CHAPTER

18 Revenue Recognition

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Apply the revenue recognition principle.
2. Describe accounting issues for revenue recognition at point of sale.
3. Apply the percentage-of-completion method for long-term contracts.
4. Apply the completed-contract method for long-term contracts.
5. Identify the proper accounting for losses on long-term contracts.
6. Describe the installment-sales method of accounting.
7. Explain the cost-recovery method of accounting.

It's Back

Several years after passage, the accounting world continues to be preoccupied with the Sarbanes-Oxley Act of 2002 (SOX). Unfortunately, SOX did not solve one of the classic accounting issues—how to properly account for revenue. In fact, revenue recognition practices are the most prevalent reasons for accounting restatements. A number of the revenue recognition issues relate to possible fraudulent behavior by company executives and employees.

As a result of such revenue recognition problems, the SEC has increased its enforcement actions in this area. In some of these cases, companies made significant adjustments to previously issued financial statements. As Lynn Turner, a former chief accountant of the SEC, indicated, "When people cross over the boundaries of legitimate reporting, the Commission will take appropriate action to ensure the fairness and integrity that investors need and depend on every day."

Consider some SEC actions:

- The SEC charged the former co-chairman and CEO of **Qwest Communications International Inc.** and eight other former Qwest officers and employees with fraud and other violations of the federal securities laws. Three of these people fraudulently characterized nonrecurring revenue from one-time sales as revenue from recurring data and Internet services. The SEC release notes that internal correspondence likened Qwest's dependence on these transactions to fill the gap between actual and projected revenue to an addiction.
- The SEC filed a complaint against three former senior officers of **iGo Corp.**, alleging that the defendants collectively caused iGo to improperly recognize revenue on consignment sales and products that were not shipped or that were shipped after the end of a fiscal quarter.
- The SEC filed a complaint against the former CEO and chairman of **Homestore Inc.** and its former executive vice president of business development, alleging that they engaged in a fraudulent scheme to overstate advertising and subscription revenues. The scheme involved a complex structure of "round-trip" transactions using various third-party companies that, in essence, allowed Homestore to recognize its own cash as revenue.
- The SEC claims that **Lantronix** deliberately sent excessive product to distributors and granted them generous return rights and extended payment terms. In addition, as part of its alleged channel

IFRS IN THIS CHAPTER

- See the **International Perspectives** on pages 1066, 1087, and 1103.
- Read the **IFRS Insights** on pages 1134–1140 for a discussion of:
  —Long-term contracts
  —Cost-recovery method

stuffing and to prevent product returns, Lantronix loaned funds to a third party to purchase Lantronix products from one of its distributors. The third party later returned the product. The SEC also asserted that Lantronix engaged in other improper revenue recognition practices, including shipping without a purchase order and recognizing revenue on a contingent sale.

Though the cases cited involved fraud and irregularity, not all revenue recognition errors are intentional. For example, in April 2005 **American Home Mortgage Investment Corp.** announced that it would reverse revenue recognized from its fourth-quarter 2004 loan securitization and would recognize it in the first quarter of 2005 instead. As a result, American Home restated its financial results for 2004.

So, how does a company ensure that revenue transactions are recorded properly? Some answers will become apparent after you study this chapter.

Sources: Cheryl de Mesa Graziano, "Revenue Recognition: A Perennial Problem," *Financial Executive* (July 14, 2005), *www.fei.org/mag/articles/7-2005_revenue.cfm;* and S. Taub, "SEC Accuses Ex-CFO of Channel Stuffing," *CFO.com* (September 30, 2006).

PREVIEW OF CHAPTER 18

As indicated in the opening story, the issue of when revenue should be recognized is complex. The many methods of marketing products and services make it difficult to develop guidelines that will apply to all situations. This chapter provides you with general guidelines used in most business transactions. The content and organization of the chapter are as follows.

REVENUE RECOGNITION

CURRENT ENVIRONMENT
- Guidelines for revenue recognition
- Departures from sale basis

REVENUE RECOGNITION AT POINT OF SALE
- Sales with discounts
- Sales with right of return
- Sales with buybacks
- Bill and hold sales
- Principal-agent relationships
- Trade loading and channel stuffing
- Multiple-deliverable arrangements

REVENUE RECOGNITION BEFORE DELIVERY
- Percentage-of-completion method
- Completed-contract method
- Long-term contract losses
- Disclosures
- Completion-of-production basis

REVENUE RECOGNITION AFTER DELIVERY
- Installment-sales method
- Cost-recovery method
- Deposit method
- Summary of bases

CURRENT ENVIRONMENT

Most revenue transactions pose few problems for revenue recognition. This is because, in many cases, the transaction is initiated and completed at the same time. However, not all transactions are that simple. For example, consider a customer who enters into a mobile phone contract with a company such as **Verizon**. The customer is often provided with a package that may include a handset, free minutes of talk time, data downloads, and text messaging service. In addition, some providers will bundle that with a fixed-line broadband service. At the same time, customers may pay for these services in a variety of ways, possibly receiving a discount on the handset, then paying higher prices for connection fees, and so forth. In some cases, depending on the package purchased, the company may provide free applications in subsequent periods. How then should the various pieces of this sale be reported by Verizon? The answer is not obvious.

It is therefore not surprising that a recent survey of financial executives noted that the revenue recognition process is increasingly more complex to manage, prone to error, and material to financial statements compared to any other area in financial reporting. The report went on to note that revenue recognition is a top fraud risk and that regardless of the accounting rules followed (GAAP or IFRS), the risk or errors and inaccuracies in revenue reporting is significant.[1]

INTERNATIONAL PERSPECTIVE

The FASB and IASB have a joint project to improve the accounting for revenue.

Indeed, both the FASB and the IASB indicate that the present state of reporting for revenue is unsatisfactory. IFRS is criticized because it lacks guidance in a number of areas. For example, IFRS has one basic standard on revenue recognition—*IAS 18*—plus some limited guidance related to certain minor topics. In contrast, GAAP has numerous standards related to revenue recognition (by some counts over 100), but many believe the standards are often inconsistent with one another. Thus, the accounting for revenues provides a most fitting contrast of the principles-based (IFRS) and rules-based (GAAP) approaches. While both sides have their advocates, the FASB and IASB recognize a number of deficiencies in this area.[2]

Unfortunately, inappropriate recognition of revenue can occur in any industry. Products that are sold to distributors for resale pose different risks than products or services that are sold directly to customers. Sales in high-technology industries, where rapid product obsolescence is a significant issue, pose different risks than sales of inventory with a longer life, such as farm or construction equipment, automobiles, trucks, and appliances.[3] As a consequence, restatements for improper revenue recognition are relatively common and can lead to significant share price adjustments.

[1]See *www.prweb.com/releases/RecognitionRevenue/IFRS/prweb1648994.htm.*

[2]See, for example, "Preliminary Views on Revenue Recognition in Contracts with Customers," *IASB/FASB Discussion Paper* (December 19, 2008). Some of the problems noted are that GAAP has so many standards that at times they are inconsistent with each other in applying basic principles. In addition, even with the many standards, no guidance is provided for service transactions. Conversely, IFRS has a lack of guidance in certain fundamental areas such as multiple-deliverable arrangements, which are becoming increasingly common. In addition, there is inconsistency in applying revenue recognition principles to long-term contracts versus other elements of revenue recognition.

[3]Adapted from American Institute of Certified Public Accountants, Inc., *Audit Issues in Revenue Recognition* (New York: AICPA, 1999).

Guidelines for Revenue Recognition

1 LEARNING OBJECTIVE
Apply the revenue recognition principle.

Revenue arises from ordinary operations and is referred to by various names such as sales, fees, rent, interest, royalties, and service revenue. Gains, on the other hand, may or may not arise in the normal course of operations. Typical gains are gains on sale of noncurrent assets or unrealized gains related to investments or noncurrent assets. The primary issue related to revenue recognition is when to recognize the revenue.

In general, the guidelines for revenue recognition are quite broad. On top of the broad guidelines, certain industries have specific additional guidelines that provide further insight into when revenue should be recognized. The **revenue recognition principle** provides that companies should recognize revenue[4] (1) when it is realized or realizable, and (2) when it is earned.[5] Therefore, proper revenue recognition revolves around three terms:

> Revenues are **realized** when a company exchanges goods and services for cash or claims to cash (receivables).
>
> Revenues are **realizable** when assets a company receives in exchange are readily convertible to known amounts of cash or claims to cash.
>
> Revenues are **earned** when a company has substantially accomplished what it must do to be entitled to the benefits represented by the revenues—that is, when the earnings process is complete or virtually complete.[6]

Four revenue transactions are recognized in accordance with this principle:

1. Companies recognize revenue from selling products at the date of sale. This date is usually interpreted to mean the date of delivery to customers.
2. Companies recognize revenue from services provided, when services have been performed and are billable.
3. Companies recognize revenue from permitting others to use enterprise assets, such as interest, rent, and royalties, as time passes or as the assets are used.
4. Companies recognize revenue from disposing of assets other than products at the date of sale.

Underlying Concepts

Revenues are inflows of assets and/or settlements of liabilities from delivering or producing goods, providing services, or other earning activities that constitute a company's ongoing major or central operations during a period.

[4]Recognition is "the process of formally recording or incorporating an item in the accounts and financial statements of an entity" (*SFAC No. 3*, par. 83). "Recognition includes depiction of an item in both words and numbers, with the amount included in the totals of the financial statements" (*SFAC No. 5*, par. 6). For an asset or liability, recognition involves recording not only acquisition or incurrence of the item but also later changes in it, including removal from the financial statements previously recognized.

Recognition is not the same as realization, although the two are sometimes used interchangeably in accounting literature and practice. *Realization* is "the process of converting noncash resources and rights into money and is most precisely used in accounting and financial reporting to refer to sales of assets for cash or claims to cash" (*SFAC No. 3*, par. 83).

[5]"Recognition and Measurement in Financial Statements of Business Enterprises," *Statement of Financial Accounting Concepts No. 5* (Stamford, Conn.: FASB, 1984), par. 83.

[6]Gains (as contrasted to revenues) commonly result from transactions and other events that do not involve an "earning process." For gain recognition, being earned is generally less significant than being realized or realizable. Companies commonly recognize gains at the time of an asset's sale, disposition of a liability, or when prices of certain assets change.

These revenue transactions are diagrammed in Illustration 18-1.

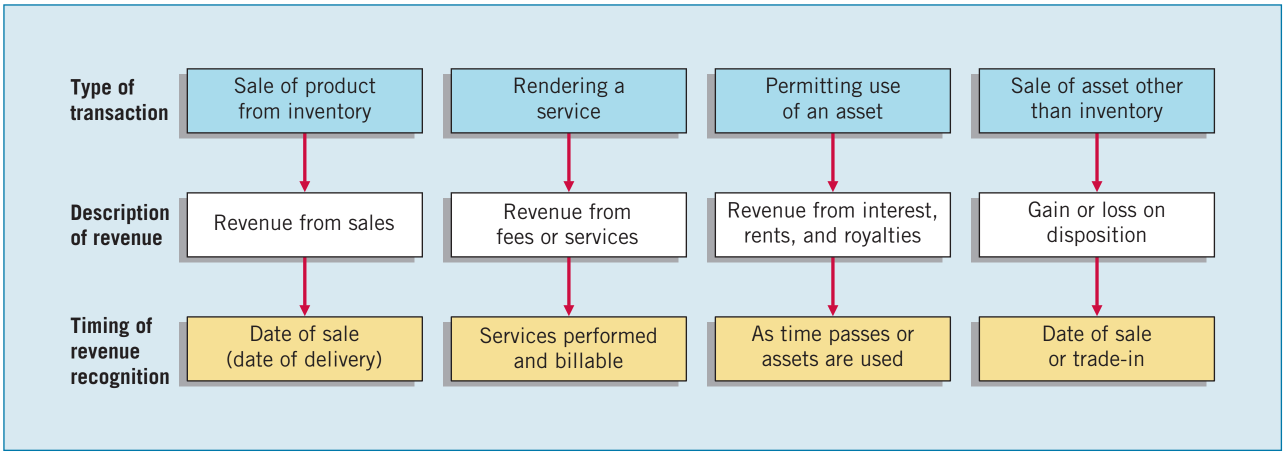


ILLUSTRATION 18-1
Revenue Recognition Classified by Nature of Transaction

The preceding statements are the basis of accounting for revenue transactions. Yet, in practice there are departures from the revenue recognition principle. Companies sometimes recognize revenue at other points in the earning process, owing in great measure to the considerable variety of revenue transactions.[7]

Departures from the Sale Basis

An FASB study found some common **reasons for departures from the sale basis**.[8] One reason is a desire to **recognize earlier** than the time of sale the effect of earning activities. Earlier recognition is appropriate if there is a high degree of certainty about the amount of revenue earned. A second reason is a desire to **delay recognition** of revenue beyond the time of sale. Delayed recognition is appropriate if the degree of uncertainty concerning the amount of either revenue or costs is sufficiently high or if the sale does not represent substantial completion of the earnings process.

This chapter focuses on two of the four general types of revenue transactions described earlier: (1) selling products and (2) providing services. Both of these are **sales transactions**. (In several other sections of the textbook, we discuss the other two types of revenue transactions—revenue from permitting others to use enterprise assets, and revenue from disposing of assets other than products.) Our discussion of product sales transactions in this chapter is organized around the following topics:

1. Revenue recognition at point of sale (delivery).
2. Revenue recognition before delivery.
3. Revenue recognition after delivery.

[7]The FASB and IASB are now involved in a joint project on revenue recognition. The purpose of this project is to develop comprehensive conceptual guidance on when to recognize revenue. Presently, the Boards are evaluating a customer-consideration model. In this model, a company accounts for the contract asset or liability that arises from the rights and performance obligations in an enforceable contract with the customer. At contract inception, the rights in the contract are measured at the amount of the promised customer payment (that is, the customer consideration). That amount is then allocated to the individual performance obligations identified within the contract in proportion to the standalone selling price of each good or service underlying the performance obligation. It is hoped that this approach (rather than using the earned and realized or realized criteria) will lead to a better basis for revenue recognition. See *www.fasb.org/project/revenue_recognition.shtml*.

[8]Henry R. Jaenicke, *Survey of Present Practices in Recognizing Revenues, Expenses, Gains, and Losses, A Research Report* (Stamford, Conn.: FASB, 1981), p. 11.

Illustration 18-2 depicts this organization of revenue recognition topics.

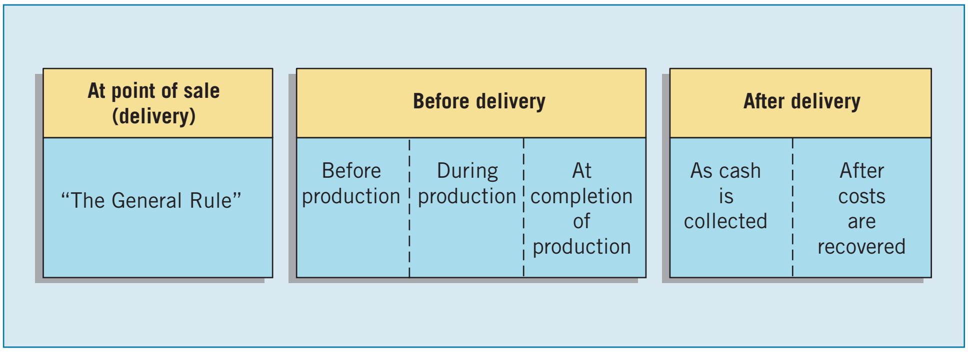


ILLUSTRATION 18-2
Revenue Recognition Alternatives

LIABILITY OR REVENUE?

What do the numbers mean?

Suppose you purchased a gift card for spa services at Sundara Spa for $300. The gift card expires at the end of six months. When should Sundara record the revenue? Here are two choices:

1. At the time Sundara receives the cash for the gift card.
2. At the time Sundara provides the service to the gift-card holder.

If you answered number 2, you would be right. Companies should recognize revenue when the obligation is satisfied—which is when Sundara performs the service.

Now let's add a few more facts. Suppose that the gift-card holder fails to use the card in the six-month period. Statistics show that between 2 and 15 percent of gift-card holders never redeem their cards. So, do you still believe that Sundara should record the revenue at the expiration date?

If you say you are not sure, you are probably right. Here is why: Certain states do not recognize expiration dates, and therefore the customer has the right to redeem an otherwise expired gift card at any time. Let's say for the moment we are in one of these states. Because the card holder may never redeem, when can Sundara recognize the revenue? In that case, Sundara would have to show statistically that after a certain period of time, the likelihood of redemption is remote. If it can make that case, it can recognize the revenue. Otherwise, it may have to wait a long time.

Unfortunately, Sundara may still have a problem. It may be required to turn over the value of the spa services to the state. The treatment for unclaimed gift cards may fall under the abandoned-and-unclaimed-property laws. Most common unclaimed items are required to be remitted to the states after a five-year period. Failure to report and remit the property can result in additional fines and penalties. So if Sundara is in a state where unclaimed property must be sent state to the state, Sundara should report a liability on its balance sheet.

Source: PricewaterhouseCoopers, "Issues Surrounding the Recognition of Gift Card Sales and Escheat Liabilities," *Quick Brief* (December 2004).

REVENUE RECOGNITION AT POINT OF SALE (DELIVERY)

2 LEARNING OBJECTIVE
Describe accounting issues for revenue recognition at point of sale.

According to the FASB's *Concepts Statement No. 5*, companies usually meet the two conditions for recognizing revenue (being realized or realizable and being earned) by the time they deliver products or render services to customers.[9] Therefore, companies commonly recognize revenues from manufacturing and selling

[9]The SEC believes that revenue is realized or realizable and earned when all of the following criteria are met: (1) Persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been provided; (3) the seller's price to the buyer is fixed or determinable; and (4) collectibility is reasonably assured. **[1]** The SEC provided more specific guidance because the general criteria were difficult to interpret.

See the FASB Codification section (page 1109).

activities at **point of sale** (usually meaning delivery).[10] Implementation problems, however, can arise. We discuss some of these problematic situations on the following pages.

Sales with Discounts

Any trade discounts or volume rebates should reduce consideration received and reduce revenue earned. In addition, if the payment is delayed, the seller should impute an interest rate for the difference between the cash or cash equivalent price and the deferred amount. In essence, the seller is financing the sale and should record interest revenue over the payment term. Illustrations 18-3 and 18-4 provide examples of transactions that illustrate these points.

ILLUSTRATION 18-3
Revenue Measurement—Volume Discount

VOLUME DISCOUNT

Facts: Sansung Company has an arrangement with its customers that it will provide a 3% volume discount to its customers if they purchase at least $2 million of its product during the calendar year. On March 31, 2012, Sansung has made sales of $700,000 to Artic Co. In the previous two years, Sansung sold over $3,000,000 to Artic in the period April 1 to December 31.

***Question:* How much revenue should Sansung recognize for the first three months of 2012?**

Solution: In this case, Sansung should reduce its revenue by $21,000 ($700,000 × 3%) because it is probable that it will provide this rebate. Revenue should therefore be reported at $679,000 ($700,000 − $21,000). To not recognize this volume discount overstates Sansung's revenue for the first three months of 2012. In other words, the realizable revenue is $679,000, not $700,000.

In this case, Sansung makes the following entry on March 31, 2012.

Accounts Receivable	679,000	
Sales Revenue		679,000

Assuming that Sansung's customers **meet the discount threshold**, Sansung makes the following entry.

Cash	679,000	
Accounts Receivable		679,000

If Sansung's customers **fail to meet the discount threshold**, Sansung makes the following entry upon payment.

Cash	700,000	
Accounts Receivable		679,000
Sales Discounts Forfeited		21,000

As indicated in Chapter 7 (page 372), Sales Discounted Forfeited is reported in the other revenue and expense section of the income statement.

In some cases, companies provide cash discounts to customers for a short period of time (often referred to as prompt settlement discounts). For example, assume that terms are payment due in 60 days, but if payment is made within 5 days, a 2 percent discount is given. These prompt settlement discounts should reduce revenues, if material. In most cases, companies record the revenue at full price (gross) and record a sales discount if payment is made within the discount period.

When a sales transaction involves a financing arrangement, the fair value is determined either by measuring the consideration received or by discounting the payment using an imputed interest rate. The imputed interest rate is the more clearly determinable of either (1) the prevailing rate for a similar instrument of an issuer with a similar credit

[10]*Statement of Financial Accounting Concepts No. 5*, op. cit., par. 84.

rating, or (2) a rate of interest that discounts the nominal amount of the instrument to the current sales price of the goods or services. [2] This issue is addressed in Illustration 18-4.

ILLUSTRATION 18-4
Revenue Measurement—Deferred Payment

EXTENDED PAYMENT TERMS

Facts: On July 1, 2012, SEK Company sold goods to Grant Company for $900,000 in exchange for a 4-year zero-interest-bearing note in the face amount of $1,416,163. The goods have an inventory cost on SEK's books of $590,000.

Questions: **(a) How much revenue should SEK Company record on July 1, 2012? (b) How much revenue should it report related to this transaction on December 31, 2012?**

Solution:
(a) SEK should record revenue of $900,000 on July 1, 2012, which is the fair value of the inventory in this case.
(b) SEK is also financing this purchase and records interest revenue on the note over the 4-year period. In this case, the interest rate is imputed and is determined to be 12%. SEK records interest revenue of $54,000 (12% × ½ × $900,000) at December 31, 2012.

The journal entry to record SEK's sale to Grant Company is as follows (ignoring the cost of goods sold entry).

July 1, 2012		
Notes Receivable	1,416,163	
Sales Revenue		900,000
Discount on Notes Receivable		516,163

SEK makes the following entry to record interest revenue.

December 31, 2012		
Discount on Notes Receivable	54,000	
Interest Revenue (12% × ½ × $900,00)		54,000

Sales with Right of Return

Whether cash or credit sales are involved, a special problem arises with claims for returns and allowances. In Chapter 7, we presented the accounting treatment for normal returns and allowances. However, certain companies experience such a **high rate of returns**—a high ratio of returned merchandise to sales—that they find it necessary to postpone reporting sales until the return privilege has substantially expired.

For example, in the publishing industry, the rate of return approaches 25 percent for hardcover books and 65 percent for some magazines. Other types of companies that experience high return rates are perishable food dealers, distributors who sell to retail outlets, recording-industry companies, and some toy and sporting goods manufacturers. Returns in these industries are frequently made either through a right of contract or as a matter of practice involving "guaranteed sales" agreements or consignments.

Three alternative revenue recognition methods are available when the right of return exposes the seller to continued risks of ownership. These are (1) not recording a sale until all return privileges have expired; (2) recording the sale, but reducing sales by an estimate of future returns; and (3) recording the sale and accounting for the returns as they occur. The FASB concluded that if a company sells its product but gives the buyer the right to return it, the company should **recognize revenue** from the sales transactions at the time of sale **only if all of the following six conditions** have been met. [3]

1. The seller's price to the buyer is substantially fixed or determinable at the date of sale.
2. The buyer has paid the seller, or the buyer is obligated to pay the seller, and the obligation is not contingent on resale of the product.

3. The buyer's obligation to the seller would not be changed in the event of theft or physical destruction or damage of the product.
4. The buyer acquiring the product for resale has economic substance apart from that provided by the seller.
5. The seller does not have significant obligations for future performance to directly bring about resale of the product by the buyer.
6. The seller can reasonably estimate the amount of future returns.

What if the six conditions are not met? In that case, the company must recognize sales revenue and cost of sales either when the return privilege has substantially expired or when those six conditions subsequently are met, **whichever occurs first**. In the income statement, the company must reduce sales revenue and cost of sales by the amount of the estimated returns.[11]

An example of a return situation is presented in Illustration 18-5.

ILLUSTRATION 18-5
Recognition—Returns

SALES WITH RETURNS

Facts: Pesido Company is in the beta-testing stage for new laser equipment that will help patients who have acid reflux problems. The product that Pesido is selling has been very successful in trials to date. As a result, Pesido has received regulatory authority to sell this equipment to various hospitals. Because of the uncertainty surrounding this product, Pesido has granted to the participating hospitals the right to return the device and receive full reimbursement for a period of 9 months.

***Question:* When should Pesido recognize the revenue for the sale of the new laser equipment?**

Solution: Given that the hospital has the right to rescind the purchase for a reason specified in the sales contract and Pesido is uncertain about the probability of return, Pesido should not record revenue at the time of delivery. If there is uncertainty about the possibility of return, revenue is recognized when the goods have been delivered and the time period for rejection has elapsed. Only at that time have the risks and rewards of ownership transferred.

Companies may retain only an insignificant risk of ownership when a refund or right of return is provided. For example, revenue is recognized at the time of sale (even though a right of return exists or refund is permitted), provided the seller can reliably estimate future returns. In this case, the seller recognizes an allowance for returns based on previous experience and other relevant factors.

Returning to the Pesido example, assume that Pesido sold $300,000 of laser equipment on August 1, 2012, and retains only an insignificant risk of ownership. On October 15, 2012, $10,000 in equipment was returned. In this case, Pesido makes the following entries.

August 1, 2012		
Accounts Receivable	300,000	
Sales Revenue		300,000
October 15, 2012		
Sales Returns and Allowances	10,000	
Accounts Receivable		10,000

At December 31, 2012, based on prior experience, Pesido estimates that returns on the remaining balance will be 4 percent. Pesido makes the following entry to record the expected returns.

[11] Here is an example where GAAP provides detailed guidelines beyond the general revenue recognition principle.

December 31, 2012		
Sales Returns and Allowances		
[($300,000 − $10,000) × 4%]	11,600	
Allowance for Sales Returns and Allowances		11,600

The Sales Returns and Allowances account is reported as contra revenue in the income statement, and Allowance for Sales Returns and Allowances is reported as a contra account to Accounts Receivable in the balance sheet. As a result, the net revenue and net accounts receivable recognized are adjusted for the amount of the expected returns.

Sales with Buybacks

If a company sells a product in one period and agrees to buy it back in the next period, has the company sold the product? As indicated in Chapter 8, legal title has transferred in this situation. However, the economic substance of this transaction is that the seller retains the risks of ownership. Illustration 18-6 provides an example of a sale with a buyback provision.

ILLUSTRATION 18-6
Recognition—Sale with Buyback

SALE WITH BUYBACK

Facts: Morgan Inc., an equipment dealer, sells equipment to Lane Company for $135,000. The equipment has a cost of $115,000. Morgan agrees to repurchase the equipment at the end of 2 years at its fair value. Lane Company pays full price at the sales date, and there are no restrictions on the use of the equipment over the 2 years.

***Question:* How should Morgan record this transaction?**

Solution: For a sale and repurchase agreement, the terms of the agreement need to be analyzed to ascertain whether, in substance, the seller has transferred the risks and rewards of ownership to the buyer. In this case, it appears that the risks and rewards of ownership are transferred to Lane Company and therefore a sale should be recorded. That is, Lane will receive fair value at the date of repurchase, which indicates Morgan has transferred risks of ownership. Furthermore, Lane has no restrictions on use of the equipment, which indicates that Morgan has transferred the rewards of ownership.

