CHAPTER 18
Revenue Recognition

LEARNING OBJECTIVES

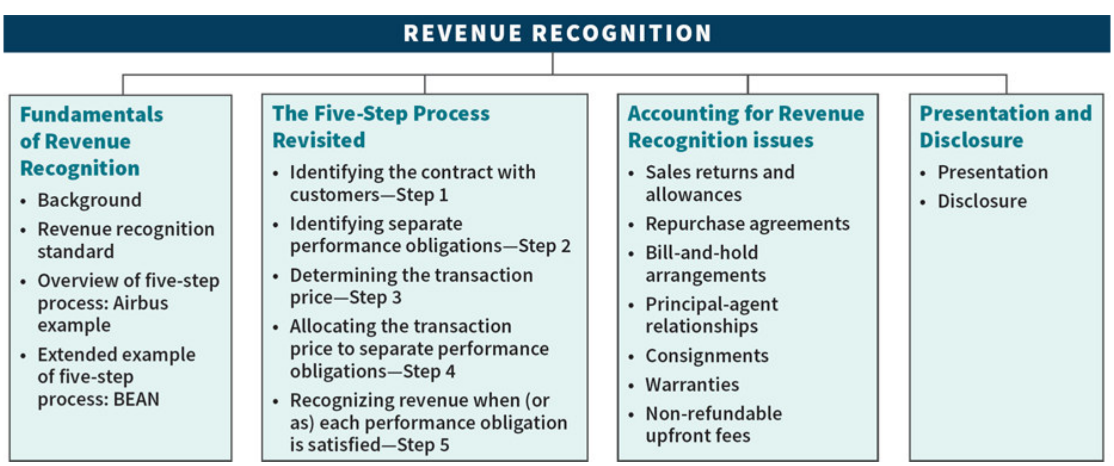
After studying this chapter, you should be able to:

1. Understand the fundamental concepts related to revenue recognition and measurement.
2. Understand and apply the five-step revenue recognition process.
3. Apply the five-step process to major revenue recognition issues.
4. Describe presentation and disclosure regarding revenue.

This chapter also includes numerous conceptual discussions that are integral to the topics presented here. Because of the converged IASB/FASB standard on revenue recognition, there is no *Global Accounting Insights* in this chapter.

PREVIEW OF CHAPTER 18

As indicated in the following 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.



It’s Back

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. Consider the following situations.

- **Rolls-Royce** (GBR) was questioned by investors about the revenue recognition practices for its “Totalcare” contracts, where engines are sold at little or no profit but tie the customer into long-term servicing and parts purchases. When it was revealed that market regulators were exploring these revenue practices and changes in how Rolls booked fees from its risk-sharing partnerships, the company’s share price slipped to a one-year low.
- The former co-chairman and CEO of **Qwest Communications International Inc.** (USA) and eight other former Qwest officers and employees were charged with fraud and other violations of U.S. securities laws. Three of these people fraudulently characterized non-recurring revenue from one-time sales as revenue from recurring data and Internet services. Internal correspondence likened Qwest’s dependence on these transactions to fill the gap between actual and projected revenue to an addiction.
- **Sinovel Wind Group** (CHN) was scrutinized by Chinese regulators over accounting problems related to its turbine business. The accounting irregularities led to an overstatement of revenue by 10 percent and profits by 20 percent in its first year as a public company. Sinovel attributed the error to incorrectly recognizing revenue for uncompleted projects. Following the investigation, Sinovel’s founder resigned as chairman but remained on the board of directors.

Though the cases cited involved fraud and irregularity, not all revenue recognition errors are intentional. For example, **Turquoise Hill Resources** (CAN) restated its financial results for three years due to revenue recognition irregularities. The restatement corrected errors in the accounting treatment for sales contracts, which provide for transfer of title—and revenue recognition—upon loading the coal onto customers’ trucks. It was determined that, due to the changing nature of the contracts, revenue should not be recognized until customers pay.

One of the most significant challenges related to revenue recognition is the amount of judgment that is involved in deciding how to report revenue transactions. Since 2016, the auditors of public companies in the European Economic Area have been required to report the areas they considered to be “key audit matters” (KAMs). As the term implies, these are the areas of the audit that were of the most significance, and for which significant auditor judgment is required. Unsurprisingly, revenue and other income has been one of the most frequently noted matters. To date, this item has been the second most frequently reported, representing almost 18 percent of the KAMs. The only matters more frequently reported are related to asset impairments.

Revenue numbers are also attracting more attention from investors these days. A concern expressed recently is that revenue growth is not robust, and increases in net income (the bottom line) are caused by factors such as low financing costs and lower labor costs, which in the long run may not be sustainable. So more focus is now being given to a company's top-line revenue number, as many believe strong revenue growth suggests a more profitable company in the future.

Companies have recently implemented the substantially revised standard on revenue recognition that hopefully will improve the reporting of revenue transactions. This standard provides a set of guidelines to follow in determining when revenue should be reported and how it should be measured. The standard is comprehensive and applies to all companies. As a result, comparability and consistency in reporting revenue should be enhanced. After studying this chapter, you should have a good understanding of these revenue recognition concepts.

Review and Practice

Go to the **Review and Practice** section at the end of the chapter for a targeted summary review and practice problem with solution. Multiple-choice questions with annotated solutions, as well as additional exercises and practice problem with solutions, are also available online.

Fundamentals of Revenue Recognition

LEARNING OBJECTIVE 1

Understand the fundamental concepts related to revenue recognition and measurement.

Background

Revenue is one of the most important measures of financial performance that a company reports. Revenue provides insights into a company's past and future performance and is a significant driver of other performance measures, such as EBITDA, net income, and earnings per share. Therefore, establishing robust guidelines for recognizing revenue is a standard-setting priority.

Most revenue transactions pose few problems for revenue recognition. That is, most companies initiate and complete transactions at the same time. However, not all transactions are that simple. For example, consider a cell phone contract between a company such as **Vodaphone** (GBR) and a customer. Vodaphone often provides a customer 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, the customer may pay for these services in a variety of ways, possibly receiving a discount on the handset and then paying higher prices for connection fees and so forth. In some cases, depending on the package purchased, the company may provide free upgrades in subsequent periods. How, then, should Vodaphone report the various pieces of this sale? The answer is not obvious.

Both the IASB and the FASB have indicated that the state of reporting for revenue was unsatisfactory. IFRS was criticized because it lacked guidance in a number of areas. For example, IFRS had one general standard on revenue recognition—*IAS 18*—plus some limited guidance related to certain minor topics. In contrast, U.S. GAAP had numerous standards related to revenue recognition (by some counts, well over 100), but many believed the standards were often inconsistent with one another. Thus, the accounting for revenue provided a most fitting contrast of the principles-based (IFRS) and rules-based (U.S. GAAP) approaches.[1]

In 2014, the IASB issued a converged standard on revenue recognition entitled *Revenue from Contracts with Customers*. **[1]** (See the Authoritative Literature References section near the end of the chapter.) To address the inconsistencies and weaknesses of the previous approaches, a comprehensive revenue recognition standard now applies to a wide range of transactions and industries. The Boards believe this standard will improve IFRS and U.S. GAAP by:

a. Providing a more robust framework for addressing revenue recognition issues.

b. Improving comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets.

c. Simplifying the preparation of financial statements by reducing the number of requirements to which companies must refer.

d. Requiring enhanced disclosures to help financial statement users better understand the amount, timing, and uncertainty of revenue that is recognized. **[2]**

Revenue Recognition Standard

The recent revenue recognition standard, *Revenue from Contracts with Customers*, adopts an **asset-liability approach** as the basis for revenue recognition. The asset-liability approach recognizes and measures revenue based on changes in assets and liabilities. The Boards decided that focusing on (a) the recognition and measurement of assets and liabilities and (b) changes in those assets or liabilities over the life of the contract brings more discipline to the measurement of revenue, compared to the “risks and rewards” criteria in prior standards.

Under the asset-liability approach, companies account for revenue based on the asset or liability arising from contracts with customers (see Underlying Concepts). Companies analyze contracts with customers because contracts initiate revenue transactions. Contracts indicate the terms of the transaction, provide the measurement of the consideration, and specify the promises that must be met by each party.

Underlying Concepts

The asset-liability approach is consistent with the conceptual framework approach to recognition.

Illustration 18.1 shows the key concepts related to the standard on revenue recognition.

Key Objective

Recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration that the company receives, or expects to receive, in exchange for these goods or services.

Five-Step Process for Revenue Recognition

1. Identify the contract with customers.
2. Identify the separate performance obligations in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the separate performance obligations.
5. Recognize revenue when each performance obligation is satisfied.

Revenue Recognition Principle

Recognize revenue in the accounting period when the performance obligation is satisfied.

ILLUSTRATION 18.1 Key Concepts of Revenue Recognition

The standard first identifies the key objective of revenue recognition, which is followed by a five-step process that companies should use to ensure that revenue is measured and reported correctly.

The culmination of the process is the **revenue recognition principle**, which states that revenue is recognized when the performance obligation is satisfied.

We examine all steps in more detail in the following section.

Overview of the Five-Step Process—Airbus Example

Assume that **Airbus** (FRA) signs a contract to sell airplanes to **Cathay Pacific Airlines** (HKG) for €100 million. **Illustration 18.2** shows the five steps that Airbus follows to recognize revenue.

As indicated, Step 5 is when Airbus recognizes revenue related to the sale of the airplanes to Cathay Pacific. At this point, Airbus delivers the airplanes to Cathay Pacific and satisfies its performance obligation. In essence, a change in control from Airbus to Cathay Pacific occurs. Cathay Pacific now controls the assets because it has the ability to direct the use of and obtain substantially all the remaining benefits from the airplanes. Control also includes Cathay Pacific's ability to prevent other companies from directing the use of, or receiving the benefits from, the airplanes.

