel in such things as product liability disputes, shareholder disputes, contract breaches, and major losses reported by entities. These investigations require the accountant to gather and evaluate evidence to assess the integrity and dollar amounts surrounding the aforementioned situations.

The accountant can be, and often is, requested to serve as an expert witness in a court of law. This experience requires knowledge of accounting and auditing in addition to possessing good communication skills, appropriate credentials, relevant experience, and critical information that could result in successful resolution of the issue.

What kind of person pursues litigation support as a career? It takes a very special individual. The person must be part accountant, part auditor, part lawyer, and part skilled businessperson. An undergraduate accounting degree, an MBA, and a law degree would be the perfect educational background needed for such a career. Many universities offer a combined MBA/JD program. Such a program fulfills the graduate needs of the litigation support person.

In addition to the degree, work experience in the business sector is essential. A career in public accounting, industry, or with a government agency would serve as valuable experience in pursuing a career in litigation support.

Much of the growth of business in recent years is due to the immense expansion of credit. Managers of companies have learned that by granting customers the privilege of charging their purchases, sales and profits increase. Using credit is not only a convenient way to make purchases but also the only way many people can own high-priced items such as automobiles.

This chapter discusses receivables and payables. For a company, a **receivable** is any sum of money due to be paid to that company from any party for any reason. Similarly, a **payable** describes any sum of money to be paid by that company to any party for any reason.

Primarily, receivables arise from the sale of goods and services. The two types of receivables are accounts receivable, which companies offer for short-term credit with no interest charge; and notes receivable, which companies sometimes extend for both short-and long-term credit with an interest charge. We pay particular attention to accounting for uncollectible accounts receivable.

Like their customers, companies use credit, which they show as accounts payable or notes payable. Accounts payable normally result from the purchase of goods or services and do not carry an interest charge. Short-term

notes payable carry an interest charge and may arise from the same transactions as accounts payable, but they can also result from borrowing money from a bank or other institution. Chapter 2 identified accounts payable and short-term notes payable as current liabilities. A company also incurs other current liabilities, including payables such as sales tax payable, estimated product warranty payable, and certain liabilities that are contingent on the occurrence of future events. Long-term notes payable usually result from borrowing money from a bank or other institution to finance the acquisition of plant assets. As you study this chapter and learn how important credit is to our economy, you will realize that credit in some form will probably always be with us.

## Accounts receivable

In Chapter 4, you learned that most companies use the accrual basis of accounting since it better reflects the actual results of the operations of a business. Under the accrual basis, a merchandising company that extends credit records revenue when it makes a sale because at this time it has earned and realized the revenue. The company has earned the revenue because it has completed the seller's part of the sales contract by delivering the goods. The company has realized the revenue because it has received the customer's promise to pay in exchange for the goods. This promise to pay by the customer is an account receivable to the seller. Accounts receivable are amounts that customers owe a company for goods sold and services rendered on account. Frequently, these receivables resulting from credit sales of goods and services are called **trade receivables**.

When a company sells goods on account, customers do not sign formal, written promises to pay, but they agree to abide by the company's customary credit terms. However, customers may sign a sales invoice to acknowledge purchase of goods. Payment terms for sales on account typically run from 30 to 60 days. Companies usually do not charge interest on amounts owed, except on some past-due amounts.

Because customers do not always keep their promises to pay, companies must provide for these uncollectible accounts in their records. Companies use two methods for handling uncollectible accounts. The allowance method provides in advance for uncollectible accounts. The direct write-off method recognizes bad accounts as an expense at the point when judged to be uncollectible and is the required method for federal income tax purposes. However, since the allowance method represents the accrual basis of accounting and is the accepted method to record uncollectible accounts for financial accounting purposes, we only discuss and illustrate the allowance method in this text.

Even though companies carefully screen credit customers, they cannot eliminate all uncollectible accounts. Companies expect some of their accounts to become uncollectible, but they do not know which ones. The matching principle requires deducting expenses incurred in producing revenues from those revenues during the accounting period. The allowance method of recording uncollectible accounts adheres to this principle by recognizing the uncollectible accounts expense in advance of identifying specific accounts as being uncollectible. The required entry has some similarity to the depreciation entry in Chapter 4 because it debits an expense and credits an allowance (contra asset). The purpose of the entry is to make the income statement fairly present the proper expense and the balance sheet fairly present the asset. **Uncollectible accounts expense** (also called doubtful accounts expense or **bad debts expense**) is an operating expense that a business incurs when it sells on credit. We classify uncollectible accounts expense as a selling expense because it results from credit sales. Other accountants might classify it as an administrative expense because the credit department has an important role in setting credit terms.