Morgan records the sale and related cost of goods sold as follows.

Cash	135,000	
Sales Revenue		135,000
Cost of Goods Sold	115,000	
Inventory		115,000

Now assume that Morgan requires Lane to sign a note with repayment to be made in 24 monthly payments. Lane is also required to maintain the equipment at a certain level. Morgan sets the payment schedule such that it receives a normal lender's rate of return on the transaction. In addition, Morgan agrees to repurchase the equipment after two years for $95,000.

In this case, this arrangement appears to be a financing transaction rather than a sale. That is, Lane is required to maintain the equipment at a certain level and Morgan agrees to repurchase at a set price, resulting in a lender's return. Thus, the risks and rewards of ownership are to a great extent still with Morgan. When the seller has retained the risks and rewards of ownership, even though legal title has been transferred, the transaction is a financing arrangement and does not give rise to revenue.[12]

[12]In essence, Lane is renting the equipment from Morgan for two years. We discuss the accounting for such rental or lease arrangements in Chapter 21.

Bill and Hold Sales

Bill and hold sales result when the buyer is not yet ready to take delivery but does take title and accept billing. For example, a customer may request a company to enter into such an arrangement because of (1) lack of available space for the product, (2) delays in its production schedule, or (3) more than sufficient inventory in its distribution channel.[13] Illustration 18-7 provides an example of a bill and hold arrangement.

ILLUSTRATION 18-7
Recognition—Bill and Hold

BILL AND HOLD

Facts: Butler Company sells $450,000 of fireplaces to a local coffee shop, Baristo, which is planning to expand its locations around the city. Under the agreement, Baristo asks Butler to retain these fireplaces in its warehouses until the new coffee shops that will house the fireplaces are ready. Title passes to Baristo at the time the agreement is signed.

***Question:* Should Butler report the revenue from this bill and hold arrangement when the agreement is signed, or should revenue be deferred and reported when the fireplaces are delivered?**

Solution: When to recognize revenue in a bill and hold situation depends on the circumstances. Butler should record the revenue at the time title passes, provided (1) the risks of ownership have passed to Baristo, that is, Butler does not have specific performance obligations other than storage; (2) Baristo makes a fixed commitment to purchase the goods, requests that the transaction be on a bill and hold basis, and sets a fixed delivery date; and (3) goods must be segregated, complete, and ready for shipment. Otherwise, if these conditions are not met, it is assumed that the risks and rewards of ownership remain with the seller even though title has passed. In this case, it appears that these conditions were probably met and therefore revenue recognition should be permitted at the time the agreement is signed.

Butler makes the following entry to record the bill and hold sale.

Accounts Receivable	450,000	
Sales Revenue		450,000

If a significant period of time elapses before payment, the accounts receivable is discounted. In addition, it is likely that one of the conditions above is violated (such as the normal payment terms). In this case, the most appropriate approach for bill and hold sales is to defer revenue recognition until the goods are delivered because the risks and rewards of ownership usually do not transfer until that point. [4]

Principal-Agent Relationships

In a **principal-agent relationship**, amounts collected on behalf of the principal are not revenue of the agent. Instead, revenue for the agent is the amount of the commission it receives (usually a percentage of the total revenue).

Classic Example

An example of principal-agent relationships is an airline that sells tickets through a travel agent. For example, assume that Fly-Away Travels sells airplane tickets for **British Airways (BA)** to various customers. In this case, the principal is BA and the agent is Fly-Away Travels. BA is acting as a principal because it has exposure to the significant risks and rewards associated with the sale of its services. Fly-Away is acting as an agent because it does not have exposure to significant risks and rewards related to the tickets. Although Fly-Away collects the full airfare from the client, it then remits this amount to BA less a commission. Fly-Away therefore should not record the full amount of the fare as revenue on its books—to do so overstates its revenue. **Its revenue is the commission—not**

[13]Proposed Accounting Standards Update, "Revenue from Contracts with Customers" (Stamford, Conn.: FASB, June 24, 2010), p. 54.

the full fare price. The risks and rewards of ownership are not transferred to Fly-Away because it does not bear any inventory risk as it sells tickets to customers.

This distinction is very important for revenue recognition purposes. Some might argue that there is no harm in letting Fly-Away record revenue for the full price of the ticket and then charging the cost of the ticket against the revenue (often referred to as the **gross method** of recognizing revenue). Others note that this approach overstates the agent's revenue and is misleading. The revenue received is the commission for providing the travel services, not the full fare price (often referred to as the **net approach**). The profession believes the net approach is the correct method for recognizing revenue in a principal-agent relationship. As a result, the FASB has developed specific criteria to determine when a principal-agent relationship exists.[14] An important feature in deciding whether Fly-Away is acting as an agent is whether the amount it earns is predetermined, being either a fixed fee per transaction or a stated percentage of the amount billed to the customer.

GROSSED OUT

What do the number mean?

Consider **Priceline.com**, the company made famous by William Shatner's ads about "naming your own price" for airline tickets and hotel rooms. In one quarter, Priceline reported that it earned $152 million in revenues. But, that included the full amount customers paid for tickets, hotel rooms, and rental cars. Traditional travel agencies call that amount "gross bookings," not revenues. And, much like regular travel agencies, Priceline keeps only a small portion of gross bookings—namely, the spread between the customers' accepted bids and the price it paid for the merchandise. The rest, which Priceline calls "product costs," it pays to the airlines and hotels that supply the tickets and rooms.

However, Priceline's product costs came to $134 million, leaving Priceline just $18 million of what it calls "gross profit" and what most other companies would call revenues. And, that's before all of Priceline's other costs—like advertising and salaries—which netted out to a loss of $102 million. The difference isn't academic: Priceline shares traded at about 23 times its reported revenues but at a mind-boggling 214 times its "gross profit." This and other aggressive recognition practices explains the stricter revenue recognition guidance, indicating that if a company performs as an agent or broker without assuming the risks and rewards of ownership of the goods, the company should report sales on a net (fee) basis.

Source: Jeremy Kahn, "Presto Chango! Sales Are Huge," *Fortune* (March 20, 2000), p. 44.

Consignments

Another common principal-agent relationship involves consignments. In these cases, manufacturers (or wholesalers) deliver goods but retain title to the goods until they are sold. This specialized method of marketing certain types of products makes use of a device known as a **consignment**. Under this arrangement, the **consignor** (manufacturer or wholesaler) ships merchandise to the **consignee** (dealer), who is to act as an agent for the consignor in selling the merchandise. Both consignor and consignee are interested in selling—the former to make a profit or develop a market, the latter to make a commission on the sale.

[14]Common principal-agent arrangements include (but are not limited to) (1) arrangements with third-party suppliers to drop-ship merchandise on behalf of the entity, (2) services offered by a company that will be provided by a third-party service provider, (3) shipping and handling fees and costs billed to customers, and (4) reimbursements for out-of-pocket expenses (expenses often include, but are not limited to, expenses related to airfare, mileage, hotel stays, out-of-town meals, photocopies, and telecommunications and facsimile charges). Principal-agent accounting guidance is not limited to entities that sell products or services over the Internet but also to transactions related to advertisements, mailing lists, event tickets, travel tickets, auctions (and reverse auctions), magazine subscription brokers, and catalog, consignment, or special-order retail sales. **[5]**

The consignee accepts the merchandise and agrees to exercise due diligence in caring for and selling it. The consignee remits to the consignor cash received from customers, after deducting a sales commission and any chargeable expenses.

In consignment sales, the consignor uses a modified version of the sale basis of revenue recognition. That is, the consignor recognizes revenue only after receiving notification of sale and the cash remittance from the consignee. The consignor carries the merchandise as inventory throughout the consignment, separately classified as Inventory (consignments). **The consignee does not record the merchandise as an asset on its books.** Upon sale of the merchandise, the consignee has **a liability for the net amount due the consignor**. The consignor periodically receives from the consignee a report called **account sales** that shows the merchandise received, merchandise sold, expenses chargeable to the consignment, and the cash remitted. Revenue is then recognized by the consignor. Analysis of a consignment arrangement is provided in Illustration 18-8.

ILLUSTRATION 18-8
Entries for Consignment Sales

SALES ON CONSIGNMENT

Facts: Nelba Manufacturing Co. ships merchandise costing $36,000 on consignment to Best Value Stores. Nelba pays $3,750 of freight costs, and Best Value pays $2,250 for local advertising costs that are reimbursable from Nelba. By the end of the period, Best Value has sold two-thirds of the consigned merchandise for $40,000 cash. Best Value notifies Nelba of the sales, retains a 10% commission, and remits the cash due Nelba.

***Question:* What are the journal entries that the consignor (Nelba) and the consignee (Best Value) make to record this transaction?**

Solution:

NELBA MFG. CO. (CONSIGNOR)			BEST VALUE STORES (CONSIGNEE)		
Shipment of consigned merchandise					
Inventory (consignments)	36,000		No entry (record memo of merchandise received).		
Finished Goods Inventory		36,000			
Payment of freight costs by consignor					
Inventory (consignments)	3,750		No entry.		
Cash		3,750			
Payment of advertising by consignee					
No entry until notified.			Receivable from Consignor	2,250	
			Cash		2,250
Sales of consigned merchandise					
No entry until notified.			Cash	40,000	
			Payable to Consignor		40,000
Notification of sales and expenses and remittance of amount due					
Cash	33,750		Payable to Consignor	40,000	
Advertising Expense	2,250		Receivable from Consignor		2,250
Commission Expense	4,000		Commission Revenue		4,000
Revenue from Consignment Sales		40,000	Cash		33,750
Adjustment of inventory on consignment for cost of sales					
Cost of Goods Sold	26,500		No entry.		
Inventory (consignments)		26,500			
[2/3 ($36,000 + $3,750) = $26,500]					

Under the consignment arrangement, the consignor accepts the risk that the merchandise might not sell and relieves the consignee of the need to commit part of its working capital to inventory. Companies use a variety of different systems and account titles to record consignments, but they all share the common goal of postponing the recognition of revenue until it is known that a sale to a third party has occurred.

Trade Loading and Channel Stuffing

One commentator describes **trade loading** this way: "Trade loading is a crazy, uneconomic, insidious practice through which manufacturers—trying to show sales, profits, and market share they don't actually have—induce their wholesale customers, known as the trade, to buy more product than they can promptly resell." For example, the cigarette industry appears to have exaggerated a couple years' operating profits by as much as $600 million by taking the profits from future years.

In the computer software industry, a similar practice is referred to as **channel stuffing**. When a software maker needed to make its financial results look good, it offered deep discounts to its distributors to overbuy and then recorded revenue when the software left the loading dock. Of course, the distributors' inventories become bloated and the marketing channel gets too filled with product, but the software maker's current-period financials are improved. However, financial results in future periods will suffer, unless the company repeats the process.

Trade loading and channel stuffing distort operating results and "window dress" financial statements. In addition, similar to consignment transactions or sales with buyback agreements, these arrangements generally do not transfer the risks and rewards of ownership. If used without an appropriate allowance for sales returns, channel stuffing is a classic example of booking tomorrow's revenue today. Business managers need to be aware of the ethical dangers of misleading the financial community by engaging in such practices to improve their financial statements.

NO TAKE-BACKS

What do the numbers mean?

Investors in **Lucent Technologies** were negatively affected when Lucent violated one of the fundamental criteria for revenue recognition—the "no take-back" rule. This rule holds that revenue should not be booked on inventory that is shipped if the customer can return it at some point in the future. In this particular case, Lucent agreed to take back shipped inventory from its distributors if the distributors were unable to sell the items to their customers.

In essence, Lucent was "stuffing the channel." By booking sales when goods were shipped, even though they most likely would get them back, Lucent was able to report continued sales growth. However, Lucent investors got a nasty surprise when distributors returned those goods and Lucent had to restate its financial results. The restatement erased $679 million in revenues, turning an operating profit into a loss. In response to this bad news, Lucent's share price declined $1.31 per share, or 8.5 percent. Lucent is not alone in this practice. **Sunbeam** got caught stuffing the sales channel with barbeque grills and other outdoor items, which contributed to its troubles when it was forced to restate its earnings.

Investors can be tipped off to potential channel stuffing by carefully reviewing a company's revenue recognition policy for generous return policies and by watching inventory and receivables levels. When sales increase along with receivables, that's one sign that customers are not paying for goods shipped on credit. And growing inventory levels are an indicator that customers have all the goods they need. Both scenarios suggest a higher likelihood of goods being returned and revenues and income being restated. So remember, no take-backs!

Source: Adapted from S. Young, "Lucent Slashes First Quarter Outlook, Erases Revenue from Latest Quarter," *Wall Street Journal Online* (December 22, 2000); and Tracey Byrnes, "Too Many Thin Mints: Spotting the Practice of Channel Stuffing," *Wall Street Journal Online* (February 7, 2002).

Multiple-Deliverable Arrangements

One of the most difficult issues related to revenue recognition involves **multiple-deliverable arrangements** (MDAs). MDAs provide multiple products or services to customers as part of a single arrangement. The major accounting issues related to this type of arrangement are how to allocate the revenue to the various products and services and how to allocate the revenue to the proper period.

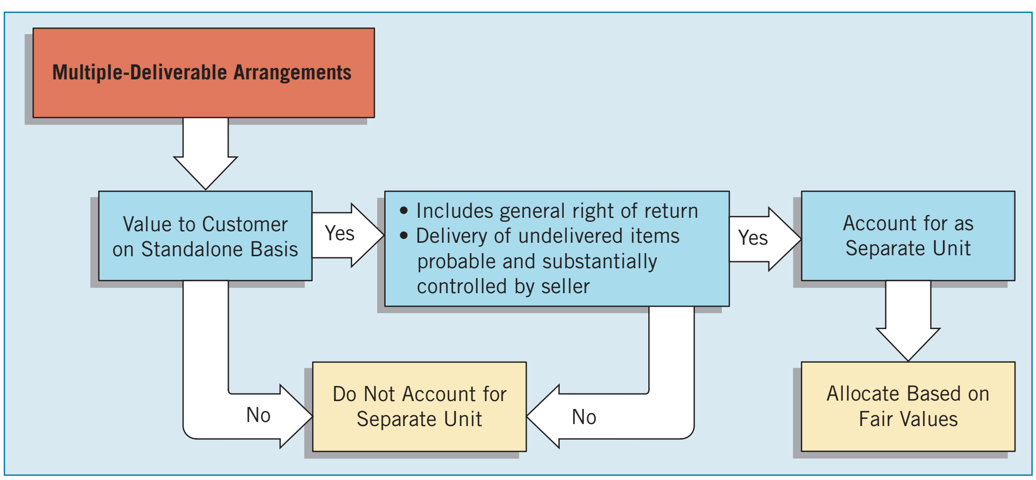
These issues are particularly complex in the technology area. Many devices have contracts that typically include such multiple deliverables as hardware, software, professional services, maintenance, and support—all of which are valued and accounted for differently. A classic example relates to the **Apple** iPhone and its AppleTV product. Basically, until a recent rule change, revenues and related costs were accounted for on a subscription basis over a period of years. The reason was that Apple provides future unspecified software upgrades and other features without charge. It was argued that Apple should defer a significant portion of the cash received for the iPhone and recognize it over future periods. At the same time, engineering, marketing, and warranty costs were expensed as incurred. As a result, Apple reported conservative numbers related to its iPhone revenue. However, as a result of efforts to more clearly define the various services related to an item such as the iPhone, Apple is now able to report more revenue at the point of sale.

In general, all units in a multiple-deliverable arrangement are considered separate units of accounting, provided that:

1. A delivered item has value to the customer on a standalone basis; and
2. The arrangement includes a general right of return relative to the delivered item; and
3. Delivery or performance of the undelivered item is considered probable and substantially in the control of the seller.

Once the separate units of accounting are determined, the amount paid for the arrangement is allocated among the separate units based on **relative fair value**. A company determines fair value based on what the vendor could sell the component for on a standalone basis. If this information is not available, the seller may rely on third-party evidence or if not available, the seller may use its best estimate of what the item might sell for as a standalone unit. [6] Illustration 18-9 identifies the steps in the evaluation process.

ILLUSTRATION 18-9
Multiple-Deliverable Evaluation Process



Presented in Illustrations 18-10 and 18-11 are two examples of the accounting for MDAs.

ILLUSTRATION 18-10
MDA—Equipment and Maintenance

MULTIPLE DELIVERABLES

Facts: Lopez Company enters into a contract to build, run, and maintain a highly complex piece of electronic equipment for a period of 5 years, commencing upon delivery of the equipment. There is a fixed fee for each of the build, run, and maintenance deliverables, and any progress payments made are not refundable. In addition, there is a right of return in the arrangement. All the deliverables have a standalone value, and there is verifiable evidence of the selling price for the building and maintenance but not for running the equipment.

Questions: **Should Lopez separate and then measure and allocate the amounts paid for the MDA?**

Solution: Assuming delivery (performance) is probable and Lopez controls any undelivered items, Lopez determines whether the components have standalone value. The components of the MDA are the equipment, maintenance of the equipment, and running the equipment; each component has a standalone value. Lopez can determine standalone values of equipment and the maintenance agreement by third-party evidence of fair values. The company then makes a best estimate of the selling price for running of the equipment. Lopez next applies the relative fair value method at the inception of the MDA to determine the proper allocation to each component. Once the allocation is performed, the company recognizes revenue independently for each component using regular revenue recognition criteria.

ILLUSTRATION 18-11
MDA—Product, Installation, and Service

PRODUCT, INSTALLATION, AND SERVICE

Facts: Handler Company is an experienced manufacturer of equipment used in the construction industry. Handler's products range from small to large individual pieces of automated machinery to complex systems containing numerous components. Unit selling prices range from $600,000 to $4,000,000 and are quoted inclusive of installation and training. The installation process does not involve changes to the features of the equipment and does not require proprietary information about the equipment in order for the installed equipment to perform to specifications. Handler has the following arrangement with Chai Company.

- Chai purchases equipment from Handler for a price of $2,000,000 and chooses Handler to do the installation. Handler charges the same price for the equipment irrespective of whether it does the installation or not. (Some companies do the installation themselves because they either prefer their own employees to do the work or because of relationships with other customers.) The price of the installation service is estimated to have a fair value of $20,000.
- The fair value of the training sessions is estimated at $50,000.
- Chai is obligated to pay Handler the $2,000,000 upon the delivery and installation of the equipment. Handler delivers the equipment on September 1, 2012, and completes the installation of the equipment on November 1, 2012. Training related to the equipment starts once the installation is completed and lasts for 1 year. The equipment has a useful life of 10 years.

Questions: **(a) What are the standalone units for purposes of accounting for the sale of the equipment? (b) If there is more than one standalone unit, how should the fee of $2,000,000 be allocated to various components?**

Solution:
(a) The first condition for separation into a standalone unit for the equipment is met. That is, the equipment, installation, and training are three separate components.
(b) The total revenue of $2,000,000 should be allocated to the three components based on their relative fair values. In this case, the fair value of the equipment should be considered $2,000,000, the installation fee is $20,000, and the training is $50,000. The total fair value to consider is $2,070,000 ($2,000,000 + $20,000 + $50,000). The allocation is as follows.

Equipment	$1,932,367	($2,000,000 ÷ $2,070,000) × $2,000,000
Installation	19,324	($20,000 ÷ $2,070,000) × $2,000,000
Training	48,309	($50,000 ÷ $2,070,000) × $2,000,000

Handler makes the following entries on November 1, 2012.

November 1, 2012		
Cash	2,000,000	
Service Revenue (installation)		19,324
Unearned Service Revenue		48,309
Sales Revenue		1,932,367

The sale of the equipment should be recognized once the installation is completed on November 1, 2012, and the installation fee also should be recognized because these services have been provided. The training revenues should be allocated on a straight-line basis starting on November 1, 2012, or $4,026 ($48,309 ÷ 12) per month for one year (unless a more appropriate method such as the percentage-of-completion method is warranted). The journal entry to recognize the training revenue for two months in 2012 is as follows.

December 31, 2012		
Unearned Service Revenue	8,052	
Service Revenue (training) ($4,026 × 2)		8,052

Therefore, the total revenue recognized at December 31, 2012, is $1,959,743 ($1,932,367 + $19,324 + $8,052). Handler makes the following journal entry to recognize the training revenue in 2013, assuming adjusting entries are made at year-end.

December 31, 2013		
Unearned Service Revenue	40,257	
Service Revenue (training) ($48,309 − $8,052)		40,257

Summary of Revenue Recognition Methods

Illustration 18-12 provides a summary of revenue recognition methods and related accounting guidance.

ILLUSTRATION 18-12
Revenue Recognition at the Point of Sale

General Principles

Recognize revenue (1) when it is realized or realizable, and (2) when it is earned. In numerous cases, GAAP provides additional specific guidance to help determine proper revenue recognition.

Specific Transactions	Accounting Guidance
Sales with discounts	Trade, volume, and cash discounts reduce sales revenue.
Sales with extended payment terms	The fair value measurement of revenue is determined by using the fair value of the consideration received or by discounting the future payments using an imputed interest rate.
Sales with right of return	If there is uncertainty about the possibility of return, recognize revenue when the goods are delivered and the return period has lapsed. If the company can reliably estimate future returns, revenue (less estimated returns) is recognized at the point of sale.
Sales with buyback	Terms of the buyback agreement must be analyzed to determine if, in substance, the seller has transferred the risks and rewards of ownership.
Bill and hold sales	Recognition depends on the circumstances. Recognize revenue when title passes if (1) the risks of ownership have passed to the customer, and the seller does not have specific obligations other than storage; (2) the customer makes a fixed commitment to purchase the goods, requests that the transaction be on a bill and hold basis, and sets a fixed delivery date; and (3) goods must be segregated, complete, and ready for shipment.
Sales involving principal-agent relationship (general)	Amounts collected by the agent on behalf of the principal are not revenue of the agent. Instead, revenue to the agent is the amount of commission it receives.
Sales involving principal-agent relationship (consignments)	Consignor recognizes revenue (sales and cost of goods sold) when goods are sold by consignee. Consignee recognizes revenue for commissions received.
Trade loading and channel stuffing	Unless returns can be reliably measured, revenue should not be recognized until the goods are sold (by the distributor) to third parties.
Multiple-deliverable arrangements	Apply general revenue recognition principles to each element of the arrangement that has stand-alone value. Once the separate units of accounting are determined, the amount paid for the arrangement is allocated among the separate units based on relative fair value.

REVENUE RECOGNITION BEFORE DELIVERY

For the most part, companies recognize revenue at the point of sale (delivery) because at point of sale most of the uncertainties in the earning process are removed and the exchange price is known. Under certain circumstances, however, companies recognize revenue prior to completion and delivery. The most notable example is long-term construction contract accounting, which uses the percentage-of-completion method.

Long-term contracts frequently provide that the seller (builder) may bill the purchaser at intervals, as it reaches various points in the project. Examples of long-term contracts are construction-type contracts, development of military and commercial aircraft, weapons-delivery systems, and space exploration hardware. When the project consists of separable units, such as a group of buildings or miles of roadway, contract provisions may provide for delivery in installments. In that case, the seller would bill the buyer and transfer title at stated stages of completion, such as the completion of each building unit or every 10 miles of road. The accounting records should record sales when installments are "delivered."[15]

Two distinctly different methods of accounting for long-term construction contracts are recognized.[16] They are:

- **Percentage-of-completion method.** Companies recognize revenues and gross profits each period based upon the progress of the construction—that is, the percentage of completion. The company accumulates construction costs **plus gross profit earned to date** in an inventory account (Construction in Process), and it accumulates progress billings in a contra inventory account (Billings on Construction in Process).
- **Completed-contract method.** Companies recognize revenues and gross profit **only** when the contract is completed. The company accumulates construction costs in an inventory account (Construction in Process), and it accumulates progress billings in a contra inventory account (Billings on Construction in Process).

The rationale for using percentage-of-completion accounting is that under most of these contracts the buyer and seller have enforceable rights. The buyer has the legal right to require specific performance on the contract. The seller has the right to require progress payments that provide evidence of the buyer's ownership interest. As a result, a continuous sale occurs as the work progresses. Companies should recognize revenue according to that progression.

Companies *must* use the percentage-of-completion method when estimates of progress toward completion, revenues, and costs are reasonably dependable and **all of the following conditions** exist. [7]

1. The contract clearly specifies the enforceable rights regarding goods or services to be provided and received by the parties, the consideration to be exchanged, and the manner and terms of settlement.
2. The buyer can be expected to satisfy all obligations under the contract.
3. The contractor can be expected to perform the contractual obligations.

Underlying Concepts

The percentage-of-completion method recognizes revenue from long-term contracts in the periods in which the revenue is earned. The firm contract fixes the selling price. And, if costs are estimable and collection reasonably assured, the revenue recognition concept is not violated.

[15] *Statement of Financial Accounting Concepts No. 5,* par. 84, item c.

[16] *Accounting Trends and Techniques—2010* reports that of the 86 of its 500 sample companies that referred to long-term construction contracts, 63 used the percentage-of-completion method and 20 used the completed-contract method.

Companies should use the completed-contract method when one of the following conditions applies:

- When a company has primarily short-term contracts, *or*
- When a company cannot meet the conditions for using the percentage-of-completion method, *or*
- When there are inherent hazards in the contract beyond the normal, recurring business risks.

The presumption is that percentage-of-completion is the better method. Therefore, companies should use the completed-contract method only when the percentage-of-completion method is inappropriate. We discuss the two methods in more detail in the following sections.

Percentage-of-Completion Method

LEARNING OBJECTIVE 3
Apply the percentage-of-completion method for long-term contracts

The **percentage-of-completion method** recognizes revenues, costs, and gross profit as a company makes progress toward completion on a long-term contract. To defer recognition of these items until completion of the entire contract is to misrepresent the efforts (costs) and accomplishments (revenues) of the accounting periods during the contract. In order to apply the percentage-of-completion method, a company must have some basis or standard for measuring the progress toward completion at particular interim dates.

Measuring the Progress toward Completion

As one practicing accountant wrote, "The big problem in applying the percentage-of-completion method . . . has to do with the ability to make reasonably accurate estimates of completion and the final gross profit."[17] Companies use various methods to determine the **extent of progress toward completion**. The most common are the *cost-to-cost* and *units-of-delivery* methods.[18]

The objective of all these methods is to measure the extent of progress in terms of costs, units, or value added. Companies identify the various measures (costs incurred, labor hours worked, tons produced, floors completed, etc.) and classify them as input or output measures. **Input measures** (costs incurred, labor hours worked) are efforts devoted to a contract. **Output measures** (with units of delivery measured as tons produced, floors of a building completed, miles of a highway completed) track results. Neither are universally applicable to all long-term projects. Their use requires the exercise of judgment and careful tailoring to the circumstances.