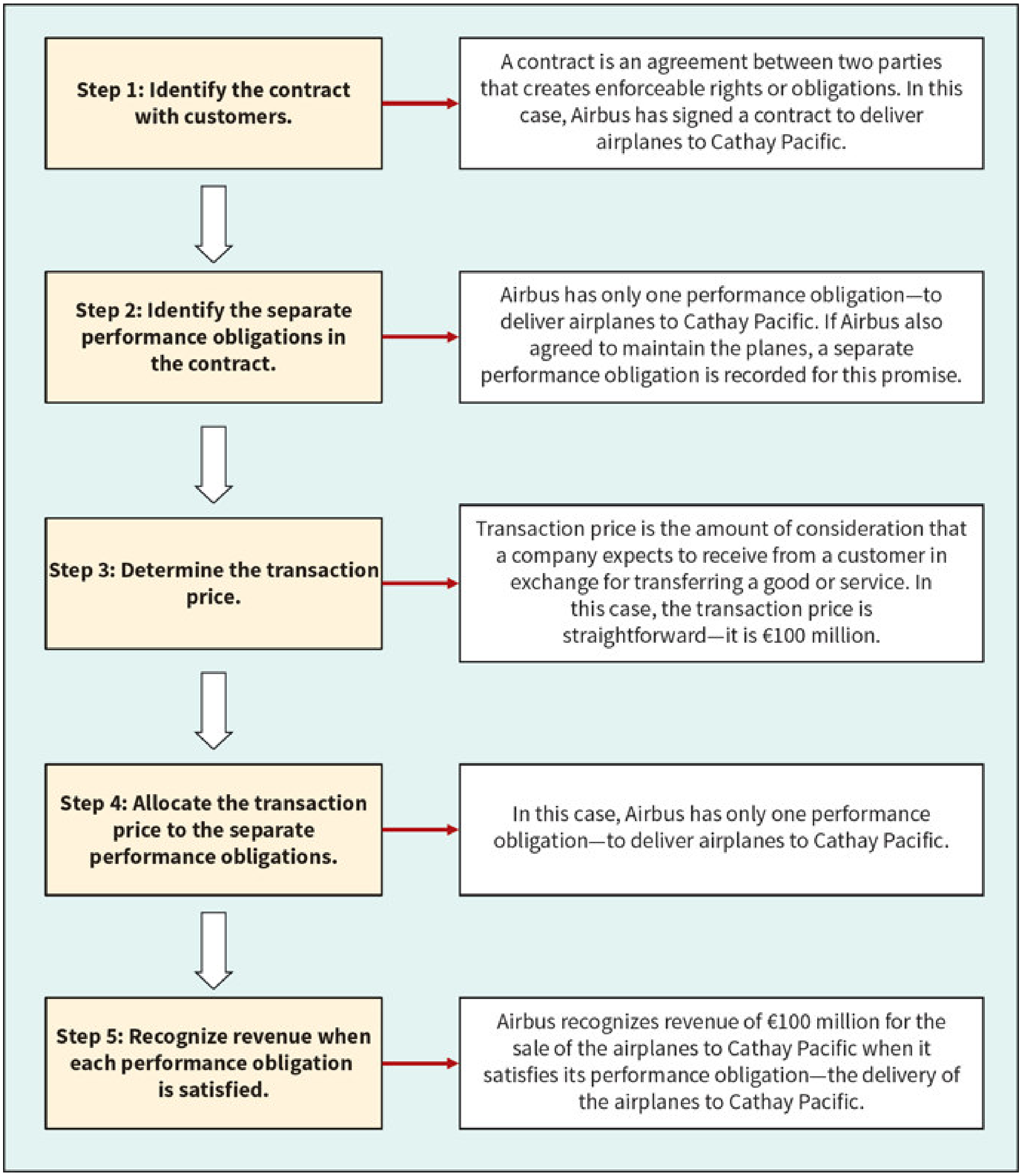


ILLUSTRATION 18.2 Five Steps of Revenue Recognition

Extended Example of the Five-Step Process: BEAN

To provide another application of the basic principles of the five-step revenue recognition model, we use a coffee and wine business called BEAN. BEAN serves gourmet coffee, espresso, lattes, teas, and smoothies. It also sells various pastries, coffee beans, other food products, wine, and beer.

Identifying the Contract with Customers—Step 1

Assume that Tyler Angler orders a large cup of black coffee costing $3 from BEAN. Tyler gives $3 to a BEAN barista, who pours the coffee into a large cup and gives it to Tyler.

***Question:* How much revenue should BEAN recognize on this transaction?**

Step 1 We first must determine whether a valid contract exists between BEAN and Tyler. Here are the components of a valid contract and how it affects BEAN and Tyler.

1. ***The contract has commercial substance:*** Tyler gives cash for the coffee.
2. ***The parties have approved the contract:*** Tyler agrees to purchase the coffee and BEAN agrees to sell it.
3. ***Identification of the rights of the parties is established:*** Tyler has the right to the coffee and BEAN has the right to receive $3.
4. ***Payment terms are identified:*** Tyler agrees to pay $3 for the coffee.
5. ***It is probable that the consideration will be collected:*** BEAN receives $3 before it delivers the coffee. **[3]**[2]

From this information, it appears that BEAN and Tyler have a valid contract with one another.

Step 2 The next step is to identify BEAN's performance obligation(s), if any. The answer is straightforward—BEAN has a performance obligation to provide a large cup of coffee to Tyler. BEAN has no other performance obligation for any other good or service.

Step 3 BEAN must determine the transaction price related to the sale of the coffee. The price of the coffee is $3, and no discounts or other adjustments are available. Therefore, the transaction price is $3.

Step 4 BEAN must allocate the transaction price to all performance obligations. Given that BEAN has only one performance obligation, no allocation is necessary.

Step 5 Revenue is recognized when the performance obligation is satisfied. BEAN satisfies its performance obligation when Tyler obtains control of the coffee. The following conditions are indicators that control of the coffee has passed to Tyler:

a. BEAN has the right to payment for the coffee.

b. BEAN has transferred legal title to the coffee.

c. BEAN has transferred physical possession of the coffee.

d. Tyler has significant risks (e.g., he might spill the coffee) and rewards of ownership (he gets to drink the coffee).

e. Tyler has accepted the asset.

Solution: BEAN should recognize $3 in revenue from this transaction when Tyler receives the coffee.

Identifying Separate Performance Obligations—Step 2

The following day, Tyler orders another large cup of coffee for $3 and also purchases two bagels at a price of $5. The barista provides these products and Tyler pays $8.

***Question:* How much revenue should BEAN recognize on the purchase of these two items?**

Step 1 A valid contract exists as it meets the five conditions necessary for a contract to be enforceable as discussed in the previous example.

Step 2 BEAN must determine whether the sale of the coffee and the sale of the two bagels involve one or two performance obligations. In the previous transaction between BEAN and Tyler, this determination was straightforward because BEAN provided a single distinct product (a large cup of coffee), and therefore only one performance obligation existed. However, an arrangement to purchase coffee and bagels may have more than one performance obligation. Multiple performance obligations exist when the following two conditions are satisfied:

1. BEAN must provide a distinct product or service. In other words, BEAN must be able to sell the coffee and the bagels separately from one another.
2. BEAN's products are distinct within the contract. In other words, if the performance obligation is not highly dependent on, or interrelated with, other promises in the contract, then each performance obligation should be accounted for separately. Conversely, if each of these products is interdependent and interrelated, these products are combined and reported as one performance obligation. [4]

The large cup of coffee and the two bagels appear to be distinct from one another and are not highly dependent or interrelated. That is, BEAN can sell the coffee and the two bagels separately, and Tyler benefits separately from the coffee and the bagels.

BEAN has two performance obligations—one for the sale of the coffee and one for the sale of the bagels.

Step 3 The transaction price is $8 ($3 + $5).

Step 4 BEAN has two performance obligations: to provide (1) a large cup of coffee and (2) the two bagels. Each of these obligations is distinct and not interrelated (and priced separately); no allocation of the transaction price is necessary. That is, the coffee sale is recorded at $3 and the sale of the bagels is priced at $5.

Step 5 BEAN has satisfied both performance obligations when the coffee and bagels are given to Tyler (control of the product has passed to the customer).

Solution: BEAN should recognize $8 ($3 + $5) of revenue when Tyler receives the coffee and bagels.

Determining the Transaction Price—Step 3

BEAN decides to provide an additional incentive to its customers to shop at its store. BEAN roasts its own coffee beans and sells the beans wholesale to grocery stores, restaurants, and other commercial companies. In addition, it sells the coffee beans at its retail location. BEAN is interested in stimulating sales of its Smoke Jumper coffee beans on Tuesdays, a slow business day for the store. Normally, these beans sell for $10 for a 12-ounce bag, but BEAN decides to cut the price by $1 when customers buy them on Tuesdays (the discounted price is now $9 per bag). Tyler has come to the store on a Tuesday, decides to purchase a bag of Smoke Jumper beans, and pays BEAN $9.

***Question:* How much revenue should BEAN recognize on this transaction?**

Step 1 As in our previous examples, with the sale of a large cup of coffee or the sale of a large cup of coffee and two bagels, a valid contract exists. The same is true for the sale of Smoke Jumper beans.

Step 2 The identification of the performance obligation is straightforward. BEAN has a performance obligation to provide a bag of Smoke Jumper coffee beans to Tyler. BEAN has no other performance obligation to provide a product or service.

Step 3 The transaction price for a bag of Smoke Jumper beans sold to Tyler is $9, not $10. The transaction price is the amount that a company expects to receive from a customer in exchange for transferring goods and services. [5] The transaction price in a contract is often easily determined because the customer agrees to pay a fixed amount to the company over a short period of time. In other contracts, companies must consider adjustments such as when they make payments or provide some other consideration to their customers (e.g., a coupon) as part of a revenue arrangement.[3]

Step 4 BEAN allocates the transaction price to the performance obligations. Given that there is only one performance obligation, no allocation is necessary.