To adhere to the matching principle, companies must match the uncollectible accounts expense against the revenues it generates. Thus, an uncollectible account arising from a sale made in 2010 is a 2010 expense even though this treatment requires the use of estimates. Estimates are necessary because the company sometimes cannot determine until 2008 or later which 2010 customer accounts will become uncollectible.

**Recording the uncollectible accounts adjustment** A company that estimates uncollectible accounts makes an adjusting entry at the end of each accounting period. It debits Uncollectible Accounts Expense, thus recording the operating expense in the proper period. The credit is to an account called Allowance for Uncollectible Accounts.

As a contra account to the Accounts Receivable account, the **Allowance for Uncollectible Accounts** (also called Allowance for doubtful accounts or Allowance for bad debts) reduces accounts receivable to their net realizable value. **Net realizable value** is the amount the company expects to collect from accounts receivable. When the firm makes the uncollectible accounts adjusting entry, it does not know which specific accounts will become uncollectible. Thus, the company cannot enter credits in either the Accounts Receivable control account or the customers' accounts receivable subsidiary ledger accounts. If only one or the other were credited, the Accounts Receivable control account balance would not agree with the total of the balances in the accounts receivable subsidiary ledger. Without crediting the Accounts Receivable control account, the allowance account lets the company show that some of its accounts receivable are probably uncollectible.

To illustrate the adjusting entry for uncollectible accounts, assume a company has USD 100,000 of accounts receivable and estimates its uncollectible accounts expense for a given year at USD 4,000. The required year-end adjusting entry is:

<b>Dec. 3</b>	<b>Uncollectible Accounts Expense (-SE)</b>	<b>4,000</b>
<b>1</b>	<b>Allowance for Uncollectible Accounts (-A)</b>	<b>4,000</b>
	<b>To record estimated uncollectible accounts.</b>	

The debit to Uncollectible Accounts Expense brings about a matching of expenses and revenues on the income statement; uncollectible accounts expense is matched against the revenues of the accounting period. The credit to Allowance for Uncollectible Accounts reduces accounts receivable to their net realizable value on the balance sheet. When the books are closed, the firm closes Uncollectible Accounts Expense to Income Summary. It reports the allowance on the balance sheet as a deduction from accounts receivable as follows:

<b>Brice Company</b>		
<b>Balance Sheet</b>		
<b>2010 December 31</b>		
Current assets		
Cash		\$21,200
Accounts receivable	\$ 100,000	
Less: Allowance for uncollectible accounts	4,000	96,000

**Estimating uncollectible accounts** Accountants use two basic methods to estimate uncollectible accounts for a period. The first method—percentage-of-sales method—focuses on the income statement and the relationship of uncollectible accounts to sales. The second method—percentage-of-receivables method—focuses on the balance sheet and the relationship of the allowance for uncollectible accounts to accounts receivable.

**Percentage-of-sales method** The **percentage-of-sales method** estimates uncollectible accounts from the credit sales of a given period. In theory, the method is based on a percentage of prior years' actual uncollectible

accounts to prior years' credit sales. When cash sales are small or make up a fairly constant percentage of total sales, firms base the calculation on total net sales. Since at least one of these conditions is usually met, companies commonly use total net sales rather than credit sales. The formula to determine the amount of the entry is:

Amount of journal entry for uncollectible accounts – Net sales (total or credit) x Percentage estimated as uncollectible

To illustrate, assume that Rankin Company's uncollectible accounts from 2008 sales were 1.1 per cent of total net sales. A similar calculation for 2009 showed an uncollectible account percentage of 0.9 per cent. The average for the two years is 1 per cent  $[(1.1 + 0.9)/2]$ . Rankin does not expect 2010 to differ from the previous two years. Total net sales for 2010 were USD 500,000; receivables at year-end were USD 100,000; and the Allowance for Uncollectible Accounts had a zero balance. Rankin would make the following adjusting entry for 2010:

<b>Dec. 3</b>	<b>Uncollectible Accounts Expense (-SE)</b>	<b>5,000</b>	
<b>1</b>	<b>Allowance for Uncollectible Accounts (-A)</b>		<b>5,000</b>
	<b>To record estimated uncollectible accounts</b>		
	<b>(\$500,000 X 0.01).</b>		