Both input and output measures have certain disadvantages. The input measure is based on an established relationship between a unit of input and productivity. If inefficiencies cause the productivity relationship to change, inaccurate measurements result. Another potential problem is front-end loading, in which significant up-front costs result in higher estimates of completion. To avoid this problem, companies should disregard some early-stage construction costs—for example, costs of uninstalled materials or costs of subcontracts not yet performed—if they do not relate to contract performance.

Similarly, output measures can produce inaccurate results if the units used are not comparable in time, effort, or cost to complete. For example, using floors (stories) completed can be deceiving. Completing the first floor of an eight-story building may require more than one-eighth the total cost because of the substructure and foundation construction.

The most popular input measure used to determine the progress toward completion is the **cost-to-cost basis**. Under this basis, a company like **EDS** measures the

[17]Richard S. Hickok, "New Guidance for Construction Contractors: 'A Credit Plus,'" *The Journal of Accountancy* (March 1982), p. 46.

[18]R. K. Larson and K. L. Brown, "Where Are We with Long-Term Contract Accounting?" *Accounting Horizons* (September 2004), pp. 207–219.

percentage of completion by comparing costs incurred to date with the most recent estimate of the total costs required to complete the contract. Illustration 18-13 shows the formula for the cost-to-cost basis.

$$\frac{\text{Costs incurred to date}}{\text{Most recent estimate of total costs}} = \text{Percent complete}$$

ILLUSTRATION 18-13
Formula for Percentage-of-Completion, Cost-to-Cost Basis

Once EDS knows the percentage that costs incurred bear to total estimated costs, it applies that percentage to the total revenue or the estimated total gross profit on the contract. The resulting amount is the revenue or the gross profit to be recognized to date. Illustration 18-14 shows this computation.

Percent complete	×	Estimated total revenue (or gross profit)	=	Revenue (or gross profit) to be recognized to date

ILLUSTRATION 18-14
Formula for Total Revenue to Be Recognized to Date

To find the amounts of revenue and gross profit recognized each period, EDS subtracts total revenue or gross profit recognized in prior periods, as shown in Illustration 18-15.

Revenue (or gross profit) to be recognized to date	–	Revenue (or gross profit) recognized in prior periods	=	Current-period revenue (or gross profit)

ILLUSTRATION 18-15
Formula for Amount of Current-Period Revenue, Cost-to-Cost Basis

Because **the cost-to-cost method is widely used** (without excluding other bases for measuring progress toward completion), we have adopted it for use in our examples. [8]

Example of Percentage-of-Completion Method—Cost-to-Cost Basis

To illustrate the percentage-of-completion method, assume that Hardhat Construction Company has a contract to construct a $4,500,000 bridge at an estimated cost of $4,000,000. The contract is to start in July 2012, and the bridge is to be completed in October 2014. The following data pertain to the construction period. (Note that by the end of 2013, Hardhat has revised the estimated total cost from $4,000,000 to $4,050,000.)

	2012	2013	2014
Costs to date	$1,000,000	$2,916,000	$4,050,000
Estimated costs to complete	3,000,000	1,134,000	—
Progress billings during the year	900,000	2,400,000	1,200,000
Cash collected during the year	750,000	1,750,000	2,000,000

Hardhat would compute the percentage complete as shown in Illustration 18-16.

	2012	2013	2014
Contract price	$4,500,000	$4,500,000	$4,500,000
Less estimated cost:			
Costs to date	1,000,000	2,916,000	4,050,000
Estimated costs to complete	3,000,000	1,134,000	—
Estimated total costs	4,000,000	4,050,000	4,050,000
Estimated total gross profit	$ 500,000	$ 450,000	$ 450,000
Percent complete	25%	72%	100%
	$\left(\frac{\$1,000,000}{\$4,000,000}\right)$	$\left(\frac{\$2,916,000}{\$4,050,000}\right)$	$\left(\frac{\$4,050,000}{\$4,050,000}\right)$

ILLUSTRATION 18-16
Application of Percentage-of-Completion Method, Cost-to-Cost Basis

On the basis of the data above, Hardhat would make the following entries to record (1) the costs of construction, (2) progress billings, and (3) collections. These entries appear as summaries of the many transactions that would be entered individually as they occur during the year.

ILLUSTRATION 18-17
Journal Entries—Percentage-of-Completion Method, Cost-to-Cost Basis

	2012		2013		2014	
To record cost of construction:						
Construction in Process	1,000,000		1,916,000		1,134,000	
Materials, Cash, Payables, etc.		1,000,000		1,916,000		1,134,000
To record progress billings:						
Accounts Receivable	900,000		2,400,000		1,200,000	
Billings on Construction in Process		900,000		2,400,000		1,200,000
To record collections:						
Cash	750,000		1,750,000		2,000,000	
Accounts Receivable		750,000		1,750,000		2,000,000

In this example, the costs incurred to date are a measure of the extent of progress toward completion. To determine this, Hardhat evaluates the costs incurred to date as a proportion of the estimated total costs to be incurred on the project. The estimated revenue and gross profit that Hardhat will recognize for each year are calculated as shown in Illustration 18-18.

ILLUSTRATION 18-18
Percentage-of-Completion Revenue, Costs, and Gross Profit by Year

	To Date	Recognized in Prior Years	Recognized in Current Year
2012			
Revenues ($4,500,000 × 25%)	$1,125,000		$1,125,000
Costs	1,000,000		1,000,000
Gross profit	$ 125,000		$ 125,000
2013			
Revenues ($4,500,000 × 72%)	$3,240,000	$1,125,000	$2,115,000
Costs	2,916,000	1,000,000	1,916,000
Gross profit	$ 324,000	$ 125,000	$ 199,000
2014			
Revenues ($4,500,000 × 100%)	$4,500,000	$3,240,000	$1,260,000
Costs	4,050,000	2,916,000	1,134,000
Gross profit	$ 450,000	$ 324,000	$ 126,000

Illustration 18-19 shows Hardhat's entries to recognize revenue and gross profit each year and to record completion and final approval of the contract.

ILLUSTRATION 18-19
Journal Entries to Recognize Revenue and Gross Profit and to Record Contract Completion—Percentage-of-Completion Method, Cost-to-Cost Basis

	2012		2013		2014	
To recognize revenue and gross profit:						
Construction in Process (gross profit)	125,000		199,000		126,000	
Construction Expenses	1,000,000		1,916,000		1,134,000	
Revenue from Long-Term Contracts		1,125,000		2,115,000		1,260,000
To record completion of the contract:						
Billings on Construction in Process					4,500,000	
Construction in Process						4,500,000

Note that Hardhat debits gross profit (as computed in Illustration 18-18) to Construction in Process. Similarly, it credits Revenue from Long-Term Contracts for the amounts computed in Illustration 18-18. Hardhat then debits the difference between the amounts recognized each year for revenue and gross profit to a nominal account, Construction Expenses (similar to Cost of Goods Sold in a manufacturing company). It reports that amount in the income statement as the actual cost of construction incurred in that period. For example, Hardhat uses the actual costs of $1,000,000 to compute both the gross profit of $125,000 and the percent complete (25 percent).

Hardhat continues to accumulate costs in the Construction in Process account, in order to maintain a record of total costs incurred (plus recognized gross profit) to date. Although theoretically a series of "sales" takes place using the percentage-of-completion method, the selling company cannot remove the inventory cost until the construction is completed and transferred to the new owner. Hardhat's Construction in Process account for the bridge would include the following summarized entries over the term of the construction project.

ILLUSTRATION 18-20
Content of Construction in Process Account—Percentage-of-Completion Method

Construction in Process

2012 construction costs	$1,000,000	12/31/14	to close completed project	$4,500,000
2012 recognized gross profit	125,000			
2013 construction costs	1,916,000			
2013 recognized gross profit	199,000			
2014 construction costs	1,134,000			
2014 recognized gross profit	126,000			
Total	$4,500,000	Total		$4,500,000

Recall that the Hardhat Construction Company example contained a **change in estimate**: In the second year, 2013, it increased the estimated total costs from $4,000,000 to $4,050,000. The change in estimate is accounted for in a **cumulative catch-up manner**. This is done by first adjusting the percent completed to the new estimate of total costs. Next, Hardhat deducts the amount of revenues and gross profit recognized in prior periods from revenues and gross profit computed for progress to date. That is, it accounts for the change in estimate in the period of change. That way, the balance sheet at the end of the period of change and the accounting in subsequent periods are as they would have been if the revised estimate had been the original estimate.

Financial Statement Presentation—Percentage-of-Completion

Generally, when a company records a receivable from a sale, it reduces the Inventory account. Under the percentage-of-completion method, however, the company continues to carry both the receivable and the inventory. Subtracting the balance in the **Billings account** from Construction in Process avoids double-counting the inventory. During the life of the contract, Hardhat reports in the balance sheet the difference between the Construction in Process and the Billings on Construction in Process accounts. If that amount is a debit, Hardhat reports it **as a current asset**; if it is a credit, it reports it **as a current liability**.

At times, the costs incurred plus the gross profit recognized to date (the balance in Construction in Process) exceed the billings. In that case, Hardhat reports this excess as a current asset entitled "Cost and recognized profit in excess of billings." Hardhat can at any time calculate the unbilled portion of revenue recognized to date by subtracting the billings to date from the revenue recognized to date, as illustrated for 2012 for Hardhat Construction in Illustration 18-21.

ILLUSTRATION 18-21
Computation of Unbilled Contract Price at 12/31/12

Contract revenue recognized to date: $\$4{,}500{,}000 \times \dfrac{\$1{,}000{,}000}{\$4{,}000{,}000}$	$1,125,000
Billings to date	(900,000)
Unbilled revenue	$ 225,000

At other times, the billings exceed costs incurred and gross profit to date. In that case, Hardhat reports this excess as a current liability entitled "Billings in excess of costs and recognized profit."

It probably has occurred to you that companies often have more than one project going at a time. When a company has a number of projects, costs exceed billings on some contracts and billings exceed costs on others. In such a case, the company segregates the contracts. The asset side includes only those contracts on which costs and recognized profit exceed billings. The liability side includes only those on which billings exceed costs and recognized profit. Separate disclosures of the dollar volume of billings and costs are preferable to a summary presentation of the net difference.

Using data from the bridge example, Hardhat Construction Company would report the status and results of its long-term construction activities under the percentage-of-completion method as shown in Illustration 18-22.

ILLUSTRATION 18-22
Financial Statement Presentation—Percentage-of-Completion Method (2012)

HARDHAT CONSTRUCTION COMPANY

Income Statement (from Illustration 18-8)		2012
Revenue from long-term contracts		$1,125,000
Costs of construction		1,000,000
Gross profit		$ 125,000

Balance Sheet (12/31)		2012
Current assets		
Accounts receivable ($900,000 − $750,000)		$ 150,000
Inventory		
Construction in process	$1,125,000	
Less: Billings	900,000	
Costs and recognized profit in excess of billings		225,000

In 2013, its financial statement presentation is as follows.

ILLUSTRATION 18-23
Financial Statement Presentation—Percentage-of-Completion Method (2013)

HARDHAT CONSTRUCTION COMPANY

Income Statement (from Illustration 18-8)		2013
Revenue from long-term contracts		$2,115,000
Costs of construction		1,916,000
Gross profit		$ 199,000

Balance Sheet (12/31)		
Current assets		
Accounts receivable ($150,000 + $2,400,000 − $1,750,000)		$ 800,000
Current liabilities		
Billings	$3,300,000	
Less: Construction in process	3,240,000	
Billings in excess of costs and recognized profits		60,000

In 2014, Hardhat's financial statements only include an income statement because the bridge project was completed and settled.

HARDHAT CONSTRUCTION COMPANY

Income Statement (from Illustration 18-18)	2014
Revenue from long-term contracts	$1,260,000
Costs of construction	1,134,000
Gross profit	$ 126,000

ILLUSTRATION 18-24
Financial Statement Presentation—Percentage-of-Completion Method (2014)

In addition, Hardhat should disclose the following information in each year.

Note 1. Summary of significant accounting policies.
Long-Term Construction Contracts. The company recognizes revenues and reports profits from long-term construction contracts, its principal business, under the percentage-of-completion method of accounting. These contracts generally extend for periods in excess of one year. The amounts of revenues and profits recognized each year are based on the ratio of costs incurred to the total estimated costs. Costs included in construction in process include direct materials, direct labor, and project-related overhead. Corporate general and administrative expenses are charged to the periods as incurred and are not allocated to construction contracts.

ILLUSTRATION 18-25
Percentage-of-Completion Method Note Disclosure

Completed-Contract Method

4 LEARNING OBJECTIVE
Apply the completed-contract method for long-term contracts.

Under the **completed-contract method**, companies recognize revenue and gross profit only at point of sale—that is, when the contract is completed. Under this method, companies accumulate costs of long-term contracts in process, but they make no interim charges or credits to income statement accounts for revenues, costs, or gross profit.

The principal advantage of the completed-contract method is that reported revenue reflects final results rather than *estimates* of unperformed work. Its major disadvantage is that it does not reflect current performance when the period of a contract extends into more than one accounting period. Although operations may be fairly uniform during the period of the contract, the company will not report revenue until the year of completion, creating a distortion of earnings.

Under the completed-contract method, the company would make the same **annual entries** to record costs of construction, progress billings, and collections from customers as those illustrated under the percentage-of-completion method. The significant difference is that the company **would not make entries to recognize revenue and gross profit**.

INTERNATIONAL PERSPECTIVE

IFRS prohibits the use of the completed-contract method of accounting for long-term construction contracts. Companies must use the percentage-of-completion method. If revenues and costs are difficult to estimate, then companies recognize revenue only to the extant of the cost incurred—a zero-profit approach.

For example, under the completed-contract method for the bridge project illustrated on the preceding pages, Hardhat Construction Company would make the following entries in 2014 to recognize revenue and costs and to close out the inventory and billing accounts.

Billings on Construction in Process	4,500,000	
Revenue from Long-Term Contracts		4,500,000
Costs of Construction	4,050,000	
Construction in Process		4,050,000

Illustration 18-26 compares the amount of gross profit that Hardhat Construction Company would recognize for the bridge project under the two revenue-recognition methods.

	Percentage-of-Completion	Completed-Contract
2012	$125,000	$ 0
2013	199,000	0
2014	126,000	450,000

ILLUSTRATION 18-26
Comparison of Gross Profit Recognized under Different Methods

Under the completed-contract method, Hardhat Construction would report its long-term construction activities as follows.

ILLUSTRATION 18-27
Financial Statement Presentation—Completed-Contract Method

HARDHAT CONSTRUCTION COMPANY

		2012	2013	2014
Income Statement				
Revenue from long-term contracts		—	—	$4,500,000
Costs of construction		—	—	4,050,000
Gross profit		—	—	$ 450,000
Balance Sheet (12/31)				
Current assets				
Accounts receivable		$150,000	$800,000	$ –0–
Inventory				
Construction in process	$1,000,000			
Less: Billings	900,000			
Costs in excess of billings		100,000		–0–
Current liabilities				
Billings ($3,300,000) in excess of costs ($2,916,000)			384,000	–0–

Note 1. Summary of significant accounting policies.
Long-Term Construction Contracts. The company recognizes revenues and reports profits from long-term construction contracts, its principal business, under the completed-contract method. These contracts generally extend for periods in excess of one year. Contract costs and billings are accumulated during the periods of construction, but no revenues or profits are recognized until completion of the contract. Costs included in construction in process include direct material, direct labor, and project-related overhead. Corporate general and administrative expenses are charged to the periods as incurred.

Long-Term Contract Losses

LEARNING OBJECTIVE 5
Identify the proper accounting for losses on long-term contracts.

Two types of losses can become evident under long-term contracts:[19]

1. ***Loss in the current period on a profitable contract.*** This condition arises when, during construction, there is a significant increase in the estimated total contract costs but the increase does not eliminate all profit on the contract. Under the percentage-of-completion method only, the estimated cost increase requires a current-period adjustment of excess gross profit recognized on the project in prior periods. The company records this adjustment as a loss in the current period because it is a **change in accounting estimate** (discussed in Chapter 22).
2. ***Loss on an unprofitable contract.*** Cost estimates at the end of the current period may indicate that a loss will result on completion of the *entire* contract. Under both the percentage-of-completion and the completed-contract methods, the company must recognize in the current period the entire expected contract loss.

The treatment described for unprofitable contracts is consistent with the accounting custom of anticipating foreseeable losses to avoid overstatement of current and future income (conservatism).

Loss in Current Period

To illustrate a loss in the current period on a contract expected to be profitable upon completion, we'll continue with the Hardhat Construction Company bridge project.

[19]Sak Bhamornsiri, "Losses from Construction Contracts," *The Journal of Accountancy* (April 1982), p. 26.

Assume that on December 31, 2013, Hardhat estimates the costs to complete the bridge contract at $1,468,962 instead of $1,134,000 (refer to page 1083). Assuming all other data are the same as before, Hardhat would compute the percentage complete and recognize the loss as shown in Illustration 18-28. Compare these computations with those for 2013 in Illustration 18-16 (page 1083). The "percent complete" has dropped, from 72 percent to 66½ percent, due to the increase in estimated future costs to complete the contract.

Cost to date (12/31/13)	$2,916,000
Estimated costs to complete (revised)	1,468,962
Estimated total costs	$4,384,962
Percent complete ($2,916,000 ÷ $4,384,962)	66½%
Revenue recognized in 2013	
($4,500,000 × 66½%) − $1,125,000	$1,867,500
Costs incurred in 2013	1,916,000
Loss recognized in 2013	$ (48,500)

ILLUSTRATION 18-28
Computation of Recognizable Loss, 2013—Loss in Current Period

The 2013 loss of $48,500 is a cumulative adjustment of the "excessive" gross profit recognized on the contract in 2012. Instead of restating the prior period, the company absorbs the prior period misstatement entirely in the current period. In this illustration, the adjustment was large enough to result in recognition of a loss.

Hardhat Construction would record the loss in 2013 as follows.

Construction Expenses	1,916,000	
Construction in Process (loss)		48,500
Revenue from Long-Term Contracts		1,867,500

Hardhat will report the loss of $48,500 on the 2013 income statement as the difference between the reported revenues of $1,867,500 and the costs of $1,916,000.[20] **Under the completed-contract method, the company does not recognize a loss in 2013.** Why not? Because the company still expects the contract **to result in a profit**, to be recognized in the year of completion.

Loss on an Unprofitable Contract

To illustrate the accounting for an **overall loss on a long-term contract**, assume that at December 31, 2013, Hardhat Construction Company estimates the costs to complete the bridge contract at $1,640,250 instead of $1,134,000. Revised estimates for the bridge contract are as follows.

	2012 Original Estimates	2013 Revised Estimates
Contract price	$4,500,000	$4,500,000
Estimated total cost	4,000,000	4,556,250*
Estimated gross profit	$ 500,000	
Estimated loss		$ (56,250)

*($2,916,000 + $1,640,250)

[20]In 2014, Hardhat Construction will recognize the remaining 33½ percent of the revenue ($1,507,500), with costs of $1,468,962 as expected, and will report a gross profit of $38,538. The total gross profit over the three years of the contract would be $115,038 [$125,000 (2012) − $48,500 (2013) + $38,538 (2014)]. This amount is the difference between the total contract revenue of $4,500,000 and the total contract costs of $4,384,962.

Under the percentage-of-completion method, Hardhat recognized $125,000 of gross profit in 2012 (see Illustration 18-18 on page 1084). This amount must be offset in 2013 because it is no longer expected to be realized. In addition, since losses must be recognized as soon as estimable, the company must recognize the total estimated loss of $56,250 in 2013. Therefore, Hardhat must recognize a total loss of $181,250 ($125,000 + $56,250) in 2013.

Illustration 18-29 shows Hardhat's computation of the revenue to be recognized in 2013.

ILLUSTRATION 18-29
Computation of Revenue Recognizable, 2013—Unprofitable Contract

Revenue recognized in 2013:		
Contract price		$4,500,000
Percent complete		× 64%*
Revenue recognizable to date		2,880,000
Less: Revenue recognized prior to 2013		1,125,000
Revenue recognized in 2013		$1,755,000
*Cost to date (12/31/13)	$2,916,000	
Estimated cost to complete	1,640,250	
Estimated total costs	$4,556,250	
Percent complete: $2,916,000 ÷ $4,556,250 = 64%		

To compute the construction costs to be expensed in 2013, Hardhat adds the total loss to be recognized in 2013 ($125,000 + $56,250) to the revenue to be recognized in 2013. Illustration 18-30 shows this computation.

ILLUSTRATION 18-30
Computation of Construction Expense, 2013—Unprofitable Contract

Revenue recognized in 2013 (computed above)		$1,755,000
Total loss recognized in 2013:		
Reversal of 2012 gross profit	$125,000	
Total estimated loss on the contract	56,250	181,250
Construction cost expensed in 2013		$1,936,250

Hardhat Construction would record the long-term contract revenues, expenses, and loss in 2013 as follows.

Construction Expenses	1,936,250	
Construction in Process (loss)		181,250
Revenue from Long-Term Contracts		1,755,000

At the end of 2013, Construction in Process has a balance of $2,859,750 as shown below.[21]

ILLUSTRATION 18-31
Content of Construction in Process Account at End of 2013—Unprofitable Contract

Construction in Process			
2012 Construction costs	1,000,000		
2012 Recognized gross profit	125,000		
2013 Construction costs	1,916,000	2013 Recognized loss	181,250
Balance	**2,859,750**		

[21]If the costs in 2014 are $1,640,250 as projected, at the end of 2014 the Construction in Process account will have a balance of $1,640,250 + $2,859,750, or $4,500,000, equal to the contract price. When the company matches the revenue remaining to be recognized in 2014 of $1,620,000 [$4,500,000 (total contract price) − $1,125,000 (2012) − $1,755,000 (2013)] with the construction expense to be recognized in 2014 of $1,620,000 [total costs of $4,556,250 less the total costs recognized in prior years of $2,936,250 (2012, $1,000,000; 2013, $1,936,250)], a zero profit results. Thus, the total loss has been recognized in 2013, the year in which it first became evident.

Under the completed-contract method, Hardhat also would recognize the contract loss of $56,250 through the following entry in 2013 (the year in which the loss first became evident).

Loss from Long-Term Contracts	56,250	
Construction in Process (loss)		56,250

Just as the Billings account balance cannot exceed the contract price, neither can the balance in Construction in Process exceed the contract price. In circumstances where the Construction in Process balance exceeds the billings, the company can deduct the recognized loss from such accumulated costs on the balance sheet. That is, under both the percentage-of-completion and the completed-contract methods, the provision for the loss (the credit) may be combined with Construction in Process, thereby reducing the inventory balance. In those circumstances, however (as in the 2013 example above), where the billings exceed the accumulated costs, Hardhat must report separately on the balance sheet, as a current liability, the amount of the estimated loss. That is, under both the percentage-of-completion and the completed-contract methods, Hardhat would take the $56,250 loss, as estimated in 2013, from the Construction in Process account and report it separately as a current liability titled "Estimated liability from long-term contracts." **[9]**

Disclosures in Financial Statements

Construction contractors usually make some unique financial statement disclosures in addition to those required of all businesses. Generally, these additional disclosures are made in the notes to the financial statements. For example, a construction contractor should disclose the following: the method of recognizing revenue, **[10]** the basis used to classify assets and liabilities as current (the nature and length of the operating cycle), the basis for recording inventory, the effects of any revision of estimates, the amount of backlog on uncompleted contracts, and the details about receivables (billed and unbilled, maturity, interest rates, retainage provisions, and significant individual or group concentrations of credit risk).

LESS CONSERVATIVE

What do the numbers mean?

Halliburton provides engineering- and construction-related services in jobs around the world. Much of the company's work is completed under contract over long periods of time. The company uses percentage-of-completion accounting. The SEC started enforcement proceedings against the company related to its accounting for contract claims and disagreements with customers, including those arising from change orders and disputes about billable amounts and costs associated with a construction delay.

Prior to 1998, Halliburton took a very conservative approach to its accounting for disputed claims. As stated in the company's 1997 annual report, "Claims for additional compensation are recognized during the period such claims are resolved." That is, the company waited until all disputes were resolved before recognizing associated revenues. In contrast, in 1998 the company recognized revenue for disputed claims before their resolution, using estimates of amounts expected to be recovered. Such revenue and its related profit are more tentative and are subject to possible later adjustment than revenue and profit recognized when all claims have been resolved. As a case in point, the company noted that it incurred losses of $99 million in 1998 related to customer claims.

The accounting method put in place in 1998 is more aggressive than the company's former policy, but it is still within the boundaries of generally accepted accounting principles. However, the SEC noted that over six quarters, Halliburton failed to disclose its change in accounting

What do the numbers mean? (continued)

practice. In the absence of any disclosure, the SEC believed the investing public was misled about the precise nature of Halliburton's income in comparison to prior periods. The Halliburton situation illustrates the difficulty of using estimates in percentage-of-completion accounting and the impact of those estimates on the financial statements.

Source: "Failure to Disclose a 1998 Change in Accounting Practice," SEC (August 3, 2004), *www.sec.gov/news/press/2004-104.htm*. See also "Accounting Ace Charles Mulford Answers Accounting Questions," *Wall Street Journal Online* (June 7, 2002).

Completion-of-Production Basis

Underlying Concepts

This is not an exception to the revenue recognition principle. At the completion of production, realization is virtually assured and the earning process is substantially completed.

In certain cases, companies recognize revenue at the completion of **production** even though no sale has been made. Examples of such situations involve precious metals or agricultural products with assured prices. Under the **completion-of-production basis**, companies recognize revenue when these metals are mined or agricultural crops harvested because the sales price is reasonably assured, the units are interchangeable, and no significant costs are involved in distributing the product.[22] (See discussion in Chapter 9, page 501, "Valuation at Net Realizable Value.")

Likewise, when sale or cash receipt precedes production and delivery, as in the case of magazine subscriptions, companies recognize revenues as earned by production and delivery.[23]

REVENUE RECOGNITION AFTER DELIVERY

In some cases, the collection of the sales price is not reasonably assured and revenue recognition is deferred. One of two methods is generally employed to defer revenue recognition until the company receives cash: the **installment-sales method** or the **cost-recovery method**. A third method, the **deposit method**, applies in situations in which a company receives cash prior to delivery or transfer of the property; the company records that receipt as a deposit because the sales transaction is incomplete. This section examines these three methods.

Installment-Sales Method

LEARNING OBJECTIVE 6

Describe the installment-sales method of accounting.

The **installment-sales method** recognizes income in the periods of collection rather than in the period of sale. The logic underlying this method is that when there is no reasonable approach for estimating the degree of collectibility, companies should not recognize revenue until cash is collected.

The expression "installment sales" generally describes any type of sale for which payment is required in periodic installments over an extended period of time. All types of farm and home equipment as well as home furnishings are sold on an installment basis. The heavy equipment industry also sometimes uses the method for machine installations paid for over a long period. Another application of the method is in land-development sales.

[22]Such revenue satisfies the criteria of *Concepts Statement No. 5* since the assets are readily realizable and the earning process is virtually complete (see par. 84, item c).