Step 5 BEAN has satisfied the performance obligation, as control of the product has passed to Tyler.

Solution: BEAN should recognize $9 of revenue when Tyler receives the Smoke Jumper coffee beans.

Allocating the Transaction Price to Separate Performance Obligations—Step 4

For revenue arrangements with multiple performance obligations, BEAN might be required to allocate the transaction price to more than one performance obligation in the contract. If an allocation is needed, the transaction price is allocated to the various performance obligations based on their relative standalone selling prices. If this information is not available, companies should use their best estimate of what the good or service might sell for as a standalone item. [6]

BEAN wants to provide even more incentive for customers to buy its coffee beans, as well as purchase a cup of coffee. BEAN therefore offers customers a $2 discount on the purchase of a large cup of coffee when they buy a bag of its premium Motor Moka beans (which normally sell for $12) at the same time. Tyler decides this offer is too good to pass up and buys a bag of Motor Moka beans for $12 and a large cup of coffee for $1. As indicated earlier, a large cup of coffee normally retails for $3 at BEAN.

***Question:* How much revenue should BEAN recognize on the purchase of these two items?**

Step 1 In our previous situations, valid contracts have existed. The same is also true for the sale of a bag of Motor Moka beans and the large cup of coffee.

Step 2 The bag of Motor Moka beans and the large cup of coffee are distinct from one another and are not highly dependent on or highly interrelated with the other. BEAN can sell a bag of the Motor Moka beans and a large cup of coffee separately. Furthermore, Tyler benefits separately from both the large cup of coffee and the Motor Moka coffee beans.

Step 3 BEAN's transaction price is \$13 (\$12 for the bag of Motor Moka beans and \$1 for the large cup of coffee).

Step 4 BEAN allocates the transaction price to the two performance obligations based on their relative standalone selling prices. The standalone selling price of a bag of Motor Moka beans is \$12, and the large cup of coffee is \$3. The allocation of the transaction price of \$13 is as follows.

Product	Standalone Selling Price	Percentage		Allocated Amount	
Motor Moka beans (one bag)	\$12	80%	(\$12 ÷ \$15)	\$10.40	(\$13 × .80)
Large cup of coffee	3	20	(\$3 ÷ \$15)	2.60	(\$13 × .20)
Total	\$15	100%		\$13.00	

As indicated, the total transaction price (\$13) is allocated \$10.40 to the bag of Motor Moka beans and \$2.60 to the large cup of coffee.

Step 5 BEAN has satisfied both performance obligations as control of the bag of Motor Moka beans and the large cup of coffee has passed to Tyler.

Solution: BEAN should recognize revenue of \$13, comprised of revenue from the sale of the Motor Moka beans at \$10.40 and the sale of the large cup of coffee at \$2.60.

Recognizing Revenue When (or as) Each Performance Obligation Is Satisfied—Step 5

As indicated in the examples presented, BEAN satisfied its performance obligation(s) when Tyler obtained control of the product(s). Change in control is the deciding factor in determining when a performance obligation is satisfied. A customer controls the product or service when the customer has the ability to direct the use of and obtain substantially all the remaining benefits from the product. Control also includes Tyler's ability to prevent other companies from directing the use of, or receiving benefits from, the coffee or coffee beans. As discussed earlier, the indicators that Tyler has obtained control are as follows:

a. BEAN has the right to payment for the coffee.

b. BEAN has transferred legal title to the coffee.

c. BEAN has transferred physical possession of the coffee.

d. Tyler has significant risks and rewards of ownership.

e. Tyler has accepted the asset.[4]

The Five-Step Process Revisited

LEARNING OBJECTIVE 2

Understand and apply the five-step revenue recognition process.

The **Airbus** and BEAN examples provide a basic understanding of the five-step process used to recognize revenue. We now discuss more technical issues related to the implementation of these five steps.

Identifying the Contract with Customers—Step 1

A **contract** is an agreement between two or more parties that creates enforceable rights or obligations. Contracts can be written, oral, or implied from customary business practice (such as the BEAN contract with Tyler). Revenue is recognized only when a valid contract exists. On entering into a contract with a customer, a company obtains rights to receive consideration from the customer and assumes obligations to transfer goods or services to the customer (performance obligations). The combination of those rights and performance obligations gives rise to an (net) asset or (net) liability.

In some cases, there are multiple contracts related to an arrangement; accounting for each contract may or may not occur, depending upon the circumstances. These situations often develop when not only a product is provided but some type of service is performed as well. To be valid, a contract must meet the five conditions illustrated in the BEAN example.[5] If the contract is wholly unperformed and each party can unilaterally terminate the contract without compensation, then revenue should not be recognized until one or both of the parties has performed. A basic contract where these issues are discussed follows in **Illustration 18.3**.

Contracts and Recognition

Facts: On March 1, 2022, Margo Company enters into a contract to transfer a product to Soon Yoon on July 31, 2022. The contract is structured such that Soon Yoon is required to pay the full contract price of $5,000 on August 31, 2022. The cost of the goods transferred is $3,000. Margo delivers the product to Soon Yoon on July 31, 2022. Either party can unilaterally terminate the contract without compensation.

***Question:* What journal entries should Margo Company make in regards to this contract in 2022?**

Solution: No entry is required on March 1, 2022, because neither party has performed on the contract. On July 31, 2022, Margo delivers the product and therefore should recognize revenue on that date as it satisfies its performance obligation by delivering the product to Soon Yoon.

The journal entry to record the sale and related cost of goods sold is as follows.

July 31, 2022		
Accounts Receivable	5,000	
Sales Revenue		5,000
Cost of Goods Sold	3,000	
Inventory		3,000

After receiving the cash payment on August 31, 2022, Margo makes the following entry.

August 31, 2022		
Cash	5,000	
Accounts Receivable		5,000

ILLUSTRATION 18.3 Basic Revenue Transaction

A key feature of the revenue arrangement is that the contract between the two parties is not recorded (does not result in a journal entry) until one or both of the parties perform under the contract. **Until performance occurs, no net asset or net liability occurs.**

Identifying Separate Performance Obligations—Step 2

A **performance obligation** is a promise to provide a product or service to a customer. This promise may be explicit, implicit, or possibly based on customary business practice. To determine whether a performance obligation exists, the company must provide a distinct product or service to the customer.

A product or service is distinct when a customer is able to benefit from a good or service on its own or together with other readily available resources. This situation typically occurs when the company can sell a good or service on a standalone basis (i.e., separately). For example, BEAN provided a good (a large cup of coffee) on a standalone basis to Tyler. Tyler benefited from this cup of coffee by consuming it.

To determine whether a company has to account for multiple performance obligations, the company's promise to sell the good or service to the customer must be separately identifiable from other promises within the contract (that is, the good or service must be distinct within the contract). **The objective is to determine whether the nature of a company's promise is to transfer individual goods and services to the customer or to transfer a combined item (or items) for which individual goods or services are inputs**.

For example, when BEAN sold Tyler a large cup of coffee and two bagels, Bean had two performance obligations. In that case, the large cup of coffee had a standalone selling price and the two bagels had a standalone selling price—even though the two promises may be part of one contract.

Conversely, assume that BEAN sold a large latte (comprised of coffee and milk) to Tyler. In this case, BEAN sold two distinct products (coffee and milk), but these two goods are not distinct within the contract. That is, the coffee and milk in the latte are highly interdependent or interrelated within the contract. As a result, the products are combined and reported as one performance obligation.

To illustrate another situation, assume that **Tata Motors** (IND) sells an automobile to Marquart Auto Dealers at a price that includes six months of telematics services such as navigation and remote diagnostics. These telematics services are regularly sold on a standalone basis by Tata Motors for a monthly fee. After the six-month period, the consumer can renew these services on a fee basis with Tata Motors. The question is whether Tata Motors sold one or two products. If we look at Tata Motors' objective, it appears that it is to sell two goods, the automobile and the telematic services. **Both are distinct (they can be sold separately) and are not interdependent.**

As another example, SoftTech Inc. licenses customer-relationship software to Lopez Company. In addition to providing the software itself, SoftTech promises to perform consulting services by extensively customizing the software to Lopez's information technology environment, for total consideration of $600,000. In this case, the objective of SoftTech appears to be to transfer a combined product and service for which individual goods and services are inputs. In other words, SoftTech is providing a significant service by integrating the goods and services (the license and the consulting service) into one combined item for which Lopez has contracted. In addition, the software is significantly customized by SoftTech in accordance with specifications negotiated by Lopez. As a result, **the license and the consulting services are distinct but interdependent, and therefore should be accounted for as one performance obligation**.[6]

Determining the Transaction Price—Step 3

The **transaction price** is the amount of consideration that a company expects to receive from a customer in exchange for transferring goods and services. The transaction price in a contract is often easily determined because the customer agrees to pay a fixed amount to the company over a short period of time. In other contracts, companies must consider the following factors. **[8]**

- Variable consideration.
- Time value of money.
- Non-cash consideration.
- Consideration paid or payable to the customer.

Variable Consideration

In some cases, the price of a good or service is dependent on future events. These future events might include price increases, volume discounts, rebates, credits, performance bonuses, or royalties. In these cases, the company estimates the amount of variable consideration it will receive from the contract to determine the amount of revenue to recognize. Companies use either the **expected value**, which is a probability-weighted amount, or the **most likely amount** in a range of possible amounts to estimate variable consideration (see **Underlying Concepts**). Companies select among these two methods based on which approach better predicts the amount of consideration to which a company is entitled. **[9]** **Illustration 18.4** highlights the issues to be considered in selecting the appropriate method.

Underlying Concepts

The expected value approach is also illustrated in Chapter 6 to determine the liability for warranties.