Using T-accounts, Rankin would show:

<b>Uncollectible Accounts Expense</b>	<b>Allowance for Uncollectible Accounts</b>	
<b>Dec. 31</b>	<b>Bal. before adjustment</b>	<b>-0-</b>
<b>Adjustment 5,000</b>	<b>Dec. 31 Adjustment</b>	<b>5,000</b>
	<b>Bal. after adjustment</b>	<b>5,000</b>

Rankin reports Uncollectible Accounts Expense on the income statement. It reports the accounts receivable less the allowance among current assets in the balance sheet as follows:

<b>Accounts receivable</b>	<b>\$ 100,000</b>	
<b>Less: Allowance for uncollectible accounts</b>	<b>5,000</b>	<b>\$ 95,000</b>

Or Rankin's balance sheet could show:

<b>Accounts receivable (less estimated uncollectible accounts, \$5,000)</b>	<b>\$95,000</b>
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On the income statement, Rankin would match the uncollectible accounts expense against sales revenues in the period. We would classify this expense as a selling expense since it is a normal consequence of selling on credit.

The Allowance for Uncollectible Accounts account usually has either a debit or credit balance before the year-end adjustment. Under the percentage-of-sales method, the company ignores any existing balance in the allowance when calculating the amount of the year-end adjustment (except that the allowance account must have a credit balance after adjustment).

For example, assume Rankin's allowance account had a USD 300 credit balance before adjustment. The adjusting entry would still be for USD 5,000. However, the balance sheet would show USD 100,000 accounts receivable less a USD 5,300 allowance for uncollectible accounts, resulting in net receivables of USD 94,700. On the income statement, Uncollectible Accounts Expense would still be 1 per cent of total net sales, or USD 5,000.

In applying the percentage-of-sales method, companies annually review the percentage of uncollectible accounts that resulted from the previous year's sales. If the percentage rate is still valid, the company makes no change. However, if the situation has changed significantly, the company increases or decreases the percentage rate to reflect the changed condition. For example, in periods of recession and high unemployment, a firm may increase

the percentage rate to reflect the customers' decreased ability to pay. However, if the company adopts a more stringent credit policy, it may have to decrease the percentage rate because the company would expect fewer uncollectible accounts.

**Percentage-of-receivables method** The **percentage-of-receivables method** estimates uncollectible accounts by determining the desired size of the Allowance for Uncollectible Accounts. Rankin would multiply the ending balance in Accounts Receivable by a rate (or rates) based on its uncollectible accounts experience. In the percentage-of-receivables method, the company may use either an overall rate or a different rate for each age category of receivables.

To calculate the amount of the entry for uncollectible accounts under the percentage-of-receivables method using an overall rate, Rankin would use:

Amount of entry for uncollectible accounts – (Accounts receivable ending balance x percentage estimated as uncollectible) – Existing credit balance in allowance for uncollectible accounts or existing debit balance in allowance for uncollectible accounts

Using the same information as before, Rankin makes an estimate of uncollectible accounts at the end of 2010. The balance of accounts receivable is USD 100,000, and the allowance account has no balance. If Rankin estimates that 6 per cent of the receivables will be uncollectible, the adjusting entry would be:

<b>Dec. 3</b>	<b>Uncollectible Accounts Expense (-SE)</b>	<b>6,000</b>
<b>1</b>	<b>Allowance for Uncollectible Accounts (-A)</b>	<b>6,000</b>
	<b>To record estimated uncollectible accounts</b>	
	<b>(\$100,000 X 0.06).</b>	

Using T-accounts, Rankin would show:

<b>Uncollectible Accounts Expense</b>	<b>Allowance for Uncollectible Accounts</b>
<b>Dec. 31</b>	<b>Bal. before</b>
<b>Adjustment 6,000</b>	<b>Adjustment -0-</b>
	<b>Dec. 31</b>
	<b>Adjustment 6,000</b>
	<b>Bal. after</b>
	<b>Adjustment 6,000</b>

If Rankin had a USD 300 credit balance in the allowance account before adjustment, the entry would be the same, except that the amount of the entry would be USD 5,700. The difference in amounts arises because management wants the allowance account to contain a credit balance equal to 6 per cent of the outstanding receivables when presenting the two accounts on the balance sheet. The calculation of the necessary adjustment is [(USD 100,000 X 0.06)-USD 300] = USD 5,700. Thus, under the percentage-of-receivables method, firms consider any existing balance in the allowance account when adjusting for uncollectible accounts. Using T-accounts, Rankin would show:

<b>Uncollectible Accounts Expense</b>	<b>Allowance for Uncollectible Accounts</b>
<b>Dec. 31</b>	<b>Bal. before</b>
<b>Adjustment 5,700</b>	<b>Adjustment 300</b>
	<b>Dec. 31</b>
	<b>Adjustment 5,700</b>
	<b>Bal. after</b>
	<b>Adjustment 6,000</b>

ALLEN COMPANY						
Accounts Receivable Aging Schedule						
2010 December 31						
Customer	Accounts Receivable Balance	Not Yet Due	Days Past Due			
			1-30	31-60	61-90	Over 90
X	\$ 5,000					\$ 5,000
Y	14,000		\$ 12,000	\$2,000		
Z	400				\$200	200
All others	808,600	\$ 560,000	240,000	2,000	600	6,000
	\$ 828,000	\$ 560,000	\$252,000	\$4,000	\$800	\$11,200
Percentage estimated as uncollectible		1%	5%	10%	25%	50%
Estimated amount uncollectible	\$ 24,400	\$ 5,600	\$ 12,600	\$ 400	\$200	\$ 5,600

Exhibit 6: Accounts receivable aging schedule

As another example, suppose that Rankin had a USD 300 debit balance in the allowance account before adjustment. Then, a credit of USD 6,300 would be necessary to get the balance to the required USD 6,000 credit balance. The calculation of the necessary adjustment is  $[(USD\ 100,000 \times 0.06) + USD\ 300] = USD\ 6,300$ . Using T-accounts, Rankin would show:

Uncollectible Accounts Expense	Allowance for Uncollectible Accounts	
Dec. 31	Bal. before	Dec. 31
Adjustment 6,300	Adjustment 300	Adjustment 6,300
		Bal. after
		Adjustment 6,000

No matter what the pre-adjustment allowance account balance is, when using the percentage-of-receivables method, Rankin adjusts the Allowance for Uncollectible Accounts so that it has a credit balance of USD 6,000—equal to 6 per cent of its USD 100,000 in Accounts Receivable. The desired USD 6,000 ending credit balance in the Allowance for Uncollectible Accounts serves as a "target" in making the adjustment.

So far, we have used one uncollectibility rate for all accounts receivable, regardless of their age. However, some companies use a different percentage for each age category of accounts receivable. When accountants decide to use a different rate for each age category of receivables, they prepare an aging schedule. An **aging schedule** classifies accounts receivable according to how long they have been outstanding and uses a different uncollectibility percentage rate for each age category. Companies base these percentages on experience. In Exhibit 6, the aging schedule shows that the older the receivable, the less likely the company is to collect it.

Classifying accounts receivable according to age often gives the company a better basis for estimating the total amount of uncollectible accounts. For example, based on experience, a company can expect only 1 per cent of the accounts not yet due (sales made less than 30 days before the end of the accounting period) to be uncollectible. At the other extreme, a company can expect 50 per cent of all accounts over 90 days past due to be uncollectible. For each age category, the firm multiplies the accounts receivable by the percentage estimated as uncollectible to find the estimated amount uncollectible.

The sum of the estimated amounts for all categories yields the total estimated amount uncollectible and is the desired credit balance (the target) in the Allowance for Uncollectible Accounts.

Since the aging schedule approach is an alternative under the percentage-of-receivables method, the balance in the allowance account before adjustment affects the year-end adjusting entry amount recorded for uncollectible accounts. For example, the schedule in Exhibit 6 shows that USD 24,400 is needed as the ending credit balance in the allowance account. If the allowance account has a USD 5,000 credit balance before adjustment, the adjustment would be for USD 19,400.

The information in an aging schedule also is useful to management for other purposes. Analysis of collection patterns of accounts receivable may suggest the need for changes in credit policies or for added financing. For example, if the age of many customer balances has increased to 61-90 days past due, collection efforts may have to be strengthened. Or, the company may have to find other sources of cash to pay its debts within the discount period. Preparation of an aging schedule may also help identify certain accounts that should be written off as uncollectible.

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### An accounting perspective:

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#### Business insight

According to the Fair Debt Collection Practices Act, collection agencies can call persons only between 8 am and 9 pm, and cannot use foul language. Agencies can call employers only if the employers allow such calls. And, they can threaten to sue only if they really intend to do so.