[23]*Statement of Financial Accounting Concepts No. 5*, par. 84, item b.

Because payment is spread over a relatively long period, the risk of loss resulting from uncollectible accounts is greater in installment-sales transactions than in ordinary sales. Consequently, selling companies use various devices to protect themselves. Two common devices are (1) the use of a *conditional sales contract*, which specifies that title to the item sold does not pass to the purchaser until all payments are made, and (2) use of notes secured by a *chattel* (personal property) *mortgage* on the article sold. Either of these permits the seller to "repossess" the goods sold if the purchaser defaults on one or more payments. The seller can then resell the repossessed merchandise at whatever price it will bring to compensate for the uncollected installments and the expense of repossession.

Underlying Concepts

Realization is a critical part of revenue recognition. Thus, if a high degree of uncertainty exists about collectibility, a company must defer revenue recognition.

Under the installment-sales method of accounting, companies defer income recognition until the period of cash collection. They recognize both revenues and costs of sales in the period of sale, but defer the related gross profit to those periods in which they collect the cash. Thus, **instead of deferring the sale, along with related costs and expenses, to the future periods of anticipated collection, the company defers only the proportional gross profit**. This approach is equivalent to deferring both sales and cost of sales. Other expenses—that is, selling expense, administrative expense, and so on—are not deferred.

Thus, the installment-sales method matches cost and expenses against sales through the gross profit figure, but no further. Companies using the installment-sales method generally record operating expenses without regard to the fact that they will defer some portion of the year's gross profit. This practice is often justified on the basis that (1) these expenses do not follow sales as closely as does the cost of goods sold, and (2) accurate apportionment among periods would be so difficult that it could not be justified by the benefits gained.[24]

Acceptability of the Installment-Sales Method

The use of the installment-sales method for revenue recognition has fluctuated widely. At one time, it was widely accepted for installment-sales transactions. Somewhat paradoxically, as installment-sales transactions increased in popularity, acceptance and use of the installment-sales method decreased. Finally, the profession concluded that except in special circumstances, "the installment method of recognizing revenue is not acceptable." **[11]** The rationale for this position is simple: Because the installment method recognizes no income until cash is collected, it is not in accordance with the accrual-accounting concept.

Use of the installment-sales method was often justified on the grounds that the risk of not collecting an account receivable may be so great that the sale itself is not sufficient evidence that recognition should occur. In some cases, this reasoning is valid but not in a majority of cases. The general approach is that a company should recognize a completed sale. If the company expects bad debts, it should record this possibility as separate estimates of uncollectibles. Although collection expenses, repossession expenses, and bad debts are an unavoidable part of installment-sales activities, the incurrence of these costs and the collectibility of the receivables are reasonably predictable.

We study this topic in intermediate accounting because the method is acceptable in cases where a company believes there to be no reasonable basis of estimating the degree of collectibility. In addition, the sales method of revenue recognition has certain weaknesses when used for franchise and land-development operations. Application of the

[24]In addition, other theoretical deficiencies of the installment-sales method could be cited. For example, see Richard A. Scott and Rita K. Scott, "Installment Accounting: Is It Inconsistent?" *The Journal of Accountancy* (November 1979).

sales method to **franchise and license operations** has resulted in the abuse described earlier as "front-end loading." In some cases, franchisors recognized revenue prematurely, when they granted a franchise or issued a license, rather than when revenue was earned or the cash is received. Many **land-development** ventures were susceptible to the same abuses. As a result, the FASB prescribes application of the installment-sales method of accounting for sales of real estate under certain circumstances. [12][25]

Procedure for Deferring Revenue and Cost of Sales of Merchandise

One could work out a procedure that deferred both the uncollected portion of the sales price and the proportionate part of the cost of the goods sold. Instead of apportioning both sales price and cost over the period of collection, however, the installment-sales method defers **only the gross profit**. This procedure has exactly the same effect as deferring both sales and cost of sales, but it requires only one deferred account rather than two.

For the **sales in any one year**, the steps companies use to defer gross profit are as follows.

1. During the year, record both sales and cost of sales in the regular way, using the special accounts described later, and compute the rate of gross profit on installment-sales transactions.
2. At the end of the year, apply the rate of gross profit to the cash collections of the current year's installment sales, to arrive at the realized gross profit.
3. Defer to future years the gross profit not realized.

For **sales made in prior years**, companies apply the gross profit rate of each year's sales against cash collections of accounts receivable resulting from that year's sales, to arrive at the realized gross profit.

Special accounts must be used in the installment-sales method. These accounts provide certain information required to determine the realized and unrealized gross profit in each year of operations. In computing net income under the installment-sales method as generally applied, the only peculiarity is the **deferral of gross profit until realized by accounts receivable collection**. We will use the following data to illustrate the installment-sales method in accounting for the sales of merchandise.

	2012	2013	2014
Installment sales	$200,000	$250,000	$240,000
Cost of installment sales	150,000	190,000	168,000
Gross profit	$ 50,000	$ 60,000	$ 72,000
Rate of gross profit on sales	25%[a]	24%[b]	30%[c]
Cash receipts			
2012 sales	$ 60,000	$100,000	$ 40,000
2013 sales		100,000	125,000
2014 sales			80,000

[a] $\frac{\$50,000}{\$200,000}$ [b] $\frac{\$60,000}{\$250,000}$ [c] $\frac{\$72,000}{\$240,000}$

To simplify this example, we have excluded interest charges. Summary entries in general journal form for the year 2012 are as follows.

[25]The installment-sales method of accounting must be applied to a retail land sale that meets all of the following criteria: (1) the period of cancellation of the sale with refund of the down payment and any subsequent payments has expired; (2) cumulative cash payments equal or exceed 10 percent of the sales value; and (3) the seller is financially capable of providing all promised contract representations (e.g., land improvements, off-site facilities).

2012		
Installment Accounts Receivable, 2012	200,000	
Installment Sales		200,000
(To record sales made on installment in 2012)		
Cash	60,000	
Installment Accounts Receivable, 2012		60,000
(To record cash collected on installment receivables)		
Cost of Installment Sales	150,000	
Inventory (or Purchases)		150,000
(To record cost of goods sold on installment in 2012 on either a perpetual or a periodic inventory basis)		
Installment Sales	200,000	
Cost of Installment Sales		150,000
Deferred Gross Profit, 2012		50,000
(To close installment sales and cost of installment sales for the year)		
Deferred Gross Profit, 2012	15,000	
Realized Gross Profit		15,000
(To remove from deferred gross profit the profit realized through cash collections; $60,000 × 25%)		
Realized Gross Profit	15,000	
Income Summary		15,000
(To close profits realized by collections)		

Illustration 18-32 shows computation of the realized and deferred gross profit for the year 2012.

2012	
Rate of gross profit current year	25%
Cash collected on current year's sales	$60,000
Realized gross profit (25% of $60,000)	15,000
Gross profit to be deferred ($50,000 − $15,000)	35,000

ILLUSTRATION 18-32
Computation of Realized and Deferred Gross Profit, 2012

Summary entries in journal form for year 2 (2013) are as follows.

2013		
Installment Accounts Receivable, 2013	250,000	
Installment Sales		250,000
(To record sales made on installment in 2013)		
Cash	200,000	
Installment Accounts Receivable, 2012		100,000
Installment Accounts Receivable, 2013		100,000
(To record cash collected on installment receivables)		
Cost of Installment Sales	190,000	
Inventory (or Purchases)		190,000
(To record cost of goods sold on installment in 2013)		
Installment Sales	250,000	
Cost of Installment Sales		190,000
Deferred Gross Profit, 2013		60,000
(To close installment sales and cost of installment sales for the year)		
Deferred Gross Profit, 2012 ($100,000 × 25%)	25,000	
Deferred Gross Profit, 2013 ($100,000 × 24%)	24,000	
Realized Gross Profit		49,000
(To remove from deferred gross profit the profit realized through cash collections)		
Realized Gross Profit	49,000	
Income Summary		49,000
(To close profits realized by collections)		

Illustration 18-33 shows computation of the realized and deferred gross profit for the year 2013.

ILLUSTRATION 18-33
Computation of Realized and Deferred Gross Profit, 2013

2013	
Current year's sales	
Rate of gross profit	24%
Cash collected on current year's sales	$100,000
Realized gross profit (24% of $100,000)	24,000
Gross profit to be deferred ($60,000 − $24,000)	36,000
Prior year's sales	
Rate of gross profit—2012	25%
Cash collected on 2012 sales	$100,000
Gross profit realized in 2013 on 2012 sales (25% of $100,000)	25,000
Total gross profit realized in 2013	
Realized on collections of 2012 sales	$ 25,000
Realized on collections of 2013 sales	24,000
Total	$ 49,000

The entries in 2014 would be similar to those of 2013, and the total gross profit taken up or realized would be $64,000, as shown by the computations in Illustration 18-34.

ILLUSTRATION 18-34
Computation of Realized and Deferred Gross Profit, 2014

2014	
Current year's sales	
Rate of gross profit	30%
Cash collected on current year's sales	$ 80,000
Gross profit realized on 2014 sales (30% of $80,000)	24,000
Gross profit to be deferred ($72,000 − $24,000)	48,000
Prior years' sales	
2012 sales	
Rate of gross profit	25%
Cash collected	$ 40,000
Gross profit realized in 2014 on 2012 sales (25% of $40,000)	10,000
2013 sales	
Rate of gross profit	24%
Cash collected	$125,000
Gross profit realized in 2014 on 2013 sales (24% of $125,000)	30,000
Total gross profit realized in 2014	
Realized on collections of 2012 sales	$ 10,000
Realized on collections of 2013 sales	30,000
Realized on collections of 2014 sales	24,000
Total	$ 64,000

In summary, here are the basic concepts you should understand about accounting for installment sales:

1. How to compute a proper gross profit percentage.
2. How to record installment sales, cost of installment sales, and deferred gross profit.
3. How to compute realized gross profit on installment receivables.
4. How the deferred gross profit balance at the end of the year results from applying the gross profit rate to the installment accounts receivable.

Additional Problems of Installment-Sales Accounting

In addition to computing realized and deferred gross profit currently, other problems are involved in accounting for installment-sales transactions. These problems are related to:

1. Interest on installment contracts.
2. Uncollectible accounts.
3. Defaults and repossessions.

Interest on Installment Contracts. Because the collection of installment receivables is spread over a long period, it is customary to charge the buyer interest on the unpaid balance. The seller and buyer set up a schedule of equal payments consisting of interest and principal. Each successive payment is attributable to a smaller amount of interest and a correspondingly larger amount of principal, as shown in Illustration 18-35. This illustration assumes that a company sells for $3,000 an asset costing $2,400 (rate of gross profit = 20%), with interest of 8 percent included in the three installments of $1,164.10.

ILLUSTRATION 18-35
Installment Payment Schedule

Date	Cash (Debit)	Interest Earned (Credit)	Installment Receivables (Credit)	Installment Unpaid Balance	Realized Gross Profit (20%)
1/2/12	—	—	—	$3,000.00	—
1/2/13	$1,164.10[a]	$240.00[b]	$ 924.10[c]	2,075.90[d]	$184.82[e]
1/2/14	1,164.10	166.07	998.03	1,077.87	199.61
1/2/15	1,164.10	86.23	1,077.87	–0–	215.57
					$600.00

[a]Periodic payment = Original unpaid balance ÷ PV of an annuity of $1.00 for three periods at 8%; $1,164.10 = $3,000 ÷ 2.57710.
[b]$3,000.00 × .08 = $240.
[c]$1,164.10 − $240.00 = $924.10.
[d]$3,000.00 − $924.10 = $2,075.90.
[e]$924.10 × .20 = $184.82.

The company accounts for interest separate from the gross profit recognized on the installment-sales collections during the period, by recognizing interest revenue at the time of its cash receipt.

Uncollectible Accounts. The problem of bad debts or uncollectible accounts receivable is somewhat different for concerns selling on an installment basis because of a repossession feature commonly incorporated in the sales agreement. This feature gives the selling company an opportunity to recoup an uncollectible account through repossession and resale of repossessed merchandise. If the experience of the company indicates that repossessions do not, as a rule, compensate for uncollectible balances, it may be advisable to provide for such losses through charges to a special bad debt expense account, just as is done for other credit sales.

Defaults and Repossessions. Depending on the terms of the sales contract and the policy of the credit department, the seller can repossess merchandise sold under an installment arrangement if the purchaser fails to meet payment requirements. The seller may then recondition repossessed merchandise before offering it for re-sale, for either cash or installment payments.

The accounting for **repossessions** recognizes that the company is not likely to collect the related installment receivable and should write it off. Along with the installment account receivable, the company must remove the applicable deferred gross profit using the following entry.

Repossessed Merchandise (an inventory account)	xxx	
Deferred Gross Profit	xxx	
Installment Accounts Receivable		xxx

This entry assumes that the company will record the repossessed merchandise at exactly the amount of the uncollected account less the deferred gross profit applicable. This assumption may or may not be proper. To determine the correct amount, the company should consider the condition of the repossessed merchandise, the cost of reconditioning, and the market for secondhand merchandise of that particular type. The objective should be to put any asset acquired on the books at its fair value, or at the best possible approximation of fair value when fair value is not determinable. A loss can occur if the fair value of the repossessed merchandise is less than the uncollected balance less the deferred gross profit. In that case, the company should record a "loss on repossession" at the date of repossession.[26]

To illustrate the required entry, assume that Klein Brothers sells a refrigerator to Marilyn Hunt for $1,500 on September 1, 2012. Terms require a down payment of $600 and $60 on the first of every month for 15 months, starting October 1, 2012. It is further assumed that the refrigerator cost $900 and that Klein Brothers priced it to provide a 40 percent rate of gross profit on selling price. At the year-end, December 31, 2012, Klein Brothers should have collected a total of $180 in addition to the original down payment.

If Hunt makes her January and February payments in 2013 and then defaults, the account balances applicable to Hunt at time of default are as shown in Illustration 18-36.

ILLUSTRATION 18-36
Computation of Installment Receivable Balances

Installment accounts receivable (September 1, 2012)		$1,500
Less: Down payment:	$600	
Payments to date ($60 × 5)	300	900
Installment accounts receivable (March 1, 2013)		$ 600
Installment accounts receivable (March 1, 2013)		$ 600
Gross profit rate		× 40%
Deferred gross profit		$ 240

As indicated, Klein Brothers compute the balance of deferred gross profit applicable to Hunt's account by applying the gross profit rate for the year of sale to the balance of Hunt's account receivable: 40 percent of $600, or $240. The account balances are therefore:

Installment Account Receivable, 2012	600 (Dr.)
Deferred Gross Profit, 2012	240 (Cr.)

[26]Some contend that a company should record repossessed merchandise at a valuation that will permit the company to make its regular rate of gross profit on resale. If the company enters the value at its approximated cost to purchase, the regular rate of gross profit could be provided for upon its ultimate sale, but that is completely a secondary consideration. It is more important that the company record the repossessed asset at fair value. This accounting would be in accordance with the general practice of carrying assets at acquisition price, as represented by the fair value at the date of acquisition.

Klein repossesses the refrigerator following Hunt's default. If Klein sets the estimated fair value of the repossessed article at $150, it would make the following entry to record the repossession.

Deferred Gross Profit, 2012	240	
Repossessed Merchandise	150	
Loss on Repossession	210	
Installment Accounts Receivable, 2012		600

Klein determines the amount of the loss in two steps: (1) It subtracts the deferred gross profit from the amount of the account receivable, to determine the unrecovered cost (or book value) of the merchandise repossessed. (2) It then subtracts the estimated fair value of the merchandise repossessed from the unrecovered cost, to get the amount of the loss on repossession. Klein Brothers computes the loss on the refrigerator as shown in Illustration 18-37.

ILLUSTRATION 18-37
Computation of Loss on Repossession

Balance of account receivable (representing uncollected selling price)	$600
Less: Deferred gross profit	240
Unrecovered cost	360
Less: Estimated fair value of merchandise repossessed	150
Loss (Gain) on repossession	$210

As pointed out earlier, the loss on repossession may be charged to Allowance for Doubtful Accounts if a company carries such an account.

Financial Statement Presentation of Installment-Sales Transactions

If installment-sales transactions represent a significant part of total sales, it is desirable to make full disclosure of installment sales, the cost of installment sales, and any expenses allocable to installment sales. However, if installment-sales transactions constitute an insignificant part of total sales, it may be satisfactory to include only the realized gross profit in the income statement as a special item following the gross profit on sales. Illustration 18-38 shows this simpler presentation.

ILLUSTRATION 18-38
Disclosure of Installment-Sales Transactions—Insignificant Amount

HEALTH MACHINE COMPANY
INCOME STATEMENT
FOR THE YEAR ENDED DECEMBER 31, 2013

Sales	$620,000
Cost of goods sold	490,000
Gross profit	130,000
Gross profit realized on installment sales	51,000
Total gross profit	$181,000

If a company wants more complete disclosure of installment-sales transactions, it would use a presentation similar to that shown in Illustration 18-39 (page 1100).

ILLUSTRATION 18-39
Disclosure of Installment-Sales Transactions—Significant Amount

HEALTH MACHINE COMPANY INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2013	Installment Sales	Other Sales	Total
Sales	$248,000	$620,000	$868,000
Cost of goods sold	182,000	490,000	672,000
Gross profit	66,000	130,000	196,000
Less: Deferred gross profit on installment sales of this year	47,000		47,000
Realized gross profit on this year's sales	19,000	130,000	149,000
Add: Gross profit realized on installment sales of prior years	32,000		32,000
Gross profit realized this year	$ 51,000	$130,000	$181,000

The presentation in Illustration 18-39 is awkward. Yet the awkwardness of this method is difficult to avoid if a company wants to provide full disclosure of installment-sales transactions in the income statement. One solution, of course, is to prepare a separate schedule showing installment-sales transactions, with only the final figure carried into the income statement.

In the balance sheet, it is generally considered desirable to classify installment accounts receivable by year of collectibility. There is some question as to whether companies should include in current assets installment accounts that are not collectible for two or more years. Yet if installment sales are **part of normal operations**, companies may consider them as current assets because they are collectible within the operating cycle of the business. Little confusion should result from this practice if the company fully discloses maturity dates, as illustrated in the following example.

ILLUSTRATION 18-40
Disclosure of Installment Accounts Receivable, by Year

Current assets		
Notes and accounts receivable		
Trade customers	$78,800	
Less: Allowance for doubtful accounts	3,700	
	75,100	
Installment accounts collectible in 2013	22,600	
Installment accounts collectible in 2014	47,200	$144,900

On the other hand, a company may have receivables from an installment contract, resulting from a transaction not related to normal operations. In that case, the company should report such receivables in the "Other assets" section if due beyond one year.

Repossessed merchandise is a part of inventory, and companies should report it as such in the "Current assets" section of the balance sheet. They should include any gain or loss on repossession in the income statement in the "Other revenues and gains" or "Other expenses and losses" section.

If a company has **deferred gross profit on installment sales**, it generally treats it as unearned revenue and classifies it as a current liability. Theoretically, deferred gross profit consists of three elements: (1) income tax liability to be paid when the sales are reported as realized revenue (current liability); (2) allowance for collection expense, bad debts, and repossession losses (deduction from installment accounts receivable); and (3) net income (retained earnings, restricted as to dividend availability). Because of the difficulty in allocating deferred gross profit among these three elements, however, companies frequently report the whole amount as unearned revenue.

In contrast, the FASB in *SFAC No. 6* states that "no matter how it is displayed in financial statements, deferred gross profit on installment sales is conceptually an asset valuation—that is, a reduction of an asset."[27] We support the FASB position, but we recognize that until an official standard on this topic is issued, financial statements will probably continue to report such deferred gross profit as a current liability.

Cost-Recovery Method

7 LEARNING OBJECTIVE
Explain the cost-recovery method of accounting.

Under the **cost-recovery method**, a company recognizes no profit until cash payments by the buyer exceed the cost of the merchandise sold. After the seller has recovered all costs, it includes in income any additional cash collections. The seller's income statement for the period reports sales revenue, the cost of goods sold, and the gross profit—both the amount (if any) that is recognized during the period and the amount that is deferred. The deferred gross profit is offset against the related receivable—reduced by collections—on the balance sheet. Subsequent income statements report the gross profit as a separate item of revenue when the company recognizes it as earned.

A seller is permitted to use the cost-recovery method to account for sales in which "there is no reasonable basis for estimating collectibility." In addition, use of this method is required where a high degree of uncertainty exists related to the collection of receivables. **[13]**, **[14]**, **[15]**

To illustrate the cost-recovery method, assume that early in 2012, Fesmire Manufacturing sells inventory with a cost of $25,000 to Higley Company for $36,000. Higley will make payments of $18,000 in 2012, $12,000 in 2013, and $6,000 in 2014. If the cost-recovery method applies to this transaction and Higley makes the payments as scheduled, Fesmire recognizes cash collections, revenue, cost, and gross profit as follows.[28]

ILLUSTRATION 18-41
Computation of Gross Profit—Cost-Recovery Method

	2012	2013	2014
Cash collected	$18,000	$12,000	$6,000
Revenue	$36,000	–0–	–0–
Cost of goods sold	25,000	–0–	–0–
Deferred gross profit	11,000	11,000	6,000
Less: Recognized gross profit	–0–	5,000*	6,000
Deferred gross profit balance (end of period)	$11,000	$ 6,000	$ –0–

*$25,000 − $18,000 = $7,000 of unrecovered cost at the end of 2012; $12,000 − $7,000 = $5,000, the excess of cash received in 2013 over unrecovered cost.

[27]*See Statement of Financial Accounting Concepts No. 6*, paras. 232–234.

[28]An alternative format for computing the amount of gross profit recognized annually is shown below.

Year	Cash Received	Original Cost Recovered	Balance of Unrecovered Cost	Gross Profit Realized
Beginning balance	—	—	$25,000	—
12/31/12	$18,000	$18,000	7,000	$ –0–
12/31/13	12,000	7,000	–0–	5,000
12/31/14	6,000	–0–	–0–	6,000

Under the cost-recovery method, Fesmire reports total revenue and cost of goods sold in the period of sale, similar to the installment-sales method. However, unlike the installment-sales method, which recognizes income as cash is collected, Fesmire recognizes profit under the cost-recovery method **only when cash collections exceed the total cost of the goods sold**.

Therefore, Fesmire's journal entry to record the deferred gross profit on the Higley sales transaction (after recording the sale and the cost of sales in the normal manner) at the end of 2012 is as follows.

2012		
Sales Revenue	36,000	
Cost of Sales		25,000
Deferred Gross Profit		11,000
(To close sales and cost of sales and to record deferred gross profit on sales accounted for under the cost-recovery method)		

In 2013 and 2014, the deferred gross profit becomes realized gross profit as the cumulative cash collections exceed the total costs, by recording the following entries.

2013		
Deferred Gross Profit	5,000	
Realized Gross Profit		5,000
(To recognize gross profit to the extent that cash collections in 2013 exceed costs)		

2014		
Deferred Gross Profit	6,000	
Realized Gross Profit		6,000
(To recognize gross profit to the extent that cash collections in 2014 exceed costs)		

Deposit Method

In some cases, a company receives cash from the buyer before it transfers the goods or property. In such cases, the seller has not performed under the contract and has no claim against the purchaser. There is not sufficient transfer of the risks and rewards of ownership for a sale to be recorded. The method of accounting for these incomplete transactions is the **deposit method**.

Under the **deposit method**, the seller reports the cash received from the buyer as a deposit on the contract and classifies it on the balance sheet as a liability (refundable deposit or customer advance). The seller continues to report the property as an asset on its balance sheet, along with any related existing debt. Also, the seller continues to charge depreciation expense as a period cost for the property. **The seller does not recognize revenue or income until the sale is complete.** **[16]** At that time, it closes the deposit account and applies one of the revenue recognition methods discussed in this chapter to the sale.

The **major difference between the installment-sales and cost-recovery methods and the deposit method** relates to contract performance. In the installment-sales and cost-recovery methods, it is assumed that the seller has performed on the contract but cash collection is highly uncertain. In the deposit method, the seller has *not* performed and no legitimate claim exists. The deposit method postpones recognizing a sale until the company determines that a sale has occurred for accounting purposes. If there has not been sufficient transfer of risks and rewards of ownership, even if the selling company has received a deposit, the company postpones recognition of the sale until sufficient transfer has occurred. In that sense, the deposit method is not a revenue recognition method as are the installment-sales and cost-recovery methods.

Summary of Product Revenue Recognition Bases

Illustration 18-42 summarizes the revenue recognition bases or methods, the criteria for their use, and the reasons for departing from the sale basis.

ILLUSTRATION 18-42
Revenue Recognition Bases

Specific Transactions	Accounting Guidance
Point of sale	See Illustration 18–12 (page 1080).
Long-term contracts (construction)	
(a) Percentage-of-completion method	Long-term construction of property; dependable estimates of extent of progress and cost to complete; reasonable assurance of collectibility of contract price; expectation that both contractor and buyer can meet obligations; and absence of inherent hazards that make estimates doubtful.
(b) Completed-contract method	Use on short-term contracts and whenever percentage-of-completion cannot be used on long-term contracts. Existence of inherent hazards in the contract beyond the normal, recurring business risks; conditions for using the percentage-of-completion method are absent.
Completion-of-production basis	Immediate marketability at quoted prices; unit interchangeability; and no significant distribution costs.
Installment-sales method and cost-recovery method	Absence of reasonable basis for estimating degree of collectibility and costs of collection. Collectibility of the receivable is so uncertain that gross profit (or income) is not recognized until cash is actually received.
Deposit method	Cash received before the sales transaction is completed. No recognition of revenue and income because there is not sufficient transfer of the risks and rewards of ownership.

CONCLUDING REMARKS

As indicated, revenue recognition principles are sometimes difficult to apply and often vary by industry. Recently, the SEC has attempted to provide more guidance in this area because of concern that the revenue recognition principle is sometimes being incorrectly applied. Many cases of intentional misstatement of revenue to achieve better financial results have recently come to light. Such practices are fraudulent, and the SEC is vigorously prosecuting these situations.

INTERNATIONAL PERSPECTIVE

There is no international enforcement body comparable to the U.S. SEC.

For our capital markets to be efficient, investors must have confidence that the financial information provided is both relevant and reliable. As a result, it is imperative that the accounting profession, regulators, and companies eliminate aggressive revenue recognition practices. It is our hope that recent efforts by the SEC and the accounting profession will lead to higher-quality reporting in this area.

You will want to read the **IFRS INSIGHTS** on pages 1134–1140 for discussion of IFRS related to revenue recognition.

SUMMARY OF LEARNING OBJECTIVES

1 Apply the revenue recognition principle. The revenue recognition principle provides that a company should recognize revenue (1) when revenue is realized or realizable and (2) when it is earned. Revenues are realized when goods or services are exchanged for cash or claims to cash. Revenues are realizable when assets received in exchanges are readily convertible to known amounts of cash or claims to cash. Revenues are earned when a company has substantially accomplished what it must do to be entitled to the benefits represented by the revenues—that is, when the earnings process is complete or virtually complete.