Expected Value: Probability-weighted amount in a range of possible consideration amounts.	**Most Likely Amount:** The single most likely amount in a range of possible consideration outcomes.
• May be appropriate if a company has a large number of contracts with similar characteristics. • Can be based on a limited number of discrete outcomes and probabilities.	• May be appropriate if the contract has only two possible outcomes.

ILLUSTRATION 18.4 Estimating Variable Consideration

Illustration 18.5 provides an application of the two estimation methods.

Estimating Variable Consideration

Facts: Peabody Construction Company enters into a contract with a customer to build a warehouse for $100,000, with a performance bonus of $50,000 that will be paid based on the timing of completion. The amount of the performance bonus decreases by 10% per week for every week beyond the agreed-upon completion date. The contract requirements are similar to contracts that Peabody has performed previously, and management believes that such experience is predictive for this contract. Management estimates that there is a 60% probability that the contract will be completed by the agreed-upon completion date, a 30% probability that it will be completed 1 week late, and only a 10% probability that it will be completed 2 weeks late.

Question: How should Peabody account for this revenue arrangement?

Solution: The transaction price should include management's estimate of the amount of consideration to which Peabody will be entitled. Management has concluded that the **probability-weighted method** is the most predictive approach for estimating the variable consideration in this situation:

On time: 60% chance of $150,000 [$100,000 + ($50,000 × 1.0)] =	$ 90,000
1 week late: 30% chance of $145,000 [$100,000 + ($50,000 × .90)] =	43,500
2 weeks late: 10% chance of $140,000 [$100,000 + ($50,000 × .80)] =	14,000
	$147,500

Thus, the total transaction price is $147,500 based on the probability-weighted estimate. Management should update its estimate at each reporting date. Using a most likely outcome approach may be more predictive if a performance bonus is binary (Peabody either will or will not earn the performance bonus), such that Peabody earns either $50,000 for completion on the agreed-upon date or nothing for completion after the agreed-upon date. In this scenario, if management believes that Peabody will meet the deadline and estimates the consideration using the **most likely outcome**, the total transaction price would be $150,000 (the outcome with 60% probability).

ILLUSTRATION 18.5 Transaction Price—Variable Consideration

A word of caution—a company only **allocates variable consideration if it is reasonably assured that it will be entitled to that amount**. Companies therefore may only recognize variable consideration if (1) they have experience with similar contracts and are able to estimate the cumulative amount of revenue, and (2) based on experience, it is highly probable that there will not be a significant reversal of revenue previously recognized.[7] If these criteria are not met, **revenue recognition is constrained**. **[11]** **Illustration 18.6** provides an example of how the revenue constraint works.

Revenue Constraint

Facts: On January 1, Shera Company enters into a contract with Hornung Inc. to perform asset-management services for 1 year. Shera receives a quarterly management fee based on a percentage of Hornung's assets under management at the end of each quarter. In addition, Shera receives a performance-based incentive fee of 20% of the fund's return in excess of the return of an observable index at the end of the year.

Shera accounts for the contract as a single performance obligation to perform investment-management services for 1 year because the services are interdependent and interrelated. To recognize revenue for satisfying the performance obligation over time, Shera selects an output method of measuring progress toward complete satisfaction of the performance obligation. Shera has had a number of these types of contracts with customers in the past.

***Question:* At what point should Shera recognize the management fee and the performance-based incentive fee related to Hornung?**

Solution: Shera should record the management fee each quarter as it performs the management of the fund. However, Shera should not record the incentive fee until the end of the year. Although Shera has experience with similar contracts, that experience is not predictive of the outcome of the current contract because the amount of consideration is highly susceptible to volatility in the market. In addition, the incentive fee has a large number and high variability of possible consideration amounts. Thus, revenue related to the incentive fee is constrained (not recognized) until the incentive fee is known at the end of the year.

ILLUSTRATION 18.6 Transaction Price—Revenue Constraint

Time Value of Money

Timing of payment to the company sometimes does not match the transfer of the goods or services to the customer. In most situations, companies receive consideration after the product is provided or the service performed. In essence, the company provides financing for the customer.

Companies account for the time value of money if the contract **involves a significant financing component**. When a sales transaction involves a significant financing component (i.e., interest is accrued on consideration to be paid over time), 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 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. The company will report the effects of the financing as interest revenue. **Illustration 18.7** provides an example of a financing transaction.

Extended Payment Terms

Facts: On July 1, 2022, SEK Industries sold goods to Grant Company for R$900,000 in exchange for a 4-year, zero-interest-bearing note with a face amount of R$1,416,163. The goods have an inventory cost on SEK's books of R$590,000.

***Question:* (a) How much revenue should SEK record on July 1, 2022? (b) How much revenue should it report related to this transaction on December 31, 2022?**

Solution:

a. SEK should record revenue of R$900,000 on July 1, 2022, 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 R$54,000 (.12 × ½ × R$900,000) at December 31, 2022.

The entry to record SEK's sale to Grant Company is as follows.

July 1, 2022		
Notes Receivable (R$1,416,163 – R$516,163)	900,000	
Sales Revenue		900,000

The related entry to record the cost of goods sold is as follows.

July 1, 2022		
Cost of Goods Sold	590,000	
Inventory		590,000

SEK makes the following entry to record (accrue) interest revenue at the end of the year.

December 31, 2022		
Notes Receivable	54,000	
Interest Revenue (.12 × ½ × R$900,000)		54,000

ILLUSTRATION 18.7 Transaction Price—Extended Payment Terms

As a practical expedient, companies are not required to reflect the time value of money to determine the transaction price if the time period for payment is less than a year. [12]

Non-Cash Consideration

Companies sometimes receive consideration in the form of goods, services, or other non-cash consideration. When these situations occur, **companies generally recognize revenue on the basis of the fair value of what is received.** For example, assume that Raylin Company receives ordinary shares of Monroe Company in payment for consulting services. In that case, Raylin Company recognizes revenue in the amount of the fair value of the ordinary shares received. If Raylin cannot determine this amount, then it should estimate the selling price of the services performed and recognize this amount as revenue.

In addition, companies sometimes receive contributions (e.g., donations and gifts). A contribution is often some type of asset (e.g., securities, land, buildings, or use of facilities), but it could be the forgiveness of debt. In these cases, companies recognize revenue for the fair value of the consideration received. Similarly, customers sometimes contribute goods or services, such as equipment or labor, as consideration for goods provided or services performed. This consideration should be recognized as revenue based on the fair value of the consideration received.

Consideration Paid or Payable to Customers

Companies often make payments to their customers as part of a revenue arrangement. Consideration paid or payable may include discounts, volume rebates, coupons, free products, or services. In general, these elements reduce the consideration received and the revenue to be recognized. **Illustration 18.8** provides an example of this type of transaction.

Volume Discount

Facts: Sansung Group offers its customers a 3% volume discount if they purchase at least ¥2 million of its product during the calendar year. On March 31, 2022, Sansung has made sales of ¥700,000 to Artic Co. In the previous 2 years, Sansung sold over ¥3,000,000 to Artic in the period April 1 to December 31. Assume that Sansung prepares financial statements quarterly.

***Question:* How much revenue should Sansung recognize for the first 3 months of 2022?**

Solution: In this case, Sansung should reduce its revenue by ¥21,000 (¥700,000 × .03) because it is probable that it will provide this rebate. Revenue is therefore ¥679,000 (¥700,000 − ¥21,000). To not recognize this volume discount overstates Sansung's revenue for the first 3 months of 2022. In other words, the appropriate revenue is ¥679,000, not ¥700,000.

Given these facts, Sansung makes the following entry on March 31, 2022, to recognize revenue.

Accounts Receivable	679,000	
Sales Revenue		679,000

Assuming that Sansung's customer **meets the discount threshold**, Sansung makes the following entry to record collection of accounts receivable.

Cash	679,000	
Accounts Receivable		679,000

If Sansung's customer **fails to meet the discount threshold**, Sansung makes the following entry to record collection of accounts receivable.

Cash	700,000	
Accounts Receivable		679,000
Sales (Volume) Discounts Forfeited		21,000

As indicated in Chapter 7, Sales Discounts Forfeited is reported in the "Other income and expense" section of the income statement.

ILLUSTRATION 18.8 Transaction Price—Volume Discount

In many 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 five days, a two percent discount is given (referred to as 2/5, net 60). 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.

Allocating the Transaction Price to Separate Performance Obligations—Step 4

Companies often have to allocate the transaction price to more than one performance obligation in a contract. If an allocation is needed, the transaction price allocated to the various performance obligations is based on their relative fair values. The best measure of fair value is what the company could sell the good or service for on a standalone basis, referred to as the **standalone selling price**. If this information is not available, companies should use their best estimate of what the good or service might sell for as a standalone unit. Illustration 18.9 summarizes the approaches that companies follow (in preferred order of use).

Allocation Approach	Implementation
Adjusted market assessment approach	Evaluate the market in which a company sells goods or services and estimate the price that customers in that market are willing to pay for those goods or services. That approach also might include referring to prices from the company's competitors for similar goods or services and adjusting those prices as necessary to reflect the company's costs and margins.
Expected cost plus a margin approach	Forecast expected costs of satisfying a performance obligation and then add an appropriate margin for that good or service.
Residual approach	If the standalone selling price of a good or service is highly variable or uncertain, then a company may estimate the standalone selling price by reference to the total transaction price less the sum of the observable standalone selling prices of other goods or services promised in the contract.[8]

ILLUSTRATION 18.9 Transaction Price—Allocation

To illustrate, Travis Merchants enters into a contract with a customer to sell Products A, B, and C in exchange for £100,000. Travis regularly sells Product A separately, and therefore the standalone selling price is directly observable at £50,000. The standalone selling price of Product B is estimated using the adjusted market assessment approach and is determined to be £30,000. Travis decides to use the residual approach to value Product C, as it has confidence that Products A and B are valued correctly. The selling price for the products is allocated as shown in **Illustration 18.10**.