**Write-off of receivables** As time passes and a firm considers a specific customer's account to be uncollectible, it writes that account off. It debits the Allowance for Uncollectible Accounts. The credit is to the Accounts Receivable control account in the general ledger and to the customer's account in the accounts receivable subsidiary ledger. For example, assume Smith's USD 750 account has been determined to be uncollectible. The entry to write off this account is:

Allowance for Uncollectible Accounts (-SE)	750	
Accounts Receivable—Smith (-A)		750
To write off Smith's account as uncollectible.		

The credit balance in Allowance for Uncollectible Accounts before making this entry represented potential uncollectible accounts not yet specifically identified. Debiting the allowance account and crediting Accounts Receivable shows that the firm has identified Smith's account as uncollectible. Notice that the debit in the entry to write off an account receivable does not involve recording an expense. The company recognized the uncollectible accounts expense in the same accounting period as the sale. If Smith's USD 750 uncollectible account were recorded in Uncollectible Accounts Expense again, it would be counted as an expense twice.

A write-off does not affect the net realizable value of accounts receivable. For example, suppose that Amos Company has total accounts receivable of USD 50,000 and an allowance of USD 3,000 before the previous entry; the net realizable value of the accounts receivable is USD 47,000. After posting that entry, accounts receivable are USD 49,250, and the allowance is USD 2,250; net realizable value is still USD 47,000, as shown here:

	<b>Before Write-Off</b>	<b>Entry for Write-Off</b>	<b>After Write-Off</b>
Accounts receivable	\$ 50,000 Dr.	\$750 Cr.	\$ 49,250 Dr.
Allowance for uncollectible accounts	3,000 Cr.	750 Dr.	2,250 Cr.
Net realizable value	\$47,000		\$ 47,000

You might wonder how the allowance account can develop a debit balance before adjustment. To explain this, assume that Jenkins Company began business on 2009 January 1, and decided to use the allowance method and make the adjusting entry for uncollectible accounts only at year-end. Thus, the allowance account would not have any balance at the beginning of 2009. If the company wrote off any uncollectible accounts during 2009, it would debit Allowance for Uncollectible Accounts and cause a debit balance in that account. At the end of 2009, the company would debit Uncollectible Accounts Expense and credit Allowance for Uncollectible Accounts. This adjusting entry would cause the allowance account to have a credit balance. During 2010, the company would again begin debiting the allowance account for any write-offs of uncollectible accounts. Even if the adjustment at the end of 2009 was adequate to cover all accounts receivable existing at that time that would later become uncollectible, some accounts receivable from 2010 sales may be written off before the end of 2010. If so, the allowance account would again develop a debit balance before the end-of-year 2010 adjustment.

**Uncollectible accounts recovered** Sometimes companies collect accounts previously considered to be uncollectible after the accounts have been written off. A company usually learns that an account has been written off erroneously when it receives payment. Then the company reverses the original write-off entry and reinstates the account by debiting Accounts Receivable and crediting Allowance for Uncollectible Accounts for the amount received. It posts the debit to both the general ledger account and to the customer's accounts receivable subsidiary ledger account. The firm also records the amount received as a debit to Cash and a credit to Accounts Receivable. And it posts the credit to both the general ledger and to the customer's accounts receivable subsidiary ledger account.

To illustrate, assume that on May 17 a company received a USD 750 check from Smith in payment of the account previously written off. The two required journal entries are:

May	17	Accounts Receivable—Smith (+A)	750	
		Allowance for Uncollectible Accounts (-A)		750
		To reverse original write-off of Smith account.		
May	17	Cash (+A)	750	
		Accounts Receivable—Smith (-A)		750
		To record collection of account.		

The debit and credit to Accounts Receivable—Smith on the same date is to show in Smith's subsidiary ledger account that he did eventually pay the amount due. As a result, the company may decide to sell to him in the future.

When a company collects part of a previously written off account, the usual procedure is to reinstate only that portion actually collected, unless evidence indicates the amount will be collected in full. If a company expects full payment, it reinstates the entire amount of the account.

Because of the problems companies have with uncollectible accounts when they offer customers credit, many now allow customers to use bank or external credit cards. This policy relieves the company of the headaches of collecting overdue accounts.