2 Describe accounting issues for revenue recognition at point of sale. The two conditions for recognizing revenue are usually met by the time a company delivers products or merchandise or provides services to customers. Companies commonly recognize revenue from manufacturing and selling activities at time of sale. Problems of implementation can arise because of (1) sales with discounts, (2) sales with extended payment terms, (3) sales with right of return, (4) sales with buyback, (5) bill and hold sales, (6) principal-agent relationships, (7) trade loading and channel stuffing, and (8) multiple-deliverable arrangements. Illustration 18-12 (page 1080) summarizes accounting guidance in these areas.

3 Apply the percentage-of-completion method for long-term contracts. To apply the percentage-of-completion method to long-term contracts, a company must have some basis for measuring the progress toward completion at particular interim dates. One of the most popular input measures used to determine the progress toward completion is the cost-to-cost basis. Using this basis, a company measures the percentage of completion by comparing costs incurred to date with the most recent estimate of the total costs to complete the contract. The company applies that percentage to the total revenue or the estimated total gross profit on the contract, to arrive at the amount of revenue or gross profit to be recognized to date.

4 Apply the completed-contract method for long-term contracts. Under this method, companies recognize revenue and gross profit only at point of sale—that is, when the company completes the contract. The company accumulates costs of long-term contracts in process and current billings. It makes no interim charges or credits to income statement accounts for revenues, costs, and gross profit. The annual entries to record costs of construction, progress billings, and collections from customers would be identical to those for the percentage-of-completion method—with the significant exclusion of the recognition of revenue and gross profit.

5 Identify the proper accounting for losses on long-term contracts. Two types of losses can become evident under long-term contracts: (1) *Loss in current period on a profitable contract:* Under the percentage-of-completion method only, the estimated cost increase requires a current-period adjustment of excess gross profit recognized on the project in prior periods. The company records this adjustment as a loss in the current period because it is a change in accounting estimate. (2) *Loss on an unprofitable contract:* Under both the percentage-of-completion and the completed-contract methods, the company must recognize the entire expected contract loss in the current period.

6 Describe the installment-sales method of accounting. The installment-sales method recognizes income in the periods of collection rather than in the period of sale. The installment-sales method of accounting is justified on the basis that when there is no reasonable approach for estimating the degree of collectibility, a company should not recognize revenue until it has collected cash.

KEY TERMS

7 **Explain the cost-recovery method of accounting.** Under the cost-recovery method, companies do not recognize profit until cash payments by the buyer exceed the seller's cost of the merchandise sold. After the seller has recovered all costs, it includes in income any additional cash collections. The income statement for the period of sale reports sales revenue, the cost of goods sold, and the gross profit—both the amount recognized during the period and the amount deferred. The deferred gross profit is offset against the related receivable on the balance sheet. Subsequent income statements report the gross profit as a separate item of revenue when revenue is recognized as earned.

APPENDIX 18A REVENUE RECOGNITION FOR FRANCHISES

8 **LEARNING OBJECTIVE**
Explain revenue recognition for franchises.

In this appendix, we cover a common yet unique type of business transaction—**franchises**. As indicated throughout this chapter, companies recognize revenue on the basis of two criteria: (1) when it is realized or realizable (occurrence of an exchange for cash or claims to cash), and (2) when it is earned (completion or virtual completion of the earnings process). These criteria are appropriate for most business activities. For some sales transactions, though, they do not adequately define when a company should recognize revenue. The fast-growing franchise industry is of special concern and challenge.

In accounting for franchise sales, a company must analyze the transaction and, considering all the circumstances, use judgment in selecting one or more of the revenue recognition bases, and then possibly must monitor the situation over a long period of time.

Four types of franchising arrangements have evolved: (1) manufacturer-retailer, (2) manufacturer-wholesaler, (3) service sponsor-retailer, and (4) wholesaler-retailer. The fastest-growing category of franchising, and the one that caused a reexamination of appropriate accounting, has been the third category, **service sponsor-retailer**. Included in this category are such industries and businesses as:

Soft ice cream/frozen yogurt stores (**Tastee Freez**, **TCBY**, **Dairy Queen**)
Food drive-ins (**McDonald's**, **KFC**, **Burger King**)
Restaurants (**TGI Friday's**, **Pizza Hut**, **Denny's**)
Motels (**Holiday Inn**, **Marriott**, **Best Western**)
Auto rentals (**Avis**, **Hertz**, **National**)
Others (**H & R Block**, **Meineke Mufflers**, **7-Eleven Stores**, **Kelly Services**)

Franchise companies derive their revenue from one or both of two sources: (1) from the sale of initial franchises and related assets or services, and (2) from continuing fees based on the operations of franchises. The **franchisor** (the party who grants business rights under the franchise) normally provides the **franchisee** (the party who operates the franchised business) with the following services.

1. Assistance in site selection: (a) analyzing location and (b) negotiating lease.
2. Evaluation of potential income.
3. Supervision of construction activity: (a) obtaining financing, (b) designing building, and (c) supervising contractor while building.
4. Assistance in the acquisition of signs, fixtures, and equipment.
5. Bookkeeping and advisory services: (a) setting up franchisee's records; (b) advising on income, real estate, and other taxes; and (c) advising on local regulations of the franchisee's business.
6. Employee and management training.

7. Quality control.
8. Advertising and promotion.[29]

In the past, it was standard practice for franchisors to recognize the entire franchise fee at the date of sale, whether the fee was received then or was collectible over a long period of time. Frequently, franchisors recorded the entire amount as revenue in the year of sale, even though many of the services were yet to be performed and uncertainty existed regarding the collection of the entire fee.[30] (In effect, the franchisors were counting their fried chickens before they were hatched.) However, a **franchise agreement** may provide for refunds to the franchisee if certain conditions are not met, and franchise fee profit can be reduced sharply by future costs of obligations and services to be rendered by the franchisor. To curb the abuses in revenue recognition that existed and to standardize the accounting and reporting practices in the franchise industry, the FASB issued rules which form the basis for the accounting discussed below.

INITIAL FRANCHISE FEES

The **initial franchise fee** is payment for establishing the franchise relationship and providing some initial services. Franchisors record initial franchise fees as revenue only when and as they make "substantial performance" of the services they are obligated to perform and when collection of the fee is reasonably assured. **Substantial performance** occurs when the franchisor has no remaining obligation to refund any cash received or excuse any nonpayment of a note and has performed all the initial services required under the contract. Commencement of operations by the franchisee shall be presumed to be the earliest point at which substantial performance has occurred, unless it can be demonstrated that substantial performance of all obligations, including services rendered voluntarily, has occurred before that time. **[17]**

Example of Entries for Initial Franchise Fee

To illustrate, assume that Tum's Pizza Inc. charges an initial franchise fee of $50,000 for the right to operate as a franchisee of Tum's Pizza. Of this amount, $10,000 is payable when the franchisee signs the agreement, and the balance is payable in five annual payments of $8,000 each. In return for the initial franchise fee, Tum's will help locate the site, negotiate the lease or purchase of the site, supervise the construction activity, and provide the bookkeeping services. The credit rating of the franchisee indicates that money can be borrowed at 8 percent. The present value of an ordinary annuity of five annual receipts of $8,000 each discounted at 8 percent is $31,941.68. The discount of $8,058.32 represents the interest revenue to be accrued by the franchisor over the payment period. The following examples show the entries that Tum's Pizza Inc. would make under various conditions.

1. If there is reasonable expectation that Tum's Pizza Inc. may refund the down payment and if substantial future services remain to be performed by Tum's Pizza Inc., the entry should be:

Cash	10,000.00	
Notes Receivable	40,000.00	
Discount on Notes Receivable		8,058.32
Unearned Franchise Fees		41,941.68

[29]Archibald E. MacKay, "Accounting for Initial Franchise Fee Revenue," *The Journal of Accountancy* (January 1970), pp. 66–67.

[30]In 1987 and 1988, the SEC ordered a half-dozen fast-growing startup franchisors, including **Jiffy Lube International**, **Moto Photo, Inc.**, **Swensen's, Inc.**, and **LePeep Restaurants, Inc.**, to defer their initial franchise fee recognition until earned. See "Claiming Tomorrow's Profits Today," *Forbes* (October 17, 1988), p. 78.

2. If the probability of refunding the initial franchise fee is extremely low, the amount of future services to be provided to the franchisee is minimal, collectibility of the note is reasonably assured, and substantial performance has occurred, the entry should be:

Cash	10,000.00	
Notes Receivable	40,000.00	
Discount on Notes Receivable		8,058.32
Revenue from Franchise Fees		41,941.68

3. If the initial down payment is not refundable, represents a fair measure of the services already provided, with a significant amount of services still to be performed by Tum's Pizza in future periods, and collectibility of the note is reasonably assured, the entry should be:

Cash	10,000.00	
Notes Receivable	40,000.00	
Discount on Notes Receivable		8,058.32
Revenue from Franchise Fees		10,000.00
Unearned Franchise Fees		31,941.68

4. If the initial down payment is not refundable and no future services are required by the franchisor, but collection of the note is so uncertain that recognition of the note as an asset is unwarranted, the entry should be:

Cash	10,000.00	
Revenue from Franchise Fees		10,000.00

5. Under the same conditions as those listed in case 4 above, except that the down payment is refundable or substantial services are yet to be performed, the entry should be:

Cash	10,000.00	
Unearned Franchise Fees		10,000.00

In cases 4 and 5—where collection of the note is extremely uncertain—franchisors may recognize cash collections using the installment-sales method or the cost-recovery method.[31]

CONTINUING FRANCHISE FEES

Continuing franchise fees are received in return for the continuing rights granted by the franchise agreement and for providing such services as management training, advertising and promotion, legal assistance, and other support. Franchisors report continuing fees as revenue when they are earned and receivable from the franchisee, unless a portion of them has been designated for a particular purpose, such as providing a specified amount for building maintenance or local advertising. In that case, the portion deferred shall be an amount sufficient to cover the estimated cost in excess of continuing franchise fees and provide a reasonable profit on the continuing services.

BARGAIN PURCHASES

In addition to paying continuing franchise fees, franchisees frequently purchase some or all of their equipment and supplies from the franchisor. The franchisor would account for these sales as it would for any other product sales.

[31]A study that compared four revenue recognition procedures—installment-sales basis, spreading recognition over the contract life, percentage-of-completion basis, and substantial performance—for franchise sales concluded that the percentage-of-completion method is the most acceptable revenue recognition method; the substantial-performance method was found sometimes to yield ultra-conservative results. See Charles H. Calhoun III, "Accounting for Initial Franchise Fees: Is It a Dead Issue?" *The Journal of Accountancy* (February 1975), pp. 60–67.

Sometimes, however, the franchise agreement grants the franchisee the right to make **bargain purchases** of equipment or supplies after the franchisee has paid the initial franchise fee. If the bargain price is lower than the normal selling price of the same product, or if it does not provide the franchisor a reasonable profit, then the franchisor should defer a portion of the initial franchise fee. The franchisor would account for the deferred portion as an adjustment of the selling price when the franchisee subsequently purchases the equipment or supplies.

OPTIONS TO PURCHASE

A franchise agreement may give the franchisor an **option to purchase** the franchisee's business. As a matter of management policy, the franchisor may reserve the right to purchase a profitable franchise outlet, or to purchase one that is in financial difficulty.

If it is **probable** at the time the option is given that the franchisor will ultimately purchase the outlet, then the franchisor should not recognize the initial franchise fee as revenue but should instead record it as a liability. When the franchisor exercises the option, the liability would reduce the franchisor's investment in the outlet.

FRANCHISOR'S COST

Franchise accounting also involves proper accounting for the **franchisor's cost**. The objective is to match related costs and revenues by reporting them as components of income in the same accounting period. Franchisors should ordinarily defer **direct costs** (usually incremental costs) relating to specific franchise sales for which revenue has not yet been recognized. They should not, however, defer costs without reference to anticipated revenue and its realizability. **[18]** **Indirect costs** of a regular and recurring nature, such as selling and administrative expenses that are incurred irrespective of the level of franchise sales, should be expensed as incurred.

DISCLOSURES OF FRANCHISORS

Franchisors must disclose all significant commitments and obligations resulting from franchise agreements, including a description of services that have not yet been substantially performed. They also should disclose any resolution of uncertainties regarding the collectibility of franchise fees. Franchisors segregate initial franchise fees from other franchise fee revenue if they are significant. Where possible, revenues and costs related to franchisor-owned outlets should be distinguished from those related to franchised outlets.

KEY TERMS

continuing franchise fees, *1107*
franchisee, *1105*
franchisor, *1105*
initial franchise fee, *1106*
substantial performance, *1106*

SUMMARY OF LEARNING OBJECTIVE FOR APPENDIX 18A

8 **Explain revenue recognition for franchises.** In a franchise arrangement, the franchisor records as revenue the initial franchise fee as it makes substantial performance of the services it is obligated to perform and collection of the fee is reasonably assured. Franchisors recognize continuing franchise fees as revenue when they are earned and receivable from the franchisee.

FASB CODIFICATION

FASB Codification References

[1] FASB ASC 605-10-S99-1. [Predecessor literature: "Revenue Recognition in Financial Statements," *SEC Staff Accounting Bulletin No. 101* December 3, 1999), and "Revenue Recognition," *SEC Staff Accounting Bulletin No. 104* (December 17, 2003).]

[2] FASB ASC 470-40-25. [Predecessor literature: "Accounting for Product Financing Arrangements," *Statement of Financial Accounting Standards No. 49* (Stamford, Conn.: FASB, 1981).]

[3] FASB ASC 605-15-25-1. [Predecessor literature: "Revenue Recognition When Right of Return Exists," *Statement of Financial Accounting Standards No. 48* (Stamford, Conn.: FASB, 1981), par. 6.]

[4] FASB ASC 605-10-S99-1. [Predecessor literature: "Revenue Recognition in Financial Statements," *SEC Staff Accounting Bulletin No. 101* (December 3, 1999), and "Revenue Recognition," *SEC Staff Accounting Bulletin No. 104* (December 17, 2003).]

[5] FASB ASC 605-45-15. [Predecessor literature: "Revenue Recognition in Financial Statements," *SEC Staff Accounting Bulletin No. 101* (December 3, 1999), and "Revenue Recognition," *SEC Staff Accounting Bulletin No. 104* (December 17, 2003).]

[6] FASB ASC 605-25-05. [Predecessor literature: "EITF 00-21 Revenue Arrangements with Multiple Deliverables" (May 15, 2003).]

[7] FASB ASC 605-35-25-57. [Predecessor literature: "Accounting for Performance of Construction-Type and Certain Production-Type Contracts," *Statement of Position 81-1* (New York: AICPA, 1981), par. 23.]

[8] FASB ASC 605-35-05-7. [Predecessor literature: Committee on Accounting Procedure, "Long-Term Construction-Type Contracts," *Accounting Research Bulletin No. 45* (New York: AICPA, 1955), p. 7.]

[9] FASB ASC 910-405. [Predecessor literature: *Construction Contractors*, Audit and Accounting Guide (New York: AICPA, 1981), pp. 148–149.]

[10] FASB ASC 910-605-50-1. [Predecessor literature: *Construction Contractors*, Audit and Accounting Guide (New York: AICPA, 1981), p. 30.]

[11] FASB ASC 605-10-25-3. [Predecessor literature: "Omnibus Opinion," *Opinions of the Accounting Principles Board No. 10* (New York: AICPA, 1966), par. 12.]

[12] FASB ASC 976-605-25. [Predecessor literature: "Accounting for Sales of Real Estate," *Statement of Financial Accounting Standards No. 66* (Norwalk, Conn.: FASB, 1982), paras. 45–47.]

[13] FASB ASC 605-10-25-4. [Predecessor literature: "Omnibus Opinion," *Opinions of the Accounting Principles Board No. 10* (New York: AICPA, 1966), footnote 8, p. 149.]

[14] FASB ASC 952-605-25-7. [Predecessor literature: "Accounting for Franchise Fee Revenue," *Statement of Financial Accounting Standards No. 45* (Stamford, Conn.: FASB, 1981), par. 6.]

[15] FASB ASC 360-20-55-13. [Predecessor literature: "Accounting for Sales of Real Estate," *Statement of Financial Accounting Standards No. 66*, paras. 62 and 63.]

[16] FASB ASC 360-20-55-17. [Predecessor literature: "Accounting for Sales of Real Estate," *Statement of Financial Accounting Standards No. 66*, par. 65.]

[17] FASB ASC 952-605-25-3. [Predecessor literature: "Accounting for Franchise Fee Revenue," *Statement of Financial Accounting Standards No. 45* (Stamford, Conn.: FASB, 1981), par. 5.]

[18] FASB ASC 952-340-25. [Predecessor literature: "Accounting for Franchise Fee Revenue," *Statement of Financial Accounting Standards No. 45* (Stamford, Conn.: FASB, 1981), p. 17.]

Exercises

If your school has a subscription to the FASB Codification, go to *http://aaahq.org/asclogin.cfm* to log in and prepare responses to the following. Provide Codification references for your responses.

CE18-1 Access the glossary ("Master Glossary") to answer the following.

- **(a)** What is the cost-recovery method?
- **(b)** What is the percentage-of-completion method?
- **(c)** What is the deposit method?
- **(d)** What is the installment method?

CE18-2 Is the installment-sales method of recognizing revenue generally acceptable? Why or why not?

CE18-3 When would a construction company be allowed to use the completed-contract method?

CE18-4 When is it appropriate to use the cost-recovery method?

An additional Codification case can be found in the Using Your Judgment section, on page 1133.

Be sure to check the book's companion website for a Review and Analysis Exercise, with solution.

Note: All asterisked Questions, Exercises, and Problems relate to material in the appendix to the chapter.

QUESTIONS

1. Explain the current environment regarding revenue recognition.
2. What is viewed as a major criticism of GAAP as regards revenue recognition?
3. What is the revenue recognition principle?
4. When is revenue recognized in the following situations: (a) Revenue from selling products? (b) Revenue from services rendered? (c) Revenue from permitting others to use enterprise assets? (d) Revenue from disposing of assets other than products?
5. What is the proper accounting for volume discounts on sales of products?
6. What are the three alternative accounting methods available to a seller that is exposed to continued risks of ownership through return of the product?
7. Under what conditions may a seller who is exposed to continued risks of a high rate of return of the product sold recognize sales transactions as current revenue?
8. Explain a bill and hold sale. When is revenue recognized in these situations?
9. What are the reporting issues in a sale and buyback agreement?
10. Explain a principal-agent relationship and its significance to revenue recognition.
11. What is the nature of a sale on consignment?
12. Explain a multiple-deliverable arrangement. What is the major accounting issue related to these arrangements?
13. Explain how multiple-deliverable arrangements are measured and reported.
14. What are the two basic methods of accounting for long-term construction contracts? Indicate the circumstances that determine when one or the other of these methods should be used.
15. Hawkins Construction Co. has a $60 million contract to construct a highway overpass and cloverleaf. The total estimated cost for the project is $50 million. Costs incurred in the first year of the project are $8 million. Hawkins Construction Co. appropriately uses the percentage-of-completion method. How much revenue and gross profit should Hawkins recognize in the first year of the project?

16. For what reasons should the percentage-of-completion method be used over the completed-contract method whenever possible?

17. What methods are used in practice to determine the extent of progress toward completion? Identify some "input measures" and some "output measures" that might be used to determine the extent of progress.

18. What are the two types of losses that can become evident in accounting for long-term contracts? What is the nature of each type of loss? How is each type accounted for?

19. Under the percentage-of-completion method, how are the Construction in Process and the Billings on Construction in Process accounts reported in the balance sheet?

20. Explain the differences between the installment-sales method and the cost-recovery method.

21. Identify and briefly describe the two methods generally employed to account for the cash received in situations where the collection of the sales price is not reasonably assured.

22. What is the deposit method and when might it be applied?

23. What is the nature of an installment sale? How do installment sales differ from ordinary credit sales?

24. Describe the installment-sales method of accounting.

25. How are operating expenses (not included in cost of goods sold) handled under the installment-sales method of accounting? What is the justification for such treatment?

26. Mojave sold her condominium for $500,000 on September 14, 2012; she had paid $330,000 for it in 2004. Mojave collected the selling price as follows: 2012, $80,000; 2013, $320,000; and 2014, $100,000. Mojave appropriately uses the installment-sales method. Prepare a schedule to determine the gross profit for 2012, 2013, and 2014 from the installment sale.

27. When interest is involved in installment-sales transactions, how should it be treated for accounting purposes?

28. How should the results of installment sales be reported on the income statement?

29. At what time is it proper to recognize income in the following cases: (a) Installment sales with no reasonable basis for estimating the degree of collectibility? (b) Sales for future delivery? (c) Merchandise shipped on consignment? (d) Profit on incomplete construction contracts? (e) Subscriptions to publications?

30. When is revenue recognized under the cost-recovery method?

31. When is revenue recognized under the deposit method? How does the deposit method differ from the installment-sales and cost-recovery methods?

***32.** Why in franchise arrangements may it not be proper to recognize the entire franchise fee as revenue at the date of sale?

***33.** How does the concept of "substantial performance" apply to accounting for franchise sales?

***34.** How should a franchisor account for continuing franchise fees and routine sales of equipment and supplies to franchisees?

***35** What changes are made in the franchisor's recording of the initial franchise fee when the franchise agreement:

(a) Contains an option allowing the franchisor to purchase the franchised outlet, and it is likely that the option will be exercised?

(b) Allows the franchisee to purchase equipment and supplies from the franchisor at bargain prices?

BRIEF EXERCISES

2 **BE18-1** Manual Company sells goods to Nolan Company during 2012. It offers Nolan the following rebates based on total sales to Nolan. If total sales to Nolan are 10,000 units, it will grant a rebate of 2%. If it sells up to 20,000 units, it will grant a rebate of 4%. If it sells up to 30,000 units, it will grant a rebate of 6%. In the first quarter of the year, Manual sells 11,000 units to Nolan at a sales price of $110,000. Manual, based on past experience, has sold over 40,000 units to Nolan and these sales normally take place in the third quarter of the year. Prepare the journal entry to record the sale of the 11,000 units in the first quarter of the year.

2 **BE18-2** Adani Inc. sells goods to Geo Company for $11,000 on January 2, 2012, with payment due in 12 months. The fair value of the goods at the date of sale is $10,000. Prepare the journal entry to record this transaction on January 2, 2012. How much total revenue should be recognized on this sale in 2012?

2 **BE18-3** Travel Inc. sells tickets for a Caribbean cruise to Carmel Company employees. The total cruise package costs Carmel $70,000 from ShipAway cruise liner. Travel Inc. receives a commission of 6% of the total price. Travel Inc. therefore remits $65,800 to ShipAway. Prepare the entry to record the revenue recognized by Travel Inc. on this transaction.

2 **BE18-4** Aamodt Music sold CDs to retailers and recorded sales revenue of $700,000. During 2012, retailers returned CDs to Aamodt and were granted credit of $78,000. Past experience indicates that the normal return rate is 15%. Prepare Aamodt's entries to record (a) the $78,000 of returns and (b) estimated returns at December 31, 2012.

2 **BE18-5** Jansen Corporation shipped $20,000 of merchandise on consignment to Gooch Company. Jansen paid freight costs of $2,000. Gooch Company paid $500 for local advertising, which is reimbursable from Jansen. By year-end, 60% of the merchandise had been sold for $21,500. Gooch notified Jansen, retained a 10% commission, and remitted the cash due to Jansen. Prepare Jansen's entry when the cash is received.

2 **BE18-6** Telephone Sellers Inc. sells prepaid telephone cards to customers. Telephone Sellers then pays the telecommunications company, TeleExpress, for the actual use of its telephone lines. Assume that Telephone Sellers sells $4,000 of prepaid cards in January 2012. It then pays TeleExpress based on usage, which turns out to be 50% in February, 30% in March, and 20% in April. The total payment by Telephone Sellers for TeleExpress lines over the 3 months is $3,000. Indicate how much income Telephone Sellers should recognize in January, February, March, and April.

3 **BE18-7** Turner, Inc. began work on a $7,000,000 contract in 2012 to construct an office building. During 2012, Turner, Inc. incurred costs of $1,700,000, billed its customers for $1,200,000, and collected $960,000. At December 31, 2012, the estimated future costs to complete the project total $3,300,000. Prepare Turner's 2012 journal entries using the percentage-of-completion method.

3 **BE18-8** O'Neil, Inc. began work on a $7,000,000 contract in 2012 to construct an office building. O'Neil uses the percentage-of-completion method. At December 31, 2012, the balances in certain accounts were Construction in Process $2,450,000; Accounts Receivable $240,000; and Billings on Construction in Process $1,400,000. Indicate how these accounts would be reported in O'Neil's December 31, 2012, balance sheet.

4 **BE18-9** Use the information from BE18-7, but assume Turner uses the completed-contract method. Prepare the company's 2012 journal entries.

4 **BE18-10** Guillen, Inc. began work on a $7,000,000 contract in 2012 to construct an office building. Guillen uses the completed-contract method. At December 31, 2012, the balances in certain accounts were Construction in Process $1,715,000; Accounts Receivable $240,000; and Billings on Construction in Process $1,000,000. Indicate how these accounts would be reported in Guillen's December 31, 2012, balance sheet.

5 **BE18-11** Archer Construction Company began work on a $420,000 construction contract in 2012. During 2012, Archer incurred costs of $278,000, billed its customer for $215,000, and collected $175,000. At December 31, 2012, the estimated future costs to complete the project total $162,000. Prepare Archer's journal entry to record profit or loss using (a) the percentage-of-completion method and (b) the completed-contract method, if any.

6 **BE18-12** Gordeeva Corporation began selling goods on the installment basis on January 1, 2012. During 2012, Gordeeva had installment sales of $150,000; cash collections of $54,000; cost of installment sales of $102,000. Prepare the company's entries to record installment sales, cash collected, cost of installment sales, deferral of gross profit, and gross profit recognized, using the installment-sales method.

6 **BE18-13** Lazaro Inc. sells goods on the installment basis and uses the installment-sales method. Due to a customer default, Lazaro repossessed merchandise that was originally sold for $800, resulting in a gross profit rate of 40%. At the time of repossession, the uncollected balance is $520, and the fair value of the repossessed merchandise is $275. Prepare Lazaro's entry to record the repossession.

6 **BE18-14** At December 31, 2012, Grinkov Corporation had the following account balances.

Installment Accounts Receivable, 2011	$ 65,000
Installment Accounts Receivable, 2012	110,000
Deferred Gross Profit, 2011	23,400
Deferred Gross Profit, 2012	41,800

Most of Grinkov's sales are made on a 2-year installment basis. Indicate how these accounts would be reported in Grinkov's December 31, 2012, balance sheet. The 2011 accounts are collectible in 2013, and the 2012 accounts are collectible in 2014.

7 **BE18-15** Schuss Corporation sold equipment to Potsdam Company for $20,000. The equipment is on Schuss's books at a net amount of $13,000. Schuss collected $10,000 in 2012, $5,000 in 2013, and $5,000 in 2014. If Schuss uses the cost-recovery method, what amount of gross profit will be recognized in each year?

8 *__BE18-16__ Frozen Delight, Inc. charges an initial franchise fee of $75,000 for the right to operate as a franchisee of Frozen Delight. Of this amount, $25,000 is collected immediately. The remainder is collected in 4 equal annual installments of $12,500 each. These installments have a present value of $41,402. There is reasonable expectation that the down payment may be refunded and substantial future services be performed by Frozen Delight, Inc. Prepare the journal entry required by Frozen Delight to record the franchise fee.

EXERCISES

2 **E18-1 (Revenue Recognition—Point of Sale)** Jupiter Company sells goods on January 1 that have a cost of $500,000 to Danone Inc. for $700,000, with payment due in 1 year. The cash price for these goods is $610,000, with payment due in 30 days. If Danone paid immediately upon delivery, it would receive a cash discount of $10,000.

Instructions

(a) Prepare the journal entry to record this transaction at the date of sale.
(b) How much revenue should Jupiter report for the entire year?

2 **E18-2 (Revenue Recognition—Point of Sale)** Shaw Company sells goods that cost $300,000 to Ricard Company for $410,000 on January 2, 2012. The sales price includes an installation fee, which is valued at $40,000. The fair value of the goods is $370,000. The installation is expected to take 6 months.

Instructions

(a) Prepare the journal entry (if any) to record the sale on January 2, 2012.
(b) Shaw prepares an income statement for the first quarter of 2012, ending on March 31, 2012. How much revenue should Shaw recognize related to its sale to Ricard?

2 **E18-3 (Revenue Recognition—Point of Sale)** Presented below are three revenue recognition situations.

(a) Grupo sells goods to MTN for $1,000,000, payment due at delivery.
(b) Grupo sells goods on account to Grifols for $800,000, payment due in 30 days.
(c) Grupo sells goods to Magnus for $500,000, payment due in two installments: the first installment payable in 6 months and the second payment due 3 months later.

Instructions

Indicate how each of these transactions is reported.

2 **E18-4 (Revenue Recognition—Point of Sale)** Wood-Mode Company is involved in the design, manufacture, and installation of various types of wood products for large construction projects. Wood-Mode recently completed a large contract for Stadium Inc., which consisted of building 35 different types of concession counters for a new soccer arena under construction. The terms of the contract are that upon completion of the counters, Stadium would pay $2,000,000. Unfortunately, due to the depressed economy, the completion of the new soccer arena is now delayed. Stadium has therefore asked Wood-Mode to hold the counters at its manufacturing plant until the arena is completed. Stadium acknowledges in writing that it ordered the counters and that they now have ownership. The time that Wood-Mode Company must hold the counters is totally dependent on when the arena is completed. Because Wood-Mode has not received additional progress payments for the arena due to the delay, Stadium has provided a deposit of $300,000.

Instructions

(a) Explain this type of revenue recognition transaction.
(b) What factors should be considered in determining when to recognize revenue in this transaction?
(c) Prepare the journal entry(ies) that Wood-Mode should make, assuming it signed a valid sales contract to sell the counters and received at the time of sale the $300,000 payment.

2 **E18-5 (Right of Return)** Organic Growth Company is presently testing a number of new agricultural seeds that it has recently harvested. To stimulate interest, it has decided to grant to five of its largest customers the unconditional right of return to these products if not fully satisfied. The right of return extends for 4 months. Organic Growth sells these seeds on account for $1,500,000 on January 2, 2012. Companies are required to pay the full amount due by March 15, 2012.

Instructions

(a) Prepare the journal entry for Organic Growth at January 2, 2012, assuming Organic Growth estimates returns of 20% based on prior experience. (Ignore cost of goods sold.)

(b) Assume that one customer returns the seeds on March 1, 2012, due to unsatisfactory performance. Prepare the journal entry to record this transaction, assuming this customer purchased $100,000 of seeds from Organic Growth.

(c) Briefly describe the accounting for these sales, if Organic Growth is unable to reliably estimate returns.

1 2 **E18-6 (Revenue Recognition on Book Sales with High Returns)** Uddin Publishing Co. publishes college textbooks that are sold to bookstores on the following terms. Each title has a fixed wholesale price, terms f.o.b. shipping point, and payment is due 60 days after shipment. The retailer may return a maximum of 30% of an order at the retailer's expense. Sales are made only to retailers who have good credit ratings. Past experience indicates that the normal return rate is 12%, and the average collection period is 72 days.

Instructions

(a) Identify alternative revenue recognition criteria that Uddin could employ concerning textbook sales.

(b) Briefly discuss the reasoning for your answers in (a) above.

(c) In late July, Uddin shipped books invoiced at $15,000,000. Prepare the journal entry to record this event that best conforms to GAAP and your answer to part (b).

(d) In October, $2 million of the invoiced July sales were returned according to the return policy, and the remaining $13 million was paid. Prepare the entries for the return and payment.

1 2 **E18-7 (Sales Recorded Both Gross and Net)** On June 3, Hunt Company sold to Ann Mount merchandise having a sales price of $8,000 with terms of 2/10, n/60, f.o.b. shipping point. An invoice totaling $120, terms n/30, was received by Mount on June 8 from the Olympic Transport Service for the freight cost. Upon receipt of the goods, June 5, Mount notified Hunt Company that merchandise costing $600 contained flaws that rendered it worthless. The same day, Hunt Company issued a credit memo covering the worthless merchandise and asked that it be returned at company expense. The freight on the returned merchandise was $24, paid by Hunt Company on June 7. On June 12, the company received a check for the balance due from Mount.

Instructions

(a) Prepare journal entries for Hunt Company to record all the events noted above under each of the following bases.

(1) Sales and receivables are entered at gross selling price.

(2) Sales and receivables are entered net of cash discounts.

(b) Prepare the journal entry under basis (2), assuming that Ann Mount did not remit payment until August 5.

1 2 **E18-8 (Revenue Recognition on Marina Sales with Discounts)** Taylor Marina has 300 available slips that rent for $800 per season. Payments must be made in full at the start of the boating season, April 1, 2013. Slips for the next season may be reserved if paid for by December 31, 2012. Under a new policy, if payment is made by December 31, 2012, a 5% discount is allowed. The boating season ends October 31, and the marina has a December 31 year-end. To provide cash flow for major dock repairs, the marina operator is also offering a 20% discount to slip renters who pay for the 2014 season.

For the fiscal year ended December 31, 2012, all 300 slips were rented at full price. Two hundred slips were reserved and paid for the 2013 boating season, and 60 slips for the 2014 boating season were reserved and paid for.

Instructions

(a) Prepare the appropriate journal entries for fiscal 2012.

(b) Assume the marina operator is unsophisticated in business. Explain the managerial significance of the accounting above to this person.

1 2 **E18-9 (Consignment Computations)** On May 3, 2012, Eisler Company consigned 80 freezers, costing $500 each, to Remmers Company. The cost of shipping the freezers amounted to $840 and was paid by Eisler Company. On December 30, 2012, a report was received from the consignee, indicating that 40 freezers had been sold for $750 each. Remittance was made by the consignee for the amount due, after deducting a commission of 6%, advertising of $200, and total installation costs of $320 on the freezers sold.

Instructions

(a) Compute the inventory value of the units unsold in the hands of the consignee.

(b) Compute the profit for the consignor for the units sold.

(c) Compute the amount of cash that will be remitted by the consignee.

2 **E18-10 (Multiple-Deliverable Arrangement)** Appliance Center is an experienced home appliance dealer. Appliance Center also offers a number of services together with the home appliances that it sells. Assume that Appliance Center sells ovens on a standalone basis. Appliance Center also sells installation services and maintenance services for ovens. However, Appliance Center does not offer installation or maintenance services to customers who buy ovens from other vendors. Pricing for ovens is as follows.

Oven only	$ 800
Oven with installation service	850
Oven with maintenance services	975
Oven with installation and maintenance services	1,000

In each instance in which maintenance services are provided, the maintenance service is separately priced within the arrangement at $175. Additionally, the incremental amount charged by Appliance Center for installation approximates the amount charged by independent third parties. Ovens are sold subject to a general right of return. If a customer purchases an oven with installation and/or maintenance services, in the event Appliance Center does not complete the service satisfactorily, the customer is only entitled to a refund of the portion of the fee that exceeds $800.

Instructions

(a) Assume that a customer purchases an oven with both installation and maintenance services for $1,000. Based on its experience, Appliance Center believes that it is probable that the installation of the equipment will be performed satisfactorily to the customer. Assume that the maintenance services are priced separately. Explain whether the conditions for a multiple-deliverable arrangement exist in this situation.

(b) Indicate the amount of revenues that should be allocated to the oven, the installation, and to the maintenance contract.

2 **E18-11 (Multiple-Deliverable Arrangement)** On December 31, 2012, Grando Company sells production equipment to Fargo Inc. for $50,000. Grando includes a 1-year warranty service with the sale of all its equipment. The customer receives and pays for the equipment on December 31, 2012. Grando estimates the prices to be $48,800 for the equipment and $1,200 for the warranty.

Instructions

(a) Prepare the journal entry to record this transaction on December 31, 2012.

(b) Indicate how much (if any) revenue should be recognized on January 31, 2013, and for the year 2013.

3 4 **E18-12 (Recognition of Profit on Long-Term Contracts)** During 2012, Nilsen Company started a construction job with a contract price of $1,600,000. The job was completed in 2014. The following information is available.

	2012	2013	2014
Costs incurred to date	$400,000	$825,000	$1,070,000
Estimated costs to complete	600,000	275,000	–0–
Billings to date	300,000	900,000	1,600,000
Collections to date	270,000	810,000	1,425,000

Instructions

(a) Compute the amount of gross profit to be recognized each year, assuming the percentage-of-completion method is used.

(b) Prepare all necessary journal entries for 2013.

(c) Compute the amount of gross profit to be recognized each year, assuming the completed-contract method is used.

3 **E18-13 (Analysis of Percentage-of-Completion Financial Statements)** In 2012, Steinrotter Construction Corp. began construction work under a 3-year contract. The contract price was $1,000,000. Steinrotter uses the percentage-of-completion method for financial accounting purposes. The income to be recognized each year is based on the proportion of cost incurred to total estimated costs for completing the contract. The financial statement presentations relating to this contract at December 31, 2012, are shown on the next page.

Balance Sheet

Accounts receivable—construction contract billings		$18,000
Construction in process	$65,000	
Less: Contract billings	61,500	
Cost of uncompleted contract in excess of billings		3,500

Income Statement

Income (before tax) on the contract recognized in 2012	$19,500

Instructions

(a) How much cash was collected in 2012 on this contract?
(b) What was the initial estimated total income before tax on this contract?

(AICPA adapted)

3 **E18-14 (Gross Profit on Uncompleted Contract)** On April 1, 2012, Dougherty Inc. entered into a cost-plus-fixed-fee contract to construct an electric generator for Altom Corporation. At the contract date, Dougherty estimated that it would take 2 years to complete the project at a cost of $2,000,000. The fixed fee stipulated in the contract is $450,000. Dougherty appropriately accounts for this contract under the percentage-of-completion method. During 2012, Dougherty incurred costs of $800,000 related to the project. The estimated cost at December 31, 2012, to complete the contract is $1,200,000. Altom was billed $600,000 under the contract.

Instructions

Prepare a schedule to compute the amount of gross profit to be recognized by Dougherty under the contract for the year ended December 31, 2012. Show supporting computations in good form.

(AICPA adapted)

3 **E18-15 (Recognition of Profit, Percentage-of-Completion)** In 2012, Gurney Construction Company agreed to construct an apartment building at a price of $1,200,000. The information relating to the costs and billings for this contract is shown below.

	2012	2013	2014
Costs incurred to date	$280,000	$600,000	$ 785,000
Estimated costs yet to be incurred	520,000	200,000	–0–
Customer billings to date	150,000	500,000	1,200,000
Collection of billings to date	120,000	320,000	940,000

Instructions

(a) Assuming that the percentage-of-completion method is used, (1) compute the amount of gross profit to be recognized in 2012 and 2013, and (2) prepare journal entries for 2013.
(b) For 2013, show how the details related to this construction contract would be disclosed on the balance sheet and on the income statement.

3 4 **E18-16 (Recognition of Revenue on Long-Term Contract and Entries)** Hamilton Construction Company uses the percentage-of-completion method of accounting. In 2012, Hamilton began work under contract #E2-D2, which provided for a contract price of $2,200,000. Other details follow:

	2012	2013
Costs incurred during the year	$640,000	$1,425,000
Estimated costs to complete, as of December 31	960,000	–0–
Billings during the year	420,000	1,680,000
Collections during the year	350,000	1,500,000

Instructions

(a) What portion of the total contract price would be recognized as revenue in 2012? In 2013?
(b) Assuming the same facts as those above except that Hamilton uses the completed-contract method of accounting, what portion of the total contract price would be recognized as revenue in 2013?
(c) Prepare a complete set of journal entries for 2012 (using the percentage-of-completion method).

3 4 **E18-17 (Recognition of Profit and Balance Sheet Amounts for Long-Term Contracts)** Yanmei Construction Company began operations January 1, 2012. During the year, Yanmei Construction entered into a contract with Lundquist Corp. to construct a manufacturing facility. At that time, Yanmei estimated that it

would take 5 years to complete the facility at a total cost of $4,500,000. The total contract price for construction of the facility is $6,000,000. During the year, Yanmei incurred $1,185,800 in construction costs related to the construction project. The estimated cost to complete the contract is $4,204,200. Lundquist Corp. was billed and paid 25% of the contract price.

Instructions

Prepare schedules to compute the amount of gross profit to be recognized for the year ended December 31, 2012, and the amount to be shown as "costs and recognized profit on uncompleted contract in excess of related billings" or "billings on uncompleted contract in excess of related costs and recognized profit" at December 31, 2012, under each of the following methods.

(a) Completed-contract method.
(b) Percentage-of-completion method.

Show supporting computations in good form.

(AICPA adapted)

4 5 **E18-18 (Long-Term Contract Reporting)** Berstler Construction Company began operations in 2012. Construction activity for the first year is shown below. All contracts are with different customers, and any work remaining at December 31, 2012, is expected to be completed in 2013.

Project	Total Contract Price	Billings through 12/31/12	Cash Collections through 12/31/12	Contract Costs Incurred through 12/31/12	Estimated Additional Costs to Complete
1	$ 560,000	$ 360,000	$340,000	$450,000	$130,000
2	670,000	220,000	210,000	126,000	504,000
3	520,000	500,000	440,000	330,000	–0–
	$1,750,000	$1,080,000	$990,000	$906,000	$634,000

Instructions

Prepare a partial income statement and balance sheet to indicate how the above information would be reported for financial statement purposes. Berstler Construction Company uses the completed-contract method.

6 **E18-19 (Installment-Sales Method Calculations, Entries)** Coffin Corporation appropriately uses the installment-sales method of accounting to recognize income in its financial statements. The following information is available for 2012 and 2013.

	2012	2013
Installment sales	$900,000	$1,000,000
Cost of installment sales	594,000	680,000
Cash collections on 2012 sales	370,000	350,000
Cash collections on 2013 sales	–0–	450,000

Instructions

(a) Compute the amount of realized gross profit recognized in each year.
(b) Prepare all journal entries required in 2013.

6 **E18-20 (Analysis of Installment-Sales Accounts)** Samuels Co. appropriately uses the installment-sales method of accounting. On December 31, 2014, the books show balances as follows.

Installment Receivables		Deferred Gross Profit		Gross Profit on Sales	
2012	$12,000	2012	$ 7,000	2012	35%
2013	40,000	2013	26,000	2013	33%
2014	80,000	2014	95,000	2014	32%

Instructions

(a) Prepare the adjusting entry or entries required on December 31, 2014 to recognize 2014 realized gross profit. (Installment receivables have already been credited for cash receipts during 2014.)
(b) Compute the amount of cash collected in 2014 on accounts receivable from each year.

6 **E18-21 (Gross Profit Calculations and Repossessed Merchandise)** Basler Corporation, which began business on January 1, 2012, appropriately uses the installment-sales method of accounting. The following data were obtained for the years 2012 and 2013.

	2012	2013
Installment sales	$750,000	$840,000
Cost of installment sales	510,000	588,000
General & administrative expenses	70,000	84,000
Cash collections on sales of 2012	310,000	300,000
Cash collections on sales of 2013	–0–	400,000

Instructions

(a) Compute the balance in the deferred gross profit accounts on December 31, 2012, and on December 31, 2013.

(b) A 2012 sale resulted in default in 2014. At the date of default, the balance on the installment receivable was $12,000, and the repossessed merchandise had a fair value of $8,000. Prepare the entry to record the repossession.

(AICPA adapted)

6 **E18-22 (Interest Revenue from Installment Sale)** Becker Corporation sells farm machinery on the installment plan. On July 1, 2012, Becker entered into an installment-sales contract with Valente Inc. for an 8-year period. Equal annual payments under the installment sale are $100,000 and are due on July 1. The first payment was made on July 1, 2012.

Additional information:

1. The amount that would be realized on an outright sale of similar farm machinery is $586,842.
2. The cost of the farm machinery sold to Valente Inc. is $425,000.
3. The finance charges relating to the installment period are based on a stated interest rate of 10%, which is appropriate.
4. Circumstances are such that the collection of the installments due under the contract is reasonably assured.

Instructions

What income or loss before income taxes should Becker record for the year ended December 31, 2012, as a result of the transaction above?

(AICPA adapted)

6 7 **E18-23 (Installment-Sales Method and Cost-Recovery Method)** Swift Corp., a capital goods manufacturing business that started on January 4, 2012, and operates on a calendar-year basis, uses the installment-sales method of profit recognition in accounting for all its sales. The following data were taken from the 2012 and 2013 records.

	2012	2013
Installment sales	$480,000	$620,000
Gross profit as a percent of costs	25%	28%
Cash collections on sales of 2012	$130,000	$240,000
Cash collections on sales of 2013	–0–	$160,000

The amounts given for cash collections exclude amounts collected for interest charges.

Instructions

(a) Compute the amount of realized gross profit to be recognized on the 2013 income statement, prepared using the installment-sales method. (Round percentages to three decimal places.)

(b) State where the balance of Deferred Gross Profit would be reported on the financial statements for 2013.

(c) Compute the amount of realized gross profit to be recognized on the income statement, prepared using the cost-recovery method.

(CIA adapted)

6 7 **E18-24 (Installment-Sales Method and Cost-Recovery Method)** On January 1, 2012, Wetzel Company sold property for $250,000. The note will be collected as follows: $120,000 in 2012, $90,000 in 2013, and $40,000 in 2014. The property had cost Wetzel $150,000 when it was purchased in 2010.

Instructions

(a) Compute the amount of gross profit realized each year, assuming Wetzel uses the cost-recovery method.

(b) Compute the amount of gross profit realized each year, assuming Wetzel uses the installment-sales method.

6 **E18-25 (Installment Sales—Default and Repossession)** Crawford Imports Inc. was involved in two default and repossession cases during the year:

1. A refrigerator was sold to Cindy McClary for $1,800, including a 30% markup on selling price. McClary made a down payment of 20%, four of the remaining 16 equal payments, and then defaulted on further payments. The refrigerator was repossessed, at which time the fair value was determined to be $800.
2. An oven that cost $1,200 was sold to Travis Longman for $1,500 on the installment basis. Longman made a down payment of $240 and paid $80 a month for six months, after which he defaulted. The oven was repossessed and the estimated fair value at time of repossession was determined to be $750.

Instructions

Prepare journal entries to record each of these repossessions using a fair value approach. (Ignore interest charges.)

6 **E18-26 (Installment Sales—Default and Repossession)** Seaver Company uses the installment-sales method in accounting for its installment sales. On January 1, 2012, Seaver Company had an installment account receivable from Jan Noble with a balance of $1,800. During 2012, $500 was collected from Noble. When no further collection could be made, the merchandise sold to Noble was repossessed. The merchandise had a fair value of $650 after the company spent $60 for reconditioning of the merchandise. The merchandise was originally sold with a gross profit rate of 30%.

Instructions

Prepare the entries on the books of Seaver Company to record all transactions related to Noble during 2012. (Ignore interest charges.)

8 ***E18-27 (Franchise Entries)** Pacific Crossburgers Inc. charges an initial franchise fee of $70,000. Upon the signing of the agreement, a payment of $28,000 is due. Thereafter, three annual payments of $14,000 are required. The credit rating of the franchisee is such that it would have to pay interest at 10% to borrow money.

Instructions

Prepare the entries to record the initial franchise fee on the books of the franchisor under the following assumptions. (Round to the nearest dollar.)

(a) The down payment is not refundable, no future services are required by the franchisor, and collection of the note is reasonably assured.

(b) The franchisor has substantial services to perform, the down payment is refundable, and the collection of the note is very uncertain.

(c) The down payment is not refundable, collection of the note is reasonably certain, the franchisor has yet to perform a substantial amount of services, and the down payment represents a fair measure of the services already performed.

8 ***E18-28 (Franchise Fee, Initial Down Payment)** On January 1, 2012, Lesley Benjamin signed an agreement to operate as a franchisee of Campbell Inc. for an initial franchise fee of $50,000. The amount of $10,000 was paid when the agreement was signed, and the balance is payable in five annual payments of $8,000 each, beginning January 1, 2013. The agreement provides that the down payment is not refundable and that no future services are required of the franchisor. Lesley Benjamin's credit rating indicates that she can borrow money at 11% for a loan of this type.

Instructions

(a) How much should Campbell record as revenue from franchise fees on January 1, 2012? At what amount should Benjamin record the acquisition cost of the franchise on January 1, 2012?

(b) What entry would be made by Campbell on January 1, 2012, if the down payment is refundable and substantial future services remain to be performed by Campbell?

(c) How much revenue from franchise fees would be recorded by Campbell on January 1, 2012, if:

   (1) The initial down payment is not refundable, it represents a fair measure of the services already provided, a significant amount of services is still to be performed by Campbell in future periods, and collectibility of the note is reasonably assured?

(2) The initial down payment is not refundable and no future services are required by the franchisor, but collection of the note is so uncertain that recognition of the note as an asset is unwarranted?
(3) The initial down payment has not been earned and collection of the note is so uncertain that recognition of the note as an asset is unwarranted?

See the book's companion website, www.wiley.com/college/kieso, for a set of B Exercises.

PROBLEMS

2 3 4 6 **P18-1 (Comprehensive Three-Part Revenue Recognition)** Van Hatten Industries has three operating divisions—Depp Construction Division, DeMent Publishing Division, and Ankiel Securities Division. Each division maintains its own accounting system and method of revenue recognition.

Depp Construction Division
During the fiscal year ended November 30, 2012, Depp Construction Division had one construction project in process. A $30,000,000 contract for construction of a civic center was granted on June 19, 2012, and construction began on August 1, 2012. Estimated costs of completion at the contract date were $25,000,000 over a 2-year time period from the date of the contract. On November 30, 2012, construction costs of $7,200,000 had been incurred and progress billings of $9,500,000 had been made. The construction costs to complete the remainder of the project were reviewed on November 30, 2012, and were estimated to amount to only $16,800,000 because of an expected decline in raw materials costs. Revenue recognition is based upon a percentage-of-completion method.

DeMent Publishing Division
The DeMent Publishing Division sells large volumes of novels to a few book distributors, which in turn sell to several national chains of bookstores. DeMent allows distributors to return up to 30% of sales, and distributors give the same terms to bookstores. While returns from individual titles fluctuate greatly, the returns from distributors have averaged 20% in each of the past 5 years. A total of $7,000,000 of paperback novel sales were made to distributors during fiscal 2012. On November 30, 2012 (the end of the fiscal year), $1,500,000 of fiscal 2012 sales were still subject to return privileges over the next 6 months. The remaining $5,500,000 of fiscal 2012 sales had actual returns of 21%. Sales from fiscal 2011 totaling $2,000,000 were collected in fiscal 2012 less 18% returns. This division records revenue according to the method referred to as revenue recognition when the right of return exists.

Ankiel Securities Division
Ankiel Securities Division works through manufacturers' agents in various cities. Orders for alarm systems and down payments are forwarded from agents, and the division ships the goods f.o.b. factory directly to customers (usually police departments and security guard companies). Customers are billed directly for the balance due plus actual shipping costs. The company received orders for $6,000,000 of goods during the fiscal year ended November 30, 2012. Down payments of $600,000 were received, and $5,200,000 of goods were billed and shipped. Actual freight costs of $100,000 were also billed. Commissions of 10% on product price are paid to manufacturing agents after goods are shipped to customers. Such goods are warranted for 90 days after shipment, and warranty returns have been about 1% of sales. Revenue is recognized at the point of sale by this division.

Instructions

(a) There are a variety of methods of revenue recognition. Define and describe each of the following methods of revenue recognition, and indicate whether each is in accordance with generally accepted accounting principles.
  (1) Point of sale.
  (2) Completion-of-production.
  (3) Percentage-of-completion.
  (4) Installment-sales.

(b) Compute the revenue to be recognized in fiscal year 2012 for each of the three operating divisions of Van Hatten Industries in accordance with generally accepted accounting principles.

3 4 **P18-2 (Recognition of Profit on Long-Term Contract)** Shanahan Construction Company has entered into a contract beginning January 1, 2012, to build a parking complex. It has been estimated that the complex will cost $600,000 and will take 3 years to construct. The complex will be billed to the purchasing company at $900,000. The following data pertain to the construction period.

	2012	2013	2014
Costs to date	$270,000	$450,000	$610,000
Estimated costs to complete	330,000	150,000	–0–
Progress billings to date	270,000	550,000	900,000
Cash collected to date	240,000	500,000	900,000

Instructions

(a) Using the percentage-of-completion method, compute the estimated gross profit that would be recognized during each year of the construction period.

(b) Using the completed-contract method, compute the estimated gross profit that would be recognized during each year of the construction period.

3 4 **P18-3 (Recognition of Profit and Entries on Long-Term Contract)** On March 1, 2012, Chance Company entered into a contract to build an apartment building. It is estimated that the building will cost $2,000,000 and will take 3 years to complete. The contract price was $3,000,000. The following information pertains to the construction period.

	2012	2013	2014
Costs to date	$ 600,000	$1,560,000	$2,100,000
Estimated costs to complete	1,400,000	520,000	–0–
Progress billings to date	1,050,000	2,000,000	3,000,000
Cash collected to date	950,000	1,950,000	2,850,000

Instructions

(a) Compute the amount of gross profit to be recognized each year, assuming the percentage-of-completion method is used.

(b) Prepare all necessary journal entries for 2014.

(c) Prepare a partial balance sheet for December 31, 2013, showing the balances in the receivables and inventory accounts.

3 **P18-4 (Recognition of Profit and Balance Sheet Presentation, Percentage-of-Completion)** On February 1, 2012, Hewitt Construction Company obtained a contract to build an athletic stadium. The stadium was to be built at a total cost of $5,400,000 and was scheduled for completion by September 1, 2014. One clause of the contract stated that Hewitt was to deduct $15,000 from the $6,600,000 billing price for each week that completion was delayed. Completion was delayed 6 weeks, which resulted in a $90,000 penalty. Below are the data pertaining to the construction period.

	2012	2013	2014
Costs to date	$1,620,000	$3,850,000	$5,500,000
Estimated costs to complete	3,780,000	1,650,000	–0–
Progress billings to date	1,200,000	3,300,000	6,510,000
Cash collected to date	1,000,000	2,800,000	6,510,000

Instructions

(a) Using the percentage-of-completion method, compute the estimated gross profit recognized in the years 2012–2014.

(b) Prepare a partial balance sheet for December 31, 2013, showing the balances in the receivables and inventory accounts.

3 4 5 **P18-5 (Completed-Contract and Percentage-of-Completion with Interim Loss)** Reynolds Custom Builders (RCB) was established in 1987 by Avery Conway and initially built high-quality customized homes under contract with specific buyers. In the 1990s, Conway's two sons joined the company and expanded RCB's activities into the high-rise apartment and industrial plant markets. Upon the retirement of RCB's long-time financial manager, Conway's sons recently hired Ed Borke as controller for RCB. Borke, a former college friend of Conway's sons, has been associated with a public accounting firm for the last 6 years.

Upon reviewing RCB's accounting practices, Borke observed that RCB followed the completed-contract method of revenue recognition, a carryover from the years when individual home building was the majority of RCB's operations. Several years ago, the predominant portion of RCB's activities shifted to the high-rise and industrial building areas. From land acquisition to the completion of construction, most building contracts cover several years. Under the circumstances, Borke believes that RCB should follow the percentage-of-completion method of accounting. From a typical building contract, Borke developed the following data.

BLUESTEM TRACTOR PLANT

Contract price: $8,000,000

	2012	2013	2014
Estimated costs	$1,600,000	$2,880,000	$1,920,000
Progress billings	1,000,000	2,500,000	4,500,000
Cash collections	800,000	2,300,000	4,900,000

Instructions

(a) Explain the difference between completed-contract revenue recognition and percentage-of-completion revenue recognition.

(b) Using the data provided for the Bluestem Tractor Plant and assuming the percentage-of-completion method of revenue recognition is used, calculate RCB's revenue and gross profit for 2012, 2013, and 2014, under **each** of the following circumstances.

(1) Assume that all costs are incurred, all billings to customers are made, and all collections from customers are received within 30 days of billing, as planned.

(2) Further assume that, as a result of unforeseen local ordinances and the fact that the building site was in a wetlands area, RCB experienced cost overruns of $800,000 in 2012 to bring the site into compliance with the ordinances and to overcome wetlands barriers to construction.

(3) Further assume that, in addition to the cost overruns of $800,000 for this contract incurred under part (b)(2), inflationary factors over and above those anticipated in the development of the original contract cost have caused an additional cost overrun of $850,000 in 2013. It is not anticipated that any cost overruns will occur in 2014.

(CMA adapted)

3 4 5 **P18-6 (Long-Term Contract with Interim Loss)** On March 1, 2012, Pechstein Construction Company contracted to construct a factory building for Fabrik Manufacturing Inc. for a total contract price of $8,400,000. The building was completed by October 31, 2014. The annual contract costs incurred, estimated costs to complete the contract, and accumulated billings to Fabrik for 2012, 2013, and 2014 are given below.

	2012	2013	2014
Contract costs incurred during the year	$2,880,000	$2,230,000	$2,190,000
Estimated costs to complete the contract at 12/31	3,520,000	2,190,000	–0–
Billings to Fabrik during the year	3,200,000	3,500,000	1,700,000

Instructions

(a) Using the percentage-of-completion method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2012, 2013, and 2014. (Ignore income taxes.)

(b) Using the completed-contract method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2012, 2013, and 2014. (Ignore incomes taxes.)

3 4 5 **P18-7 (Long-Term Contract with an Overall Loss)** On July 1, 2012, Torvill Construction Company Inc. contracted to build an office building for Gumbel Corp. for a total contract price of $1,900,000. On July 1, Torvill estimated that it would take between 2 and 3 years to complete the building. On December 31, 2014, the building was deemed substantially completed. Following are accumulated contract costs incurred, estimated costs to complete the contract, and accumulated billings to Gumbel for 2012, 2013, and 2014.

	At 12/31/12	At 12/31/13	At 12/31/14
Contract costs incurred to date	$ 300,000	$1,200,000	$2,100,000
Estimated costs to complete the contract	1,200,000	800,000	–0–
Billings to Gumbel	300,000	1,100,000	1,850,000

Instructions

(a) Using the percentage-of-completion method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2012, 2013, and 2014. (Ignore income taxes.)

(b) Using the completed-contract method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2012, 2013, and 2014. (Ignore income taxes.)

6 **P18-8 (Installment-Sales Computations and Entries)** Presented below is summarized information for Johnston Co., which sells merchandise on the installment basis.

	2012	2013	2014
Sales (on installment plan)	$250,000	$260,000	$280,000
Cost of sales	155,000	163,800	182,000
Gross profit	$ 95,000	$ 96,200	$ 98,000
Collections from customers on:			
2012 installment sales	$ 75,000	$100,000	$ 50,000
2013 installment sales		100,000	120,000
2014 installment sales			100,000

Instructions

(a) Compute the realized gross profit for each of the years 2012, 2013, and 2014.
(b) Prepare in journal form all entries required in 2014, applying the installment-sales method of accounting. (Ignore interest charges.)

6 **P18-9 (Installment-Sales Income Statements)** Chantal Stores sells merchandise on open account as well as on installment terms.

	2012	2013	2014
Sales on account	$385,000	$426,000	$525,000
Installment sales	320,000	275,000	380,000
Collections on installment sales			
Made in 2012	100,000	90,000	40,000
Made in 2013		110,000	140,000
Made in 2014			125,000
Cost of sales			
Sold on account	270,000	277,000	341,000
Sold on installment	214,400	176,000	228,000
Selling expenses	77,000	87,000	92,000
Administrative expenses	50,000	51,000	52,000

Instructions

From the data above, which cover the 3 years since Chantal Stores commenced operations, determine the net income for each year, applying the installment-sales method of accounting. (Ignore interest charges.)

6 **P18-10 (Installment-Sales Computations and Entries)** Paul Dobson Stores sell appliances for cash and also on the installment plan. Entries to record cost of sales are made monthly.

PAUL DOBSON STORES
TRIAL BALANCE
DECEMBER 31, 2013

	Dr.	Cr.
Cash	$153,000	
Installment Accounts Receivable, 2012	56,000	
Installment Accounts Receivable, 2013	91,000	
Inventory—New Merchandise	123,200	
Inventory—Repossessed Merchandise	24,000	
Accounts Payable		$ 98,500
Deferred Gross Profit, 2012		45,600
Capital Stock		170,000
Retained Earnings		93,900
Sales		343,000
Installment Sales		200,000
Cost of Goods Sold	255,000	
Cost of Installment Sales	120,000	
Loss on Repossession	800	
Operating Expenses	128,000	
	$951,000	$951,000

The accounting department has prepared the following analysis of cash receipts for the year.

Cash sales (including repossessed merchandise)	$424,000
Installment accounts receivable, 2012	96,000
Installment accounts receivable, 2013	109,000
Other	36,000
Total	$665,000

Repossessions recorded during the year are summarized as follows.

	2012
Uncollected balance	$8,000
Loss on repossession	800
Repossessed merchandise	4,800

Instructions

From the trial balance and accompanying information:

(a) Compute the rate of gross profit on installment sales for 2012 and 2013.
(b) Prepare closing entries as of December 31, 2013, under the installment-sales method of accounting.
(c) Prepare an income statement for the year ended December 31, 2013. Include only the realized gross profit in the income statement.

6 **P18-11 (Installment-Sales Entries)** The following summarized information relates to the installment-sales activity of Phillips Stores, Inc. for the year 2012.

Installment sales during 2012	$500,000
Cost of goods sold on installment basis	350,000
Collections from customers	180,000
Unpaid balances on merchandise repossessed	24,000
Estimated value of merchandise repossessed	11,200

Instructions

(a) Prepare journal entries at the end of 2012 to record on the books of Phillips Stores, Inc. the summarized data above.
(b) Prepare the entry to record the gross profit realized during 2012.

6 **P18-12 (Installment-Sales Computation and Entries—Periodic Inventory)** Mantle Inc. sells merchandise for cash and also on the installment plan. Entries to record cost of goods sold are made at the end of each year.

Repossessions of merchandise (sold in 2012) were made in 2013 and were recorded correctly as follows.

Deferred Gross Profit, 2012	7,200	
Repossessed Merchandise	8,000	
Loss on Repossession	2,800	
Installment Accounts Receivable, 2012		18,000

Part of this repossessed merchandise was sold for cash during 2013, and the sale was recorded by a debit to Cash and a credit to Sales Revenue.

The inventory of repossessed merchandise on hand December 31, 2013, is $4,000; of new merchandise, $127,400. There was no repossessed merchandise on hand January 1, 2013.

Collections on accounts receivable during 2013 were:

Installment Accounts Receivable, 2012	$80,000
Installment Accounts Receivable, 2013	50,000

The cost of the merchandise sold under the installment plan during 2013 was $111,600. The rate of gross profit on 2012 and on 2013 installment sales can be computed from the information given.

MANTLE INC.
TRIAL BALANCE
DECEMBER 31, 2013

	Dr.	Cr.
Cash	$118,400	
Installment Accounts Receivable, 2012	80,000	
Installment Accounts Receivable, 2013	130,000	
Inventory, Jan. 1, 2013	120,000	
Repossessed Merchandise	8,000	
Accounts Payable		$ 47,200
Deferred Gross Profit, 2012		64,000
Common Stock		200,000
Retained Earnings		40,000
Sales Revenue		400,000
Installment Sales		180,000
Purchases	360,000	
Loss on Repossession	2,800	
Operating Expenses	112,000	
	$931,200	$931,200

Instructions

(a) From the trial balance and other information given above, prepare adjusting and closing entries as of December 31, 2013.

(b) Prepare an income statement for the year ended December 31, 2013. Include only the realized gross profit in the income statement.

6 **P18-13 (Installment Repossession Entries)** Selected transactions of TV Land Company are presented below.

1. A television set costing $540 is sold to Jack Matre on November 1, 2012, for $900. Matre makes a down payment of $300 and agrees to pay $30 on the first of each month for 20 months thereafter.
2. Matre pays the $30 installment due December 1, 2012.
3. On December 31, 2012, the appropriate entries are made to record profit realized on the installment sales.
4. The first seven 2013 installments of $30 each are paid by Matre. (Make one entry.)
5. In August 2013, the set is repossessed after Matre fails to pay the August 1 installment and indicates that he will be unable to continue the payments. The estimated fair value of the repossessed set is $100.

Instructions

Prepare journal entries to record the transactions above on the books of TV Land Company. Closing entries should not be made.

6 **P18-14 (Installment-Sales Computations and Schedules)** Saprano Company, on January 2, 2012, entered into a contract with a manufacturing company to purchase room-size air conditioners and to sell the units on an installment plan with collections over approximately 30 months with no carrying charge.

For income tax purposes Saprano Company elected to report income from its sales of air conditioners according to the installment-sales method.

Purchases and sales of new units were as follows.

	Units Purchased		Units Sold	
Year	Quantity	Price Each	Quantity	Price Each
2012	1,400	$130	1,100	$200
2013	1,200	112	1,500	170
2014	900	136	800	205

Collections on installment sales were as follows.

	Collections Received		
	2012	2013	2014
2012 sales	$42,000	$88,000	$ 80,000
2013 sales		51,000	110,000
2014 sales			34,600

In 2014, 50 units from the 2013 sales were repossessed and sold for $120 each on the installment plan. At the time of repossession, $2,000 had been collected from the original purchasers, and the units had a fair value of $3,000.

General and administrative expenses for 2014 were $60,000. No charge has been made against current income for the applicable insurance expense from a 3-year policy expiring June 30, 2015, costing $7,200, and for an advance payment of $12,000 on a new contract to purchase air conditioners beginning January 2, 2015.

Instructions

Assuming that the weighted-average method is used for determining the inventory cost, including repossessed merchandise, prepare schedules computing for 2012, 2013, and 2014:

(a) **(1)** The cost of goods sold on installments.
(2) The average unit cost of goods sold on installments for each year.
(b) The gross profit percentages for 2012, 2013, and 2014.
(c) The gain or loss on repossessions in 2014.
(d) The net income from installment sales for 2014. (Ignore income taxes.)

(AICPA adapted)

4 5 **P18-15 (Completed-Contract Method)** Monat Construction Company, Inc., entered into a firm fixed-price contract with Hyatt Clinic on July 1, 2012, to construct a four-story office building. At that time, Monat estimated that it would take between 2 and 3 years to complete the project. The total contract price for construction of the building is $4,400,000. Monat appropriately accounts for this contract under the completed-contract method in its financial statements and for income tax reporting. The building was deemed substantially completed on December 31, 2014. Estimated percentage of completion, accumulated contract costs incurred, estimated costs to complete the contract, and accumulated billings to the Hyatt Clinic under the contract are shown below.

	At December 31, 2012	At December 31, 2013,	At December 31, 2014
Percentage of completion	30%	70%	100%
Contract costs incurred	$1,140,000	$3,290,000	$4,800,000
Estimated costs to complete the contract	$2,660,000	$1,410,000	–0–
Billings to Hyatt Clinic	$1,400,000	$2,500,000	$4,300,000

Instructions

(a) Prepare schedules to compute the amount to be shown as "Cost of uncompleted contract in excess of related billings" or "Billings on uncompleted contract in excess of related costs" at December 31, 2012, 2013, and 2014. (Ignore income taxes.) Show supporting computations in good form.
(b) Prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2012, 2013, and 2014. (Ignore income taxes.) Show supporting computations in good form.

(AICPA adapted)

3 4 **P18-16 (Revenue Recognition Methods—Comparison)** Sue's Construction is in its fourth year of business. Sue performs long-term construction projects and accounts for them using the completed-contract method. Sue built an apartment building at a price of $1,100,000. The costs and billings for this contract for the first three years are as follows.

	2012	2013	2014
Costs incurred to date	$240,000	$600,000	$ 790,000
Estimated costs yet to be incurred	560,000	200,000	–0–
Customer billings to date	150,000	410,000	1,100,000
Collection of billings to date	120,000	340,000	950,000

Sue has contacted you, a certified public accountant, about the following concern. She would like to attract some investors, but she believes that in order to recognize revenue she must first "deliver" the product. Therefore, on her balance sheet, she did not recognize any gross profits from the above contract until 2014, when she recognized the entire $310,000. That looked good for 2014, but the preceding years looked grim by comparison. She wants to know about an alternative to this completed-contract revenue recognition.

Instructions

Draft a letter to Sue, telling her about the percentage-of-completion method of recognizing revenue. Compare it to the completed-contract method. Explain the idea behind the percentage-of-completion method. In addition, illustrate how much revenue she could have recognized in 2012, 2013, and 2014 if she had used this method.

3 4 **P18-17 (Comprehensive Problem—Long-Term Contracts)** You have been engaged by Buhl Construction Company to advise it concerning the proper accounting for a series of long-term contracts. Buhl commenced doing business on January 1, 2012. Construction activities for the first year of operations are shown below. All contract costs are with different customers, and any work remaining at December 31, 2012, is expected to be completed in 2013.

Project	Total Contract Price	Billings Through 12/31/12	Cash Collections Through 12/31/12	Contract Costs Incurred Through 12/31/12	Estimated Additional Costs to Complete
A	$ 300,000	$200,000	$180,000	$248,000	$ 72,000
B	350,000	110,000	105,000	67,800	271,200
C	280,000	280,000	255,000	186,000	–0–
D	200,000	35,000	25,000	118,000	87,000
E	240,000	205,000	200,000	190,000	10,000
	$1,370,000	$830,000	$765,000	$809,800	$440,200

Instructions

(a) Prepare a schedule to compute gross profit (loss) to be reported, unbilled contract costs and recognized profit, and billings in excess of costs and recognized profit using the percentage-of-completion method.

(b) Prepare a partial income statement and balance sheet to indicate how the information would be reported for financial statement purposes.

(c) Repeat the requirements for part (a), assuming Buhl uses the completed-contract method.

(d) Using the responses above for illustrative purposes, prepare a brief report comparing the conceptual merits (both positive and negative) of the two revenue recognition approaches.

CONCEPTS FOR ANALYSIS

CA18-1 (Revenue Recognition—Alternative Methods) Peterson Industries has three operating divisions—Farber Mining, Glesen Paperbacks, and Enyart Protection Devices. Each division maintains its own accounting system and method of revenue recognition.

Farber Mining

Farber Mining specializes in the extraction of precious metals such as silver, gold, and platinum. During the fiscal year ended November 30, 2012, Farber entered into contracts worth $2,250,000 and shipped metals worth $2,000,000. A quarter of the shipments were made from inventories on hand at the beginning of the fiscal year, and the remainder were made from metals that were mined during the year. Mining totals for the year, valued at market prices, were silver at $750,000, gold at $1,400,000, and platinum at $490,000. Farber uses the completion-of-production method to recognize revenue because its operations meet the specified criteria, i.e., reasonably assured sales prices, interchangeable units, and insignificant distribution costs.

Enyart Paperbacks

Enyart Paperbacks sells large quantities of novels to a few book distributors that in turn sell to several national chains of bookstores. Enyart allows distributors to return up to 30% of sales, and distributors give the same terms to bookstores. While returns from individual titles fluctuate greatly, the returns from distributors have averaged 20% in each of the past 5 years. A total of $7,000,000 of paperback novel sales were made to distributors during the fiscal year. On November 30, 2012, $2,200,000 of fiscal 2012 sales were still subject to return privileges over the next 6 months. The remaining $4,800,000 of fiscal 2012 sales had actual returns of 21%. Sales from fiscal 2011 totaling $2,500,000 were collected in fiscal 2012, with less than 18% of sales returned. Enyart records revenue according to the method referred to as revenue recognition when the right of return exits, because all applicable criteria for use of this method are met by Enyart's operations.

Glesen Protection Devices

Glesen Protection Devices works through manufacturers' agents in various cities. Orders for alarm systems and down payments are forwarded from agents, and Glesen ships the goods f.o.b. shipping point. Customers are billed for the balance due plus actual shipping costs. The firm received orders for $6,000,000 of goods during the fiscal year ended November 30, 2012. Down payments of $600,000 were received, and $5,000,000 of goods were billed and shipped. Actual freight costs of $100,000 were also billed. Commissions of 10% on product price were paid to manufacturers' agents after the goods were shipped to customers. Such goods are warranted for 90 days after shipment, and warranty returns have been about 1% of sales. Revenue is recognized at the point of sale by Glesen.

Instructions

(a) There are a variety of methods for revenue recognition. Define and describe each of the following methods of revenue recognition, and indicate whether each is in accordance with generally accepted accounting principles.
   (1) Completion-of-production method.
   (2) Percentage-of-completion method.
   (3) Installment-sales method.

(b) Compute the revenue to be recognized in the fiscal year ended November 30, 2012, for
   (1) Farber Mining.
   (2) Enyart Paperbacks.
   (3) Glesen Protection Devices.

(CMA adapted)

CA18-2 (Recognition of Revenue—Theory) Revenue is usually recognized at the point of sale. Under special circumstances, however, bases other than the point of sale are used for the timing of revenue recognition.

Instructions

(a) Why is the point of sale usually used as the basis for the timing of revenue recognition?

(b) Disregarding the special circumstances when bases other than the point of sale are used, discuss the merits of each of the following objections to the sale basis of revenue recognition:
   (1) It is too conservative because revenue is earned throughout the entire process of production.
   (2) It is not conservative enough because accounts receivable do not represent disposable funds, sales returns and allowances may be made, and collection and bad debt expenses may be incurred in a later period.

(c) Revenue may also be recognized (1) during production and (2) when cash is received. For each of these two bases of timing revenue recognition, give an example of the circumstances in which it is properly used and discuss the accounting merits of its use in lieu of the sale basis.

(AICPA adapted)

CA18-3 (Recognition of Revenue—Theory) The earning of revenue by a business enterprise is recognized for accounting purposes when the transaction is recorded. In some situations, revenue is recognized approximately as it is earned in the economic sense. In other situations, however, accountants have developed guidelines for recognizing revenue by other criteria, such as at the point of sale.

Instructions

(Ignore income taxes.)

(a) Explain and justify why revenue is often recognized as earned at time of sale.

(b) Explain in what situations it would be appropriate to recognize revenue as the productive activity takes place.

(c) At what times, other than those included in (a) and (b) above, may it be appropriate to recognize revenue? Explain.

CA18-4 (Recognition of Revenue—Bonus Dollars) Griseta & Dubel Inc. was formed early this year to sell merchandise credits to merchants who distribute the credits free to their customers. For example, customers can earn additional credits based on the dollars they spend with a merchant (e.g., airlines and hotels). Accounts for accumulating the credits and catalogs illustrating the merchandise for which the credits may be exchanged are maintained online. Centers with inventories of merchandise premiums have been established for redemption of the credits. Merchants may not return unused credits to Griseta & Dubel.

The following schedule expresses Griseta & Dubel's expectations as to percentages of a normal month's activity that will be attained. For this purpose, a "normal month's activity" is defined as the level of operations expected when expansion of activities ceases or tapers off to a stable rate. The company expects that this level will be attained in the third year and that sales of credits will average $6,000,000 per month throughout the third year.

Month	Actual Credit Sales Percent	Merchandise Premium Purchases Percent	Credit Redemptions Percent
6th	30%	40%	10%
12th	60	60	45
18th	80	80	70
24th	90	90	80
30th	100	100	95

Griseta & Dubel plans to adopt an annual closing date at the end of each 12 months of operation.

Instructions

(a) Discuss the factors to be considered in determining when revenue should be recognized in measuring the income of a business enterprise.

(b) Discuss the accounting alternatives that should be considered by Griseta & Dubel Inc. for the recognition of its revenues and related expenses.

(c) For each accounting alternative discussed in (b), give balance sheet accounts that should be used and indicate how each should be classified.

(AICPA adapted)

CA18-5 (Recognition of Revenue from Subscriptions) *Cutting Edge* is a monthly magazine that has been on the market for 18 months. It currently has a circulation of 1.4 million copies. Negotiations are underway to obtain a bank loan in order to update the magazine's facilities. They are producing close to capacity and expect to grow at an average of 20% per year over the next 3 years.

After reviewing the financial statements of *Cutting Edge*, Andy Rich, the bank loan officer, had indicated that a loan could be offered to *Cutting Edge* only if it could increase its current ratio and decrease its debt to equity ratio to a specified level.

Jonathan Embry, the marketing manager of *Cutting Edge*, has devised a plan to meet these requirements. Embry indicates that an advertising campaign can be initiated to immediately increase circulation. The potential customers would be contacted after the purchase of another magazine's mailing list. The campaign would include:

1. An offer to subscribe to *Cutting Edge* at 3/4 the normal price.
2. A special offer to all new subscribers to receive the most current world atlas whenever requested at a guaranteed price of $2.
3. An unconditional guarantee that any subscriber will receive a full refund if dissatisfied with the magazine.

Although the offer of a full refund is risky, Embry claims that few people will ask for a refund after receiving half of their subscription issues. Embry notes that other magazine companies have tried this sales promotion technique and experienced great success. Their average cancellation rate was 25%. On average, each company increased its initial circulation threefold and in the long run increased circulation to twice that which existed before the promotion. In addition, 60% of the new subscribers are expected to take advantage of the atlas premium. Embry feels confident that the increased subscriptions from the advertising campaign will increase the current ratio and decrease the debt to equity ratio.

You are the controller of *Cutting Edge* and must give your opinion of the proposed plan.

Instructions

(a) When should revenue from the new subscriptions be recognized?

(b) How would you classify the estimated sales returns stemming from the unconditional guarantee?

(c) How should the atlas premium be recorded? Is the estimated premium claims a liability? Explain.

(d) Does the proposed plan achieve the goals of increasing the current ratio and decreasing the debt to equity ratio?

CA18-6 (Long-Term Contract—Percentage-of-Completion) Widjaja Company is accounting for a long-term construction contract using the percentage-of-completion method. It is a 4-year contract that is currently in its second year. The latest estimates of total contract costs indicate that the contract will be completed at a profit to Widjaja Company.

Instructions

(a) What theoretical justification is there for Widjaja Company's use of the percentage-of-completion method?

(b) How would progress billings be accounted for? Include in your discussion the classification of progress billings in Widjaja Company financial statements.

(c) How would the income recognized in the second year of the 4-year contract be determined using the cost-to-cost method of determining percentage of completion?

(d) What would be the effect on earnings per share in the second year of the 4-year contract of using the percentage-of-completion method instead of the completed-contract method? Discuss.

(AICPA adapted)

CA18-7 (Revenue Recognition—Real Estate Development) Lillehammer Lakes is a new recreational real estate development which consists of 500 lake-front and lake-view lots. As a special incentive to the first 100 buyers of lake-view lots, the developer is offering 3 years of free financing on 10-year, 12% notes, no down payment, and one week at a nearby established resort (to be used in the next 3 months)—"a $1,200 value." The normal price per lot is $15,000. The cost per lake-view lot to the developer is an estimated average of $3,000.

The development costs continue to be incurred; the actual average cost per lot is not known at this time. The resort promotion cost is $700 per lot. The notes are held by Harper Corp., a wholly owned subsidiary.

Instructions

(a) Discuss the revenue recognition and gross profit measurement issues raised by this situation.
(b) How would the developer's past financial and business experience influence your decision concerning the recording of these transactions?
(c) Assume 50 people have accepted the offer, signed 10-year notes, and have stayed at the local resort. Prepare the journal entries that you believe are proper.
(d) What should be disclosed in the notes to the financial statements?

CA18-8 (Revenue Recognition) Nimble Health and Racquet Club (NHRC), which operates eight clubs in the Chicago metropolitan area, offers one-year memberships. The members may use any of the eight facilities but must reserve racquetball court time and pay a separate fee before using the court. As an incentive to new customers, NHRC advertised that any customers not satisfied for any reason could receive a refund of the remaining portion of unused membership fees. Membership fees are due at the beginning of the individual membership period. However, customers are given the option of financing the membership fee over the membership period at a 9% interest rate.

Some customers have expressed a desire to take only the regularly scheduled aerobic classes without paying for a full membership. During the current fiscal year, NHRC began selling coupon books for aerobic classes to accommodate these customers. Each book is dated and contains 50 coupons that may be redeemed for any regularly scheduled aerobics class over a one-year period. After the one-year period, unused coupons are no longer valid.

During 2010, NHRC expanded into the health equipment market by purchasing a local company that manufactures rowing machines and cross-country ski machines. These machines are used in NHRC's facilities and are sold through the clubs and mail order catalogs. Customers must make a 20% down payment when placing an equipment order; delivery is 60–90 days after order placement. The machines are sold with a 2-year unconditional guarantee. Based on past experience, NHRC expects the costs to repair machines under guarantee to be 4% of sales.

NHRC is in the process of preparing financial statements as of May 31, 2013, the end of its fiscal year. Marvin Bush, corporate controller, expressed concern over the company's performance for the year and decided to review the preliminary financial statements prepared by Joyce Kiley, NHRC's assistant controller. After reviewing the statements, Bush proposed that the following changes be reflected in the May 31, 2013, published financial statements.

1. Membership revenue should be recognized when the membership fee is collected.
2. Revenue from the coupon books should be recognized when the books are sold.
3. Down payments on equipment purchases and expenses associated with the guarantee on the rowing and cross-country machines should be recognized when paid.

Kiley indicated to Bush that the proposed changes are not in accordance with generally accepted accounting principles, but Bush insisted that the changes be made. Kiley believes that Bush wants to manage income to forestall any potential financial problems and increase his year-end bonus. At this point, Kiley is unsure what action to take.

Instructions

(a) (1) Describe when Nimble Health and Racquet Club (NHRC) should recognize revenue from membership fees, court rentals, and coupon book sales.
(2) Describe how NHRC should account for the down payments on equipment sales, explaining when this revenue should be recognized.
(3) Indicate when NHRC should recognize the expense associated with the guarantee of the rowing and cross-country machines.
(b) Discuss why Marvin Bush's proposed changes and his insistence that the financial statement changes be made is unethical. Structure your answer around or to include the following aspects of ethical conduct: competence, confidentiality, integrity, and/or objectivity.
(c) Identify some specific actions Joyce Kiley could take to resolve this situation.

(CMA adapted)

CA18-9 (Revenue Recognition—Membership Fees) Midwest Health Club (MHC) offers one-year memberships. Membership fees are due in full at the beginning of the individual membership period. As an incentive to new customers, MHC advertised that any customers not satisfied for any reason could receive a refund of the remaining portion of unused membership fees. As a result of this policy, Richard Nies, corporate controller, recognized revenue ratably over the life of the membership.

MHC is in the process of preparing its year-end financial statements. Rachel Avery, MHC's treasurer, is concerned about the company's lackluster performance this year. She reviews the financial statements Nies prepared and tells Nies to recognize membership revenue when the fees are received.

Instructions

Answer the following questions.

(a) What are the ethical issues involved?
(b) What should Nies do?

*__CA18-10 (Franchise Revenue)__ Amigos Burrito Inc. sells franchises to independent operators throughout the northwestern part of the United States. The contract with the franchisee includes the following provisions.

1. The franchisee is charged an initial fee of $120,000. Of this amount, $20,000 is payable when the agreement is signed, and a $20,000 non-interest-bearing note is payable at the end of each of the 5 subsequent years.
2. All of the initial franchise fee collected by Amigos is to be refunded and the remaining obligation canceled if, for any reason, the franchisee fails to open his or her franchise.
3. In return for the initial franchise fee, Amigos agrees to (a) assist the franchisee in selecting the location for the business, (b) negotiate the lease for the land, (c) obtain financing and assist with building design, (d) supervise construction, (e) establish accounting and tax records, and (f) provide expert advice over a 5-year period relating to such matters as employee and management training, quality control, and promotion.
4. In addition to the initial franchise fee, the franchisee is required to pay to Amigos a monthly fee of 2% of sales for menu planning, receipt innovations, and the privilege of purchasing ingredients from Amigos at or below prevailing market prices.

Management of Amigos Burrito estimates that the value of the services rendered to the franchisee at the time the contract is signed amounts to at least $20,000. All franchisees to date have opened their locations at the scheduled time, and none have defaulted on any of the notes receivable.

The credit ratings of all franchisees would entitle them to borrow at the current interest rate of 10%. The present value of an ordinary annuity of five annual receipts of $20,000 each discounted at 10% is $75,816.

Instructions

(a) Discuss the alternatives that Amigos Burrito Inc. might use to account for the initial franchise fees, evaluate each by applying generally accepted accounting principles, and give illustrative entries for each alternative.
(b) Given the nature of Amigos Burrito's agreement with its franchisees, when should revenue be recognized? Discuss the question of revenue recognition for both the initial franchise fee and the additional monthly fee of 2% of sales, and give illustrative entries for both types of revenue.
(c) Assume that Amigos Burrito sells some franchises for $100,000, which includes a charge of $20,000 for the rental of equipment for its useful life of 10 years; that $50,000 of the fee is payable immediately and the balance on non-interest-bearing notes at $10,000 per year; that no portion of the $20,000 rental payment is refundable in case the franchisee goes out of business; and that title to the equipment remains with the franchisor. Under those assumptions, what would be the preferable method of accounting for the rental portion of the initial franchise fee? Explain.

(AICPA adapted)

USING YOUR JUDGMENT

FINANCIAL REPORTING

Financial Reporting Problem

The Procter & Gamble Company (P&G)

The financial statements of P&G are presented in Appendix 5B or can be accessed at the book's companion website, **www.wiley.com/college/kieso**.

Instructions

Refer to P&G's financial statements and the accompanying notes to answer the following questions.

(a) What were P&G's sales for 2009?

(b) What was the percentage of increase or decrease in P&G's sales from 2008 to 2009? From 2007 to 2008? From 2005 to 2009?

(c) In its notes to the financial statements, what criteria does P&G use to recognize revenue?

(d) How does P&G account for trade promotions? Does the accounting conform to accrual accounting concepts? Explain.

Comparative Analysis Case

PEPSICO

The Coca-Cola Company and PepsiCo, Inc.

Instructions

Go to book's companion website and use information found there to answer the following questions related to **The Coca-Cola Company** and **PepsiCo, Inc.**

(a) What were Coca-Cola's and PepsiCo's net revenues (sales) for the year 2009? Which company increased its revenues more (dollars and percentage) from 2008 to 2009?

(b) Are the revenue recognition policies of Coca-Cola and PepsiCo similar? Explain.

(c) In which foreign countries (geographic areas) did Coca-Cola and PepsiCo experience significant revenues in 2009? Compare the amounts of foreign revenues to U.S. revenues for both Coca-Cola and PepsiCo.

Financial Statement Analysis Case

Westinghouse Electric Corporation

The following note appears in the "Summary of Significant Accounting Policies" section of the Annual Report of **Westinghouse Electric Corporation**.

> **Note 1 (in part): Revenue Recognition.** Sales are primarily recorded as products are shipped and services are rendered. The percentage-of-completion method of accounting is used for nuclear steam supply system orders with delivery schedules generally in excess of five years and for certain construction projects where this method of accounting is consistent with industry practice.
>
> WFSI revenues are generally recognized on the accrual method. When accounts become delinquent for more than two payment periods, usually 60 days, income is recognized only as payments are received. Such delinquent accounts for which no payments are received in the current month, and other accounts on which income is not being recognized because the receipt of either principal or interest is questionable, are classified as nonearning receivables.

Instructions

(a) Identify the revenue recognition methods used by Westinghouse Electric as discussed in its note on significant accounting policies.

(b) Under what conditions are the revenue recognition methods identified in the first paragraph of Westinghouse's note above acceptable?

(c) From the information provided in the second paragraph of Westinghouse's note, identify the type of operation being described and defend the acceptability of the revenue recognition method.

Accounting, Analysis, and Principles

Diversified Products, Inc. operates in several lines of business, including the construction and real estate industries. While the majority of its revenues are recognized at point of sale, Diversified appropriately recognizes revenue on long-term construction contracts using the percentage-of-completion method. It recognizes sales of some properties using the installment-sales approach. Income data for 2012 from operations other than construction and real estate are as follows.

Revenues	$9,500,000
Expenses	7,750,000

1. Diversified started a construction project during 2011. The total contract price is $1,000,000, and $200,000 in costs were incurred in both 2011 and 2012. In 2013, Diversified recognized $50,000 gross profit on the project. Estimated costs to complete the project in 2013 were $400,000.
2. During 2012, Diversified sold real-estate parcels at a price of $630,000. Gross profit at a 25% rate is recognized when cash is received. Diversified collected $500,000 during the year on these sales.

Accounting

Determine Diversified Products' 2012 net income. (Ignore taxes.)

Analysis

Determine free cash flow (see Chapter 5) for Diversified Products for 2012. In 2012, Diversified had depreciation expense of $175,000 and a net increase in working capital (changes in accounts receivable and accounts payable) of $250,000. In 2012, capital expenditures were $500,000; Diversified paid dividends of $120,000.

Principles

"Application of the percentage-of-completion and installment-sales method revenue recognition approaches illustrates the trade-off between relevance and faithful representation of accounting information." Explain.

BRIDGE TO THE PROFESSION

Professional Research: FASB Codification

Employees at your company disagree about the accounting for sales returns. The sales manager believes that granting more generous return provisions can give the company a competitive edge and increase sales revenue. The controller cautions that, depending on the terms granted, loose return provisions might lead to non-GAAP revenue recognition. The company CFO would like you to research the issue to provide an authoritative answer.

Instructions

If your school has a subscription to the FASB Codification, go to *http://aaa.hq.org/asclogin.cfm* to log in and prepare responses to the following. Provide Codification references for your responses.

(a) What is the authoritative literature addressing revenue recognition when right of return exists?

(b) What is meant by "right of return"?

(c) When there is a right of return, what conditions must the company meet to recognize the revenue at the time of sale?

(d) What factors may impair the ability to make a reasonable estimate of future returns?

Professional Simulation

In this simulation, you are asked to address questions related to revenue recognition issues. Prepare responses to all parts.

KWW_Professional_Simulation

Revenue Recognition | Time Remaining 3 hours 00 minutes | Unsplit | Split Horiz | Split Vertical | Spreadsheet | Calculator | Exit

Directions | Situation | Measurement | Journal Entries | Financial Statements | Explanation | Resources

Nomar Industries, Inc. operates in several lines of business, including the construction and real estate industries. While the majority of its revenues are recognized at point of sale, Nomar appropriately recognizes revenue on long-term construction contracts using the percentage-of-completion method. It recognizes sales of some properties using the installment-sales approach. Income data for 2013 from operations other than construction and real estate are as follows:

Revenues	$5,500,000
Expenses	4,200,000

1. Nomar started a construction project during 2012. The total contract price is $500,000, and $100,000 in costs were incurred in 2013. Estimated costs to complete the project in 2014 are $200,000. In 2012, Nomar incurred $100,000 of costs and recognized $25,000 gross profit on this project. Total billings at the end of 2013 were $230,000, and total cash collected as of the end of 2013 was $202,500.
2. During this year, Nomar sold real estate parcels at a price of $480,000. Nomar recognizes gross profit at an 18% rate when cash is received. Nomar collected $220,000 during the year on these sales.

Directions | Situation | Measurement | Journal Entries | Financial Statements | Explanation | Resources

Determine net income for Nomar for 2013. Ignore income taxes.

Directions | Situation | Measurement | Journal Entries | Financial Statements | Explanation | Resources

Prepare the journal entries to record the costs incurred and gross profit recognized in 2013 on the construction project.

Directions | Situation | Measurement | Journal Entries | Financial Statements | Explanation | Resources

For 2013, show how the details related to this construction contract would be disclosed on the balance sheet.

Directions | Situation | Measurement | Journal Entries | Financial Statements | Explanation | Resources

Nomar is negotiating real estate sales with some new customers which are more uncertain as to the customers' ability to make all payments. Is there a more appropriate revenue recognition policy for these customers? Explain.

IFRS Insights

The general concepts and principles used for revenue recognition are similar between IFRS and GAAP. Where they differ is in the details. As indicated in the chapter, GAAP provides specific guidance related to revenue recognition for many different industries. That is not the case for IFRS.

RELEVANT FACTS

- The IASB defines revenue to include both revenues and gains. GAAP provides separate definitions for revenues and gains.

- Revenue recognition fraud is a major issue in U.S. financial reporting. The same situation occurs overseas as evidenced by revenue recognition breakdowns at Dutch software company **Baan NV**, Japanese electronics giant **NEC**, and Dutch grocer **AHold NV**.
- In general, the IFRS revenue recognition principle is based on the probability that the economic benefits associated with the transaction will flow to the company selling the goods, rendering the service, or receiving investment income. In addition, the revenues and costs must be capable of being measured reliably. GAAP uses concepts such as realized, realizable, and earned as a basis for revenue recognition.
- IFRS has one basic standard on revenue recognition—*IAS 18*. GAAP has numerous standards related to revenue recognition (by some counts over 100).
- Accounting for revenue provides a most fitting contrast of the principles-based (IFRS) and rules-based (GAAP) approaches. While both sides have their advocates, the IASB and the FASB have identified a number of areas for improvement in this area.
- Under IFRS, revenue should be measured at fair value of the consideration received or receivable. GAAP measures revenue based on the fair value of what is given up (goods or services) or the fair value of what is received—whichever is more clearly evident.
- In general, the accounting at point of sale is similar between IFRS and GAAP. As indicated earlier, GAAP often provides detailed guidance, such as in the accounting for right of return and multiple-deliverable arrangements.
- IFRS prohibits the use of the completed-contract method of accounting for long-term construction contracts *(IAS 13)*. Companies must use the percentage-of-completion method. If revenues and costs are difficult to estimate, then companies recognize revenue only to the extent of the cost incurred—a cost-recovery (zero-profit) approach.
- In long-term construction contracts, IFRS requires recognition of a loss immediately if the overall contract is going to be unprofitable. In other words, GAAP and IFRS are the same regarding this issue.

ABOUT THE NUMBERS

Long-Term Contracts (Construction)

Under IFRS, two distinctly different methods of accounting for long-term construction contracts are recognized. They are:

- **Percentage-of-completion method.** Companies recognize revenues and gross profits each period based on the progress of the construction—that is, the percentage of completion. The company accumulates construction costs **plus gross profit earned to date** in an inventory account (Construction in Process), and it accumulates progress billings in a contra inventory account (Billings on Construction in Process). This approach is the same as GAAP.
- **Cost-recovery (zero-profit) method.** In some cases, contract revenue is recognized only to the extent of costs incurred that are expected to be recoverable. Once all costs are recognized, profit is recognized. The company accumulates construction costs in an inventory account (Construction in Process), and it accumulates progress billings in a contra inventory account (Billings on Construction in Process).

The rationale for using percentage-of-completion accounting is that under most of these contracts, the buyer and seller have enforceable rights. The buyer has the legal right to require specific performance on the contract. The seller has the right to require progress payments that provide evidence of the buyer's ownership interest. As a result, a continuous sale occurs as the work progresses. Companies should recognize revenue according to that progression. Companies *must* use the percentage-of-completion method when estimates of progress toward completion, revenues, and costs can be estimated reliably and **all of the following conditions** exist.

1. Total contract revenue can be measured reliably;
2. It is probable that the economic benefits associated with the contract will flow to the company;
3. Both the contract costs to complete the contract and the stage of contract completion at the end of the reporting period can be measured reliably; and
4. The contract costs attributable to the contract can be clearly identified and measured reliably so the actual contract costs incurred can be compared with prior estimates.

Companies should use the cost-recovery method when **one of the following conditions** applies:

- When a company cannot meet the conditions for using the percentage-of-completion method, or
- When there are inherent hazards in the contract beyond the normal, recurring business risks.

The presumption is that percentage-of-completion is the better method. Therefore, companies should use the cost-recovery method only when the percentage-of-completion method is inappropriate.

Cost-Recovery (Zero-Profit) Method

During the early stages of a contract, a company like **Alcatel-Lucent** may not be able to estimate reliably the outcome of a long-term construction contract. Nevertheless, Alcatel-Lucent is confident that it will recover the contract costs incurred. In this case, Alcatel-Lucent uses the **cost-recovery method** (sometimes referred to as the zero-profit method). This method recognizes revenue only to the extent of costs incurred that are expected to be recoverable. Only after all costs are incurred is gross profit recognized.

To illustrate the cost-recovery method for a bridge project, recall the Hardhat Construction example on pages 1083–1088. Under the cost-recovery method, Hardhat would report the following revenues and costs for 2012–2014, as shown in Illustration IFRS18-1.

ILLUSTRATION IFRS18-1
Cost-Recovery Method Revenue, Costs, and Gross Profit by Year

	To Date	Recognized in Prior Years	Recognized in Current Year
2012			
Revenues (costs incurred)	$1,000,000		$1,000,000
Costs	1,000,000		1,000,000
Gross profit	$ 0		$ 0
2013			
Revenues (costs incurred)	$2,916,000	$1,000,000	$1,916,000
Costs	2,916,000	1,000,000	1,916,000
Gross profit	$ 0	$ 0	$ 0
2014			
Revenues ($4,500,000 × 100%)	$4,500,000	$2,916,000	$1,584,000
Costs	4,050,000	2,916,000	1,134,000
Gross profit	$ 450,000	$ 0	$ 450,000

Illustration IFRS18-2 shows Hardhat's entries to recognize revenue and gross profit each year and to record completion and final approval of the contract.

	2012		2013		2014	
Construction Expenses	1,000,000		1,916,000			
Revenue from Long-Term Contracts		1,000,000		1,916,000		
(To recognize costs and related expenses)						
Construction in Process (Gross Profit)					450,000	
Construction Expenses					1,134,000	
Revenue from Long-Term Contracts						1,584,000
(To recognize costs and related expenses)						
Billings on Construction in Process					4,500,000	
Construction in Process						4,500,000
(To record completion of the contract)						

ILLUSTRATION IFRS18-2
Journal Entries—Cost-Recovery Method

As indicated, no gross profit is recognized in 2012 and 2013. In 2014, Hardhat then recognizes gross profit and closes the Billings and Construction in Process accounts.

Illustration IFRS18-3 compares the amount of gross profit that Hardhat Construction Company would recognize for the bridge project under the two revenue recognition methods.

	Percentage-of-Completion	Cost-Recovery
2012	$125,000	$ 0
2013	199,000	0
2014	126,000	450,000

ILLUSTRATION IFRS18-3
Comparison of Gross Profit Recognized under Different Methods

Under the cost-recovery method, Hardhat Construction would report its long-term construction activities as shown in Illustration IFRS18-4.

HARDHAT CONSTRUCTION COMPANY

Income Statement	2012	2013	2014
Revenue from long-term contracts	$1,000,000	$1,916,000	$1,584,000
Costs of construction	1,000,000	1,916,000	1,134,000
Gross profit	$ 0	$ 0	$ 450,000

Statement of Financial Position (12/31)		2012	2013	2014
Current assets				
Inventories				
Construction in process	$1,000,000			
Less: Billings	900,000			
Costs in excess of billings		$ 100,000		$ –0–
Accounts receivable		150,000	$ 800,000	–0–
Current liabilities				
Billings	3,300,000			
Less: Construction in process	2,916,000			
Billings in excess of costs and recognized profits			384,000	–0–

Note 1. Summary of significant accounting policies.

Long-Term Construction Contracts. The company recognizes revenues and reports profits from long-term construction contracts, its principal business, under the cost-recovery method. These contracts generally extend for periods in excess of one year. Contract costs and billings are accumulated during the periods of construction, and revenues are recognized only to the extent of costs incurred that are expected to be recoverable. Only after all costs are incurred is net income recognized. Costs included in construction in process include direct material, direct labor, and project-related overhead. Corporate general and administrative expenses are charged to the periods as incurred.

ILLUSTRATION IFRS18-4
Financial Statement Presentation—Cost-Recovery Method

ON THE HORIZON

The FASB and IASB are now involved in a joint project on revenue recognition. The objective of the project is to develop coherent conceptual guidance for revenue recognition and a comprehensive statement on revenue recognition based on those concepts. In particular, the project is intended to improve financial reporting by (1) converging U.S. and international standards on revenue recognition, (2) eliminating inconsistencies in the existing conceptual guidance on revenue recognition, (3) providing conceptual guidance that would be useful in addressing future revenue recognition issues, (4) eliminating inconsistencies in existing standards-level authoritative literature and accepted practices, (5) filling voids in revenue recognition guidance that have developed over time, and (6) establishing a single, comprehensive standard on revenue recognition. Presently, the Boards are evaluating a "customer-consideration" model. It is hoped that this approach (rather than using the earned and realized or realized criteria) will lead to a better basis for revenue recognition. For more on this topic, see *http://www.fasb.org/project/revenue_recognition.shtml*.

IFRS SELF-TEST QUESTIONS

1. The IASB:
   (a) has issued over 100 standards related to revenue recognition.
   (b) has issued one standard related to revenue recognition.
   (c) indicates that the present state of reporting for revenue is satisfactory.
   (d) All of the above.

2. Under IFRS, the revenue recognition principle indicates that revenue is recognized when:
   I. the benefits can be measured reliably.
   II. the sales transaction is initiated and completed.
   III. it is probable the benefits will flow to the company.
   IV. the date of sale, date of delivery, and billing have all occurred.

   (a) I, II, and III.
   (b) II and III.
   (c) I and III.
   (d) I, II, III and IV.

3. Lark Corp. has a contract to construct a $5,000,000 cruise ship at an estimated cost of $4,000,000. The company will begin construction of the cruise ship in early January 2011 and expects to complete the project sometime in late 2012. Lark Corp. has never constructed a cruise ship before, and the customer has never operated a cruise ship. Due to this and other circumstances, Lark Corp. believes there are inherent hazards in the contract beyond the normal, recurring business risks. Lark Corp. expects to recover all its costs under the contract. Under these circumstances, Lark Corp. should:
   (a) wait until the completion of construction before it recognizes revenue.
   (b) use the percentage-of-completion method and measure progress toward completion using the units-of-delivery method.
   (c) use the percentage-of-completion method and measure progress toward completion using the cost-to-cost method.
   (d) use the cost-recovery (zero-profit) method.

4. Swallow Corp. has a contract to construct a $5,000,000 cruise ship at an estimated cost of $4,000,000. The company will begin construction of the cruise ship in early January 2011 and expects to complete the project sometime in late 2014. Swallow Corp. has never constructed a cruise ship before, and the customer has never operated a cruise ship. Due to this and other circumstances, Swallow Corp. believes there are inherent hazards in the contract beyond the normal, recurring business risks. Swallow Corp. expects to recover all its costs under the contract. During 2011 and 2012, the company has the following activity:

	2011	2012
Costs to date	$ 980,000	$2,040,000
Estimated costs to complete	3,020,000	1,960,000
Progress billings during the year	1,000,000	1,000,000
Cash collected during the year	648,000	1,280,000

For the year ended December 31, 2012, how much revenue should Swallow Corp. recognize on its income statement?

(a) $980,000. **(c)** $1,300,000.
(b) $2,040,000. **(d)** $1,060,000.

5. Given the information in question 4 above, on its statement of financial position at December 31, 2012, what amount is reported in the cost of construction and billings presentation by Swallow?

(a) $40,000 costs in excess of billings.
(b) $1,020,000 costs in excess of billings.
(c) $40,000 billings in excess of costs.
(d) $20,000 billings in excess of costs.

IFRS CONCEPTS AND APPLICATION

IFRS18-1 What is a major difference between IFRS and GAAP as regards revenue recognition practices?

IFRS18-2 IFRS prohibits the use of the completed-contract method in accounting for long-term contracts. If revenues and costs are difficult to estimate, how must companies account for long-term contracts?

IFRS18-3 Livesey Company has signed a long-term contract to build a new basketball arena. The total revenue related to the contract is $120 million. Estimated costs for building the arena are $40 million in the first year and $30 million in both the second and third years. The costs cannot be reliably estimated. How much revenue should Livesey Company report in the first year under IFRS?

IFRS18-4 What are the two basic methods of accounting for long-term construction contracts? Indicate the circumstances that determine when one or the other of these methods should be used.

IFRS18-5 When is revenue recognized under the cost-recovery method?

IFRS18-6 Turner, Inc. began work on a $7,000,000 contract in 2012 to construct an office building. During 2012, Turner, Inc. incurred costs of $1,700,000, billed its customers for $1,200,000, and collected $960,000. At December 31, 2012, the estimated future costs to complete the project total $3,300,000. Prepare Turner's 2012 journal entries using the percentage-of-completion method.

IFRS18-7 Use the information from IFRS18-6, but assume Turner uses the cost-recovery method. Prepare the company's 2012 journal entries.

IFRS18-8 Hamilton Construction Company uses the percentage-of-completion method of accounting. In 2012, Hamilton began work under contract #E2-D2, which provided for a contract price of $2,200,000. Other details are as follows.

	2012	2013
Costs incurred during the year	$640,000	$1,425,000
Estimated costs to complete, as of December 31	960,000	–0–
Billings during the year	420,000	1,680,000
Collections during the year	350,000	1,500,000

Instructions

(a) What portion of the total contract price would be recognized as revenue in 2012? In 2013?

(b) Assuming the same facts as those shown on page 1139 except that Hamilton uses the cost-recovery method of accounting, what portion of the total contract price would be recognized as revenue in 2013?

Professional Research

IFRS18-9 Employees at your company disagree about the accounting for sales returns. The sales manager believes that granting more generous return provisions and allowing customers to order items on a bill and hold basis can give the company a competitive edge and increase sales revenue. The controller cautions that, depending on the terms granted, loose return or bill and hold provisions might lead to non-IFRS revenue recognition. The company CFO would like you to research the issue to provide an authoritative answer.

Instructions

Access the IFRS authoritative literature at the IASB website (*http:/eifrs.iasb.org/*). When you have accessed the documents, you can use the search tool in your Internet browser to respond to the following questions. (Provide paragraph citations.)

(a) What is the authoritative literature addressing revenue recognition when right of return exists?

(b) What is meant by "right of return"? "Bill and hold"?

(c) When there is a right of return, what conditions must the company meet to recognize the revenue at the time of sale?

(d) What factors may impair the ability to make a reasonable estimate of future returns?

(e) When goods are sold on a bill and hold basis, what conditions must be met to recognize revenue upon receipt of the order?

International Financial Reporting Problem:
Marks and Spencer plc

IFRS18-10 The financial statements of **Marks and Spencer plc (M&S)** are available at the book's companion website or can be accessed at *http:/corporate.marksandspencer.com/documents/publications/2010/Annual_Report_2010.*

Instructions

Refer to M&S's financial statements and the accompanying notes to answer the following questions.

(a) What were M&S's sales for 2010?

(b) What was the percentage of increase or decrease in M&S's sales from 2009 to 2010? From 2008 to 2009? From 2008 to 2010?

(c) In its notes to the financial statements, what criteria does M&S use to recognize revenue?

(d) How does M&S account for discounts and loyalty schemes? Does the accounting conform to accrual-accounting concepts? Explain.

ANSWERS TO IFRS SELF-TEST QUESTIONS

1. b **2.** c **3.** d **4.** d **5.** a

Remember to check the book's companion website to find additional resources for this chapter.