Product	Price	Rationale
A	£ 50,000	Directly observable using standalone selling price.
B	30,000	Directly observable using adjusted market assessment approach.
C	20,000	[£100,000 – (£50,000 + £30,000)]; using the residual approach given reliability of the two above measurements.
Total transaction price	£100,000	

ILLUSTRATION 18.10 Residual Value Allocation

Illustrations 18.11 and **18.12** are additional examples of the measurement issues involved in allocating the transaction price.

Multiple Performance Obligations—Example 1

Facts: Lonnie 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 non-refundable. It is determined that the transaction price must be allocated to the three performance obligations: building, running, and maintaining the equipment. There is verifiable evidence of the selling price for the building and maintenance but not for running the equipment.

***Question:* What procedure should Lonnie Company use to allocate the transaction price to the three performance obligations?**

Solution: The performance obligations relate to building the equipment, running the equipment, and maintaining the equipment. As indicated, Lonnie can determine verifiable standalone selling prices for the equipment and the maintenance agreements. The company then can make a best estimate of the selling price for running the equipment, using the adjusted market assessment approach or expected cost plus a margin approach. Lonnie next applies the proportional standalone selling price method at the inception of the transaction to determine the proper allocation to each performance obligation. Once the allocation is performed, Lonnie recognizes revenue independently for each performance obligation using regular revenue recognition criteria.

If, on the other hand, Lonnie is unable to estimate the standalone selling price for running the equipment because such an estimate is highly variable or uncertain, Lonnie may use a residual approach. In this case, Lonnie uses the standalone selling prices of the equipment and maintenance agreements and subtracts these prices from the total transaction price to arrive at a residual value for running the equipment.

ILLUSTRATION 18.11 Allocation—Multiple Performance Obligations

Multiple Performance Obligations—Example 2

Facts: Handler Company is an established 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 installation service included in the arrangement is estimated to have a standalone selling price of $20,000.
- The standalone selling price of the training sessions is estimated at $50,000. Other companies can also perform these training services.
- Chai is obligated to pay Handler the $2,000,000 upon the delivery and installation of the equipment.
- Handler delivers and completes installation of the equipment on November 1, 2022. 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 performance obligations for purposes of accounting for the sale of the equipment? (b) If there is more than one performance obligation, how should the payment of $2,000,000 be allocated to various components?**

Solution:

a. Handler's primary objective is to sell equipment. The other services (installation and training) can be performed by other parties if necessary. As a result, the equipment, installation, and training are three separate products or services. Each of these items has a standalone selling price, and the items are not interdependent.

b. The total revenue of $2,000,000 should be allocated to the three components based on their relative standalone selling prices. In this case, the standalone selling price of the equipment is $2,000,000, the installation fee is $20,000, and the training is $50,000. The total standalone selling price therefore 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 entry on November 1, 2022, to record both sales revenue and service revenue on the installation, as well as unearned service revenue.

November 1, 2022		
Cash	2,000,000	
Service Revenue (installation)		19,324
Unearned Service Revenue		48,309
Sales Revenue		1,932,367

Assuming the cost of the equipment is $1,500,000, the entry to record cost of goods sold is as follows.

November 1, 2022		
Cost of Goods Sold	1,500,000	
Inventory		1,500,000

As indicated by these entries, Handler recognizes revenue from the sale of the equipment on November 1, 2022. In addition, it recognizes revenue for the installation fee because these services have been performed.

Handler recognizes the training revenues on a straight-line basis starting on November 1, 2022, or $4,026 ($48,309 ÷ 12) per month for 1 year (unless a more appropriate method such as the percentage-of-completion method—discussed in the next section—is warranted). The journal entry to recognize the training revenue for 2 months in 2022 is as follows.

December 31, 2022		
Unearned Service Revenue	8,052	
Service Revenue (training) ($4,026 × 2)		8,052

Therefore, Handler recognizes revenue at December 31, 2022, in the amount of $1,959,743 ($1,932,367 + $19,324 + $8,052). Handler makes the following journal entry to recognize the remaining training revenue in 2023, assuming adjusting entries are made at year-end.

December 31, 2023		
Unearned Service Revenue	40,257	
Service Revenue (training) ($48,309 – $8,052)		40,257

ILLUSTRATION 18.12 Multiple Performance Obligations—Product, Installation, and Service

Recognizing Revenue When (or as) Each Performance Obligation Is Satisfied—Step 5

A company satisfies its performance obligation when the customer obtains control of the good or service. As indicated in the Handler example (in Illustration 18.12) and the BEAN example, the concept of change in control is the deciding factor in determining when a performance obligation is satisfied. The customer controls the product or service when it has the ability to direct the use of and obtain substantially all the remaining benefits from the asset or service. Control also includes the customer's ability to prevent other companies from directing the use of, or receiving the benefits, from the asset or service. **Illustration 18.13** summarizes the indicators that the customer has obtained control. [14]

1. The company has a right to payment for the asset.
2. The company has transferred legal title to the asset.
3. The company has transferred physical possession of the asset.
4. The customer has significant risks and rewards of ownership.
5. The customer has accepted the asset.

ILLUSTRATION 18.13 Change in Control Indicators

This is a list of indicators, not requirements or criteria. Not all of the indicators need to be met for management to conclude that control has transferred and revenue can be recognized. Management must use judgment to determine whether the factors collectively indicate that the customer has obtained control. This assessment should be focused primarily on the customer's perspective.

Companies satisfy performance obligations either at a point in time or over a period of time. Companies recognize revenue over a period of time if one of the following three criteria is met.

1. The customer receives and consumes the benefits as the seller performs.
2. The customer controls the asset as it is created or enhanced (e.g., a builder constructs a building on a customer's property).
3. The company does not have an alternative use for the asset created or enhanced (e.g., an aircraft manufacturer builds specialty jets to a customer's specifications); and either (a) the customer receives benefits as the company performs, and therefore the task would not need to be re-performed, or (b) the company has a right to payment, and this right is enforceable.

Illustration 18.14 provides an example of the point in time when revenue should be recognized.

Timing of Revenue Recognition

Facts: Gomez Software enters into a contract with Hurly Company to develop and install customer relationship management (CRM) software. Progress payments are made upon completion of each stage of the contract. If the contract is terminated, then the partially completed CRM software passes to Hurly Company. Gomez Software is prohibited from redirecting the software to another customer.

***Question:* At what point should Gomez Software recognize revenue related to its contract with Hurly Company?**

Solution: Gomez Software does not create an asset with an alternative use because it is prohibited from redirecting the software to another customer. In addition, Gomez Software is entitled to payments for performance to date and expects to complete the project. Therefore, Gomez Software concludes that the contract meets the criteria for recognizing revenue over time.

ILLUSTRATION 18.14 Satisfying a Performance Obligation

A company recognizes revenue from a performance obligation over time by measuring the progress toward completion. The method selected for measuring progress should depict the transfer of control from the company to the customer. **For many service arrangements, revenue is recognized on a straight-line basis because the performance obligation is being satisfied ratably**

over the contract period. In other settings (e.g., long-term construction contracts), 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. 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 (e.g., costs incurred and 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, etc.) track results. Neither is universally applicable to all long-term projects. Their use requires the exercise of judgment and careful tailoring to the circumstances.

The most popular input measure used to determine the progress toward completion is the cost-to-cost basis. Under this basis, a company measures the percentage of completion by comparing costs incurred to date with the most recent estimate of the total costs required to complete the contract. The percentage-of-completion method is discussed more fully in Appendix 18A, which examines the accounting for long-term contracts.

Summary

Illustration 18.15 provides a summary of the five-step revenue recognition process.

Step in Process	Description	Implementation
1. Identify the contract with customers.	A contract is an agreement that creates enforceable rights or obligations.	A company applies the revenue guidance to contracts with customers.
2. Identify the separate performance obligations in the contract.	A performance obligation is a promise in a contract to provide a product or service to a customer. A performance obligation exists if the customer can benefit from the good or service on its own or together with other readily available resources.	A contract may be comprised of multiple performance obligations. The accounting for multiple performance obligations is based on evaluation of whether the product or service is distinct within the contract. If each of the goods or services is distinct, but are all interdependent and interrelated, these goods and services are combined and reported as one performance obligation.
3. Determine the transaction price.	The transaction price is the amount of consideration that a company expects to receive from a customer in exchange for transferring goods and services.	In determining the transaction price, companies must consider the following factors: (1) variable consideration, (2) time value of money, (3) non-cash consideration, and (4) consideration paid or payable to customer.
4. Allocate the transaction price to the separate performance obligations.	If more than one performance obligation exists, allocate the transaction price based on relative fair values.	The best measure of fair value is what the good or service could be sold for on a standalone basis (standalone selling price). Estimates of standalone selling price can be based on (1) adjusted market assessment, (2) expected cost plus a margin approach, or (3) a residual approach.
5. Recognize	A company satisfies its performance obligation	Companies satisfy performance obligations either at a point in time

revenue when each performance obligation is satisfied.	when the customer obtains control of the good or service.	or over a period of time. Companies recognize revenue over a period of time if one of the following criteria is met: (1) the customer receives and consumes the benefits as the seller performs, (2) the customer controls the asset as it is created, or (3) the company does not have an alternative use for the asset.

ILLUSTRATION 18.15 Summary of the Five-Step Revenue Recognition Process

Accounting for Revenue Recognition Issues

LEARNING OBJECTIVE 3

Apply the five-step process to major revenue recognition issues.

This section addresses revenue recognition issues found in practice. Most of these issues relate to determining the transaction price (Step 3) and evaluating when control of the product or service passes to the customer (Step 5). The revenue recognition principle and the concept of control are illustrated for the following situations.

- Sales returns and allowances.
- Repurchase agreements.
- Bill-and-hold arrangements.
- Principal-agent relationships.
- Consignments.
- Warranties.
- Non-refundable upfront fees.

Sales Returns and Allowances

Sales returns and allowances are very common for many companies that sell goods to customers. For example, assume that Fafco Solar sells solar panels to customers on account. Fafco grants customers the right of return for these panels for various reasons (e.g., dissatisfaction with the product) and to receive any combination of the following.

1. A full or partial refund of any consideration paid.
2. A credit that can be applied against amounts owed, or that will be owed, to the seller.
3. Another product in exchange.

To account for these sales returns and allowances, Fafco should recognize the following:

a. Revenue for the transferred solar panels in the amount of consideration to which Fafco is reasonably assured to be entitled (considering the products to be returned or allowance granted).
b. An asset (and corresponding adjustment to cost of goods sold) for the goods expected to be returned from customers.

Credit Sales with Returns and Allowances

To illustrate the accounting for a return situation in more detail, assume that on January 12, 2022, Venden NV sells 100 cameras for €100 each on **account** to Amaya SA. Venden allows Amaya to return any unused cameras within 45 days of purchase. The cost of each product is €60. Venden estimates that:

1. Three products will be returned.
2. The cost of recovering the products will be immaterial.
3. The returned products are expected to be resold at a profit.

On January 24, Amaya returns two of the cameras because they are the wrong color. On January 31, Venden prepares financial statements and determines that it is likely that only one more camera will be returned. Venden makes the following entries related to these transactions.

The Sales Returns and Allowances account is a contra account to Sales Revenue. The Returned Inventory account is used to separate returned inventory from regular inventory.

To record the sale of the cameras and related cost of goods sold on January 12, 2022		
Accounts Receivable	10,000	
Sales Revenue (100 × €100)		10,000
Cost of Goods Sold	6,000	
Inventory (100 × €60)		6,000
To record the return of the two cameras on January 24, 2022		
Sales Returns and Allowances	200	
Accounts Receivable (2 × €100)		200
Returned Inventory	120	
Cost of Goods Sold (2 × €60)		120

On January 31, 2022, Venden prepares financial statements. As indicated earlier, Venden originally estimated that the most likely outcome was that three cameras would be returned. Venden believes the original estimate is correct and makes the following adjusting entries to account for expected returns at January 31, 2022.

To record expected sales returns on January 31, 2022		
Sales Returns and Allowances	100	
Refund Liability (1 × €100)		100
To record the expected return of the one camera and related reduction in Cost of Goods Sold		
Estimated Inventory Returns	60	
Cost of Goods Sold (1 × €60)		60

The Refund Liability account is a current liability. The Estimated Inventory Returns account will generally be added to the Returned Inventory account at the end of the reporting period.[9]

For the month of January, Venden's income statement reports the information presented in **Illustration 18.16**.

Sales revenue (100 × €100)	€10,000
Less: Sales returns and allowances (€200 + €100)	300
Net sales	9,700
Cost of goods sold (97 × €60)	5,820
Gross profit	€ 3,880

ILLUSTRATION 18.16 Income Statement Reporting

As a result, at the end of the reporting period, the net sales reflects the amount that Venden is expected to be entitled to collect.

Venden reports the information in the statement of financial position as of January 31, 2022 as shown in **Illustration 18.17**.

Accounts receivable (€10,000 – €200)	€9,800
Returned inventory (including estimated) (3 × €60)	180
Refund liability	100

ILLUSTRATION 18.17 Statement of Financial Position Reporting

Cash Sales with Returns and Allowances

Assume now that Venden sold the cameras to Amaya **for cash** instead of on account. In this situation, Venden makes the following entries related to these transactions.

To record the sale of the cameras and related cost of goods sold on January 12, 2022		
Cash	10,000	
Sales Revenue (100 × €100)		10,000
Cost of Goods Sold	6,000	
Inventory (100 × €60)		6,000

Assuming that Venden did not pay cash at the time of the return of the two cameras to Amaya on January 24, 2022, the entries to record the return of the two cameras and related cost of goods sold are as follows.

To record the return of two cameras on January 24, 2022		
Sales Returns and Allowances	200	
Refund Liability (2 × €100)		200
Returned Inventory	120	
Cost of Goods Sold (2 × €60)		120

Venden records a refund liability to Amaya to recognize that it owes Amaya for the return of two cameras. As indicated earlier, the Sales Returns and Allowances account is a contra-revenue account. The Returned Inventory account is used to separate returned inventory from regular inventory.

On January 31, 2022, Venden prepares financial statements. As indicated earlier, Venden estimates that the most likely outcome is that one more camera will be returned. Venden therefore makes the following adjusting entries.

To record expected sales returns on January 31, 2022		
Sales Returns and Allowances	100	
Refund Liability (1 × €100)		100
To record the expected return of the one camera and related Cost of Goods Sold		
Estimated Inventory Returns	60	
Cost of Goods Sold (1 × €60)		60

At January 31, 2022, Venden records a refund liability to recognize its estimated additional liability to Amaya for expected future returns. The Estimated Inventory Returns account will generally be added to the Returned Inventory account at the end of the reporting period to identify returned and estimated inventory returns.

Illustration 18.18 presents the information related to these sales that will be reported on Venden's income statement for the month of January.

Sales revenue (100 × €100)	€10,000
Less: Sales returns and allowances (3 × €100)	300
Net sales	9,700
Cost of goods sold (97 × €60)	5,820
Gross profit	€ 3,880

ILLUSTRATION 18.18 Income Statement Reporting Sales Returns and Allowances

On Venden's statement of financial position as of January 31, 2022, the information is reported as shown in **Illustration 18.19**.

Cash (assuming no cash payments to date to Amaya)	€10,000
Returned inventory (including estimated) (3 × €60)	180
Refund liability (€200 + €100)	300

ILLUSTRATION 18.19 Statement of Financial Position Reporting Sales Returns and Allowances

Companies record the returned asset in a separate account from inventory to provide transparency. The carrying value of the returned asset is subject to impairment testing, separate from the inventory. If a company is unable to estimate the level of returns with any reliability, it should not report any revenue until the returns become predictive.

What Do the Numbers Mean?

Boomerang Sales!

With the explosive growth and increasing competition in the e-commerce world, many new business opportunities and challenges have arisen. For example, the furniture retailer **Wayfair Inc.** (USA) has needed to sort out how to deliver home furnishings (including large furniture items) to their customers, which is a much more challenging task than small-package delivery. The company reports it has established multiple warehouses in the United States, Canada, and Europe, and primarily uses its own employees for home delivery rather than third-party delivery companies.

As sales have increased, another challenge has arisen in the e-commerce world—returns. For an industry that ships millions of packages a week, retailers are now also dealing with returns that can represent as much as one-third of their original sales. The return rate is especially high for retailers that sell clothing and footwear items, where sizing and other factors contribute to returns.

The challenge has reached a point where companies are designing special "reverse logistics" processes to deal with the returned items. For example, it has been documented that returned items require 20 percent more warehouse space, compared to items that have not yet been sold.

As discussed in the chapter, companies must consider the possibility of returns and how they can impact reported revenues. The issue of returns is both an operations and an accounting issue.

Sources: McKinsey, "Bulky is beautiful: How Wayfair Is Poised to Meet Massive New Demand for Home Goods—and Home Delivery," *McKinsey.com* (December 2019); Erica E. Phillips, "Holiday Returns Already Are Flooding Parcel Networks," *Wall Street Journal* (December 20, 2018); Steve Dennis, "The Ticking Time Bomb of E-Commerce Returns," *Forbes.com* (February 12, 2018); Diana Olick, "The Surge in Online-Shopping Returns Has Boosted the Warehouse Sector," *CNBC.com* (January 4, 2019).

Repurchase Agreements

In some cases, companies enter into **repurchase agreements**, which allow them to transfer an asset to a customer but have an unconditional (forward) obligation or unconditional right (call option) to repurchase the asset at a later date. In these situations, the question is whether the company sold the asset.[10] Generally, companies report these transactions as a financing (borrowing). That is, if the selling company has a forward obligation or call option to repurchase the asset for an amount **greater than or equal to its selling price,** then the transaction is a financing transaction by the company.[11] **Illustration 18.20** examines the issues related to a repurchase agreement.

Repurchase Agreement

Facts: Morgan Ltd., an equipment dealer, sells equipment on January 1, 2022, to Lane Construction for £100,000. It agrees to repurchase this equipment (an unconditional obligation) from Lane Construction on December 31, 2023, for a price of £121,000.

***Question:* Should Morgan Ltd. record a sale for this transaction?**

Solution: For a sale and repurchase agreement, the terms of the agreement need to be analyzed to determine whether Morgan Ltd. has transferred control to the customer, Lane Construction. As indicated earlier, control of an asset refers to the ability to direct the use of and obtain substantially all the benefits from the asset. Control also includes the ability to prevent other companies from directing the use of and receiving the benefit from a good or service. In this case, Morgan continues to have control of the asset because it has agreed to repurchase the asset at an amount greater than the selling price. Therefore, this agreement is a financing transaction and not a sale. Thus, the asset is not removed from the books of Morgan.

Assuming that an interest rate of 10% is imputed from the agreement, Morgan makes the following entries to record this agreement. Morgan records the financing on January 1, 2022, as follows.

January 1, 2022		
Cash	100,000	
Liability to Lane Construction		100,000

Morgan records interest on December 31, 2022, as follows.

December 31, 2022		
Interest Expense	10,000	
Liability to Lane Construction (£100,000 × .10)		10,000

Morgan records interest and retirement of its liability to Lane as follows.

December 31, 2023		
Interest Expense	11,000	
Liability to Lane Construction (£110,000 × .10)		11,000
Liability to Lane Construction	121,000	
Cash (£100,000 + £10,000 + £11,000)		121,000

ILLUSTRATION 18.20 Recognition—Repurchase Agreement

Rather than Morgan Ltd. having a forward or call option to repurchase the asset, assume that Lane Construction **has the option** to require Morgan Ltd. to repurchase the asset at December 31, 2023. This option is a put option; that is, Lane has the option to put the asset back to Morgan. In this situation, Lane has control of the asset, as it can keep the equipment or sell it to Morgan or to some other third party. The value of a put option increases when the value of the underlying asset (in this case, the equipment) decreases. In determining how to account for this transaction, Morgan has to determine whether Lane will have an economic incentive to exercise this put option at the end of 2023.

Specifically, Lane has a significant economic incentive to exercise its put option if the value of the equipment declines. In this case, the transaction is generally reported as a financing transaction as shown in Illustration 18.20. That is, Lane will return (put) the equipment back to Morgan if the repurchase price exceeds the fair value of the equipment. For example, if the repurchase price of the equipment is £150,000 but its fair value is £125,000, Lane is better off returning the equipment to Morgan.

Conversely, if Lane does not have a significant economic incentive to exercise its put option, then the transaction should be reported as a sale of a product with a right of return.

Bill-and-Hold Arrangements

A **bill-and-hold arrangement** is a contract under which an entity bills a customer for a product but the entity retains physical possession of the product until it is transferred to the customer at a point in time in the future. Bill-and-hold sales result when the buyer is not yet ready to take delivery but does take title and accepts 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. [16] **Illustration 18.21** provides an example of a bill-and-hold arrangement.

Bill and Hold

Facts: Butler A.Ş. sells ₺450,000 (cost ₺280,000) of fireplaces on March 1, 2022, 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:* When should Butler recognize the revenue from this bill-and-hold arrangement?**

Solution: When to recognize revenue in a bill-and-hold arrangement depends on the circumstances. Butler determines when it has satisfied its performance obligation to transfer a product by evaluating when Baristo obtains control of that product. For Baristo to have obtained control of a product in a bill-and-hold arrangement, it must meet all of the conditions for change in control plus all of the following criteria:

a. The reason for the bill-and-hold arrangement must be substantive.
b. The product must be identified separately as belonging to Baristo.
c. The product currently must be ready for physical transfer to Baristo.
d. Butler cannot have the ability to use the product or to direct it to another customer.

In this case, assuming that the above criteria were met in the contract, revenue recognition should be permitted at the time the contract is signed. Butler has transferred control to Baristo; that is, Butler has a right to payment for the fireplaces and legal title has transferred.

Butler makes the following entry to record the bill-and-hold sale and related cost of goods sold.

March 1, 2022		
Accounts Receivable	450,000	
Sales Revenue		450,000
Cost of Goods Sold	280,000	
Inventory		280,000

ILLUSTRATION 18.21 **Recognition—Bill and Hold**

Principal-Agent Relationships

In a **principal-agent relationship**, the principal's performance obligation is to provide goods or perform services for a customer. The agent's performance obligation is to arrange for the principal to provide these goods or services to a customer. Examples of principal-agent relationships are as follows.

- Preferred Travel Company (agent) facilitates the booking of cruise excursions by finding customers for Regency Cruise Company (principal).
- **Priceline** (USA) (agent) facilitates the sale of various services such as car rentals for **Hertz** (USA) (principal).

In these types of situations, 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 total revenue). **Illustration 18.22** provides an example of the issues related to principal-agent relationships.

Principal-Agent Relationship

Facts: Fly-Away Travel sells airplane tickets for **British Airways (BA)** (GBR) to various customers.

***Question:* What are the performance obligations in this situation and how should revenue be recognized for both the principal and agent?**

Solution: The principal in this case is BA and the agent is Fly-Away Travel. Because BA has the performance obligation to provide air transportation to the customer, it is the principal. Fly-Away Travel facilitates the sale of the airline ticket to the customer in exchange for a fee or commission. Its performance obligation is to arrange for BA to provide air transportation to the customer.

Although Fly-Away collects the full airfare from the customer, it then remits this amount to BA less the commission. Fly-Away therefore should not record the full amount of the fare as revenue on its books—to do so overstates revenue. Its revenue is the commission, not the full price. Control of performing the air transportation is with BA, not Fly-Away Travel.

ILLUSTRATION 18.22 **Recognition—Principal-Agent Relationship**

Some might argue that there is no harm in Fly-Away recording 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 IASB has developed specific criteria to determine when a principal-agent relationship exists.[12] 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.

Consignments

A 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 an agreement 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.

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 point-of-sale basis of revenue recognition. That is, the consignor recognizes revenue only after receiving notification of the sale.

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 cash remitted. Revenue is then recognized by the consignor. Analysis of a consignment arrangement is provided in **Illustration 18.23**.

Sales on Consignment

Facts: Nelba Manufacturing 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. (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
*€40,000 × .10					
Adjustment of inventory on consignment for cost of sales					
Cost of Goods Sold	26,500		No entry.		
Inventory (consignments)		26,500			
[⅔ × (€36,000 + €3,750) = €26,500]					

ILLUSTRATION 18.23 Recognition—Sales on Consignment

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. Consignors use a variety of 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. **Consignees only recognize commission revenue.**

Warranties

As discussed in Chapter 13, companies often provide one of two types of **warranties** to customers:

1. Warranties that the product **meets agreed-upon specifications in the contract at the time the product is sold.** This type of warranty is included in the sales price of a company's product and is often referred to as an **assurance-type warranty.**
2. Warranties that provide an **additional service beyond the assurance-type warranty**. This warranty is not included in the sales price of the product and is referred to as a **service-type warranty**. As a consequence, it is recorded as a separate performance obligation.

Companies do not record a separate performance obligation for assurance-type warranties. This type of warranty is nothing more than a quality guarantee that the good or service is free from defects at the point of sale. In this case, the sale of the product and the related assurance warranty are one performance obligation, as they are interdependent of and interrelated with each other. The objective for companies that issue an assurance warranty is to provide a combined item (product and a warranty).

These types of obligations should be expensed in the period the goods are provided or services performed. In addition, the company should record a warranty liability. The estimated amount of the liability includes all the costs that the company will incur after sale due to the correction of defects or deficiencies required under the warranty provisions.

In addition, companies sometimes provide customers with an option to purchase a warranty separately. In most cases, these extended warranties provide the customer a service beyond fixing defects that existed at the time of sale. For example, when you purchase a TV, you are entitled to the company's warranty. You will also undoubtedly be offered an extended warranty on the product at an additional cost. These service-type warranties represent a **separate service and**

are an additional performance obligation. The service-type warranty is sold separately and therefore has a standalone selling price. In this case, the objective of the company is to sell an additional service to customers. As a result, companies should allocate a portion of the transaction price to this performance obligation, if provided. The company recognizes revenue in the period that the service-type warranty is in effect. **Illustration 18.24** presents an example of both an assurance-type and a service-type warranty.

Warranties

Facts: Maverick Company sold 1,000 Rollomatics on October 1, 2022, at a total price of $6,000,000, with a warranty guarantee that the product was free of defects. The cost of the Rollomatics is $4,000,000. The term of this assurance warranty is 2 years, with an estimated cost of $80,000. In addition, Maverick sold extended warranties related to 400 Rollomatics for 3 years beyond the 2-year period for $18,000. On November 22, 2022, Maverick incurred labor costs of $3,000 and part costs of $25,000 related to the assurance warranties. Maverick prepares financial statements on December 31, 2022. It estimates that its future assurance warranty costs will total $44,000 at December 31, 2022.

***Question:* What are the journal entries that Maverick Company should make in 2022 related to the sale of the Rollomatics and the assurance and extended warranties?**

Solution: Maverick makes the following entries in 2022 related to Rollomatics sold with warranties.

October 1, 2022		
To record the sale of the Rollomatics and the related extended warranties:		
Cash ($6,000,000 + $18,000)	6,018,000	
Sales Revenue		6,000,000
Unearned Warranty Revenue		18,000
To record the cost of goods sold and reduce the inventory of Rollomatics:		
Cost of Goods Sold	4,000,000	
Inventory		4,000,000
November 22, 2022		
To record the warranty costs incurred:		
Warranty Expense	28,000	
Salaries and Wages Payable		3,000
Inventory (parts)		25,000
December 31, 2022		
To record the adjusting entry related to its assurance warranty at the end of the year:		
Warranty Expense	44,000	
Warranty Liability		44,000

ILLUSTRATION 18.24 Recognition—Performance Obligations and Warranties

Maverick Company makes an adjusting entry to record a liability for the expected warranty costs related to the sale of the Rollomatics. As the Chapter 13 examples illustrated, when actual warranty costs are incurred in 2023, the Warranty Liability account is reduced.[13]

In most cases, Unearned Warranty Revenue (related to the service-type warranty) is recognized on a straight-line basis as Warranty Revenue over the three-year period to which it applies. Revenue related to the extended warranty is not recognized until the warranty becomes effective on October 1, 2024. If financial statements are prepared on December 31, 2024, Maverick makes the following entry to recognize revenue:

Unearned Warranty Revenue	1,500	
Warranty Revenue [(\$18,000 ÷ 36) × 3]		1,500

As indicated, the company also recognizes revenue related to the service-type warranty over the three-year period that extends beyond the assurance warranty period (two years). In most cases, the unearned warranty revenue is recognized on a straight-line basis. The costs associated with the service-type warranty are expensed as incurred.

Non-refundable Upfront Fees

Companies sometimes receive payments (**upfront fees**) from customers before they deliver a product or perform a service. Upfront payments generally relate to the initiation, activation, or setup of a good or service to be provided or performed in the future. In most cases, these upfront payments are non-refundable. Examples include fees paid for membership in a health club or buying club, and activation fees for phone, Internet, or cable.

Companies must determine whether these non-refundable advance payments are for products or services in the current period. In most situations, these payments are for future delivery of products and services and should therefore not be recorded as revenue at the time of payment. In some cases, the upfront fee is viewed as being similar to a renewal option for future products and services at a reduced price. An example would be a health club where once the initiation fee is paid, no additional fee is necessary upon renewal. **Illustration 18.25** provides an example of an upfront fee payment.

Upfront fee Considerations

Facts: Erica Felise signs a 1-year contract with Bigelow Health Club. The terms of the contract are that Erica is required to pay a non-refundable initiation fee of £200 and a membership fee of £50 per month. Bigelow determines that its customers, on average, renew their annual membership two times before terminating their membership.

***Question:* What is the amount of revenue Bigelow Health Club should recognize in the first year?**

Solution: In this case, the membership fee arrangement may be viewed as a single performance obligation (similar services are provided in all periods). That is, Bigelow is providing a discounted price in the second and third years for the same services, and this should be reflected in the revenue recognized in those periods. Bigelow determines the total transaction price to be £2,000—the upfront fee of £200 and the three years of monthly fees of £1,800 (£50 × 36)—and allocates it over the 3 years. In this case, Bigelow would report revenue of £55.56 (£2,000 ÷ 36) each month for 3 years. *Unless otherwise instructed, use this approach for homework problems.*[14]

ILLUSTRATION 18.25 Transaction Price—Upfront Fee Considerations

Summary

Illustration 18.26 provides a summary of the additional issues related to transfer of control and revenue recognition.

Issue	Description	Implementation
Sales returns and allowances	Return of product by customer (e.g., due to dissatisfaction with the product) in exchange for refunds, a credit against amounts owed or that will be owed, and/or another product in exchange.	Seller may recognize (a) a liability (and an adjustment to revenue for products expected to be returned), and (b) an asset (and corresponding adjustment to cost of goods sold) for the goods returned from customers.
Repurchase agreements	Seller has an obligation or right to repurchase the asset at a later date.	Generally, if the company has an obligation or right to repurchase the asset for an amount greater than its selling price, then the transaction is a financing transaction.
Bill-and-hold arrangements	Results when the buyer is not yet ready to take delivery but does take title and accepts billing.	Revenue is recognized depending on when the customer obtains control of that product.
Principal-agent relationships	Arrangement in which the principal's performance obligation is to provide goods or perform services for a customer. The agent's performance obligation is to arrange for the principal to provide these goods or services to a customer.	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. The principal recognizes revenue when the goods or services are sold to a third-party customer.
Consignments	A principal-agent relationship in which 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.	The consignor recognizes revenue only after receiving notification of the sale and the cash remittance from the consignee (consignor carries the merchandise as inventory throughout the consignment). The consignee records commission revenue (usually some percentage of the selling price).
Warranties	Warranties can be assurance-type (product meets agreed-upon	A separate performance obligation is not recorded for assurance-type warranties (considered part of the

	specifications) or service-type (provides additional service beyond the assurance-type warranty).	product). Service-type warranties are recorded as a separate performance obligation. Companies should allocate a portion of the transaction price to service-type warranties, when present.
Non-refundable upfront fees	Upfront payments generally relate to initiation, activation, or setup activities for a good or service to be delivered in the future.	The upfront payment should be allocated over the periods benefited.

ILLUSTRATION 18.26 Summary—Other Revenue Recognition Issues

Presentation and Disclosure

LEARNING OBJECTIVE 4

Describe presentation and disclosure regarding revenue.

Presentation

Companies use an asset-liability approach to recognize revenue. For example, when **Cereal Partners** (CHE) delivers cereal to **Carrefour** (FRA) (satisfying its performance obligation), it has a right to consideration from Carrefour and therefore has a contract asset. If, on the other hand, Carrefour performs first, by prepaying for this cereal, Cereal Partners has a contract liability. Companies must present these contract assets and contract liabilities on their statements of financial position.

Contract Assets and Liabilities

Contract assets are of two types: (1) unconditional rights to receive consideration because the company has satisfied its performance obligation with a customer, and (2) conditional rights to receive consideration because the company has satisfied one performance obligation but must satisfy another performance obligation in the contract before it can bill the customer. Companies should report unconditional rights to receive consideration as a receivable on the statement of financial position. Conditional rights on the statement of financial position should be reported separately as contract assets. **Illustration 18.27** provides an example of the accounting and reporting for a contract asset.

Contract Asset

Facts: On January 1, 2022, Finn ASA enters into a contract to transfer Product A and Product B to Obermine Overstock for €100,000. The contract specifies that payment for Product A will not occur until Product B is also delivered. In other words, payment will not occur until both Product A and Product B are transferred to Obermine. Finn determines that standalone selling prices are €30,000 for Product A and €70,000 for Product B. Finn delivers Product A to Obermine on February 1, 2022. On March 1, 2022, Finn delivers Product B to Obermine.

***Question:* What journal entries should Finn make regarding to this contract in 2022?**

Solution: No entry is required on January 1, 2022, because neither party has performed on the contract. On February 1, 2022, Finn records the following entry.

February 1, 2022		
Contract Asset	30,000	
Sales Revenue		30,000

On February 1, Finn has satisfied its performance obligation and therefore reports revenue of €30,000. However, it does not record an accounts receivable at this point because it does not have an unconditional right to receive the €100,000 unless it also transfers Product B to Obermine. In other words, a contract asset occurs generally when a company must satisfy another performance obligation before it is entitled to bill the customer. When Finn transfers Product B on March 1, 2022, it makes the following entry.

March 1, 2022		
Accounts Receivable	100,000	
Contract Asset		30,000
Sales Revenue		70,000

ILLUSTRATION 18.27 Contract Asset Recognition and Presentation

As indicated above, a **contract liability** is a company's obligation to transfer goods or services to a customer for which the company has received consideration from the customer. A contract liability is generally referred to as

Unearned Sales Revenue, Unearned Service Revenue, or another appropriate account title. **Illustration 18.28** provides an example of the recognition and presentation of a contract liability.

Contract Liability

Facts: On March 1, 2022, Henly Company enters into a contract to transfer a product to Propel Inc. on July 31, 2022. It is agreed that Propel will pay the full price of $10,000 in advance on April 15, 2022. Henly delivers the product on July 31, 2022. The cost of the product is $7,500.

***Question:* What journal entries are required in 2022?**

Solution: No entry is required on March 1, 2022, because neither party has performed on the contract. On receiving the cash on April 15, 2022, Henly records the following entry.

April 15, 2022		
Cash	10,000	
Unearned Sales Revenue		10,000

On satisfying the performance obligation on July 31, 2022, Henly records the following entry to record the sale.

July 31, 2022		
Unearned Sales Revenue	10,000	
Sales Revenue		10,000

In addition, Henly records cost of goods sold as follows.

Cost of Goods Sold	7,500	
Inventory		7,500

ILLUSTRATION 18.28 Contract Liability Recognition and Presentation

Companies are not required to use the terms "contract assets" and "contract liabilities" on the statement of financial position. For example, contract liabilities are performance obligations and therefore more descriptive titles (as noted earlier) such as unearned service revenue, unearned sales revenue, repurchase liability, and return liability may be used where appropriate. For contract assets, it is important that financial statement users can differentiate between unconditional and conditional rights through appropriate account presentation.

Contract Modifications

Companies sometimes change the terms of a contract while it is ongoing; this is referred to as a **contract modification**. When this occurs, companies determine whether a new contract (and performance obligations) results or whether the existing contract is still in effect, but with modifications.

Separate Performance Obligation

A company accounts for a contract modification as a new contract if **both** of the following conditions are satisfied:

- The promised **goods or services are distinct** (i.e., the company sells them separately and they are not interdependent with other goods and services), and
- The company has the right to receive an amount of **consideration that reflects the standalone selling price** of the promised goods or services. **[18]**

For example, Crandall Co. has a contract to sell 100 products to a customer for $10,000 ($100 per product) at various points in time over a six-month period. After 60 products have been delivered, Crandall modifies the contract by promising to deliver 20 more products for an additional $1,900, or $95 per product (which is the standalone selling price of the products at the time of the contract modification). Crandall regularly sells the products separately. In this situation, the contract modification for the additional 20 products is, in effect, a **new and separate contract** because it meets both of the conditions above. That is, it does not affect the accounting for the original contract.

Given a new contract, Crandall will recognize an additional $4,000 [(100 units – 60 units) × $100] related to the original contract terms and $1,900 (20 units × $95) related to the new products. Total revenue after the modification is therefore $5,900 ($4,000 + $1,900).

Prospective Modification

What if Crandall Co. determines that the additional products are not a separate performance obligation? This might arise if the new products are not priced at the proper standalone selling price or if they are not distinct. In this situation, companies generally account for the modification using a prospective approach.

Under the prospective approach, Crandall should account for the effect of the change in the period of change as well as future periods if the change affects both. Crandall should not change previously reported results. For Crandall, the amount recognized as revenue for each of the remaining products would be a blended price of $98.33, computed as shown in **Illustration 18.29**.

Consideration for products not yet delivered under original contract ($100 × 40)	$4,000
Consideration for products to be delivered under the contract modification ($95 × 20)	1,900
Total remaining revenue	$5,900
Revenue per remaining unit ($5,900 ÷ 60) = $98.33	

ILLUSTRATION 18.29 Revenue Under Prospective Modification

Under the prospective approach, this computation differs from that in the separate performance obligation approach because revenue on the remaining units is recognized at the blended price. Total revenue after the modification is therefore $5,900 (60 units × $98.33). **Illustration 18.30** shows the revenue reported under the two contract modification approaches for Crandall Co.

	Revenue Recognized Prior to Modification	Revenue Recognized After Modification	Total Revenue Recognized
Separate performance obligation	$6,000	$5,900	$11,900
No separate performance obligation—prospectively	$6,000	$5,900	$11,900

ILLUSTRATION 18.30 Comparison of Contract Modification