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### A broader perspective:

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#### GECS allowance for losses on financing receivables

**Recognition of losses on financing receivables.** The allowance for losses on small-balance receivables reflects management's best estimate of probable losses inherent in the portfolio determined principally on the basis of historical experience. For other receivables, principally the larger loans and leases, the allowance for losses is determined primarily on the basis of management's best estimate of probable losses, including specific allowances for known troubled accounts.

All accounts or portions thereof deemed to be uncollectible or to require an excessive collection cost are written off to the allowance for losses. Small-balance accounts generally are written off when 6 to 12 months delinquent, although any such balance judged to be uncollectible, such as an account in bankruptcy, is written down immediately to estimated realizable value. Large-balance accounts are reviewed at least quarterly, and those accounts with amounts that are judged to be uncollectible are written down to estimated realizable value.

When collateral is repossessed in satisfaction of a loan, the receivable is written down against the allowance for losses to estimated fair value of the asset less costs to sell, transferred to other assets and subsequently carried at the lower of cost or estimated fair value less costs to sell. This accounting method has been employed principally for specialized financing transactions.

(In millions)	2000	1999	1998
Balance at January 1	\$3,708	\$3,223	\$2,745
Provisions charged			
To operations	2,045	1,671	1,603
Net transfers related to companies acquired or sold	22	271	386
Amounts written off-net	(1,741)	(1,457)	(1,511)
Balance at December 31	\$4,034	\$3,708	\$3,223

Source: General Electric Company, 2000 Annual Report.

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### An accounting perspective:

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#### Uses of technology

Auditors use expert systems to review a client's internal control structure and to test the reasonableness of a client's Allowance for Uncollectible Accounts balance. The expert system reaches conclusions based on rules and information programmed into the expert system software. The rules are modeled on the mental processes that a human expert would use in addressing the situation. In the medical field, for instance, the rules constituting the expert system are derived from modeling the diagnostic decision processes of the foremost experts in a given area of

medicine. A physician can input information from a remote location regarding the symptoms of a certain patient, and the expert system will provide a probable diagnosis based on the expert model. In a similar fashion, an accountant can feed client information into the expert system and receive an evaluation as to the appropriateness of the account balance or internal control structure.

**Credit cards** are either nonbank (e.g. American Express) or bank (e.g. VISA and MasterCard) charge cards that customers use to purchase goods and services. For some businesses, uncollectible account losses and other costs of extending credit are a burden. By paying a service charge of 2 per cent to 6 per cent, businesses pass these costs on to banks and agencies issuing national credit cards. The banks and credit card agencies then absorb the uncollectible accounts and costs of extending credit and maintaining records.

Usually, banks and agencies issue credit cards to approved credit applicants for an annual fee. When a business agrees to honor these credit cards, it also agrees to pay the percentage fee charged by the bank or credit agency.

When making a credit card sale, the seller checks to see if the customer's card has been canceled and requests approval if the sale exceeds a prescribed amount, such as USD 50. This procedure allows the seller to avoid accepting lost, stolen, or canceled cards. Also, this policy protects the credit agency from sales causing customers to exceed their established credit limits.

The seller's accounting procedures for credit card sales differ depending on whether the business accepts a nonbank or a bank credit card. To illustrate the entries for the use of nonbank credit cards (such as American Express), assume that a restaurant American Express invoices amounting to USD 1,400 at the end of a day. American Express charges the restaurant a 5 per cent service charge. The restaurant uses the **Credit Card Expense account** to record the credit card agency's service charge and makes the following entry:

Accounts Receivable—American Express (+A)	1,330	
Credit Card Expense (-SE)	70	
Sales (+SE)		1,400
To record credit card sales.		

The restaurant mails the invoices to American Express. Sometime later, the restaurant receives payment from American Express and makes the following entry:

Cash (+A)	1,330	
Accounts Receivable – American Express (-A)		1,330
To record remittance from American Express.		

To illustrate the accounting entries for the use of bank credit cards (such as VISA or MasterCard), assume that a retailer has made sales of USD 1,000 for which VISA cards were accepted and the service charge is USD 30 (which is 3 per cent of sales). VISA sales are treated as cash sales because the receipt of cash is certain. The retailer deposits the credit card sales invoices in its VISA checking account at a bank just as it deposits checks in its regular checking account. The entry to record this deposit is:

Cash (+A)	970	
Credit Card Expense (-SE)	30	
Sales (+SE)		1,000
To record credit Visa card sales		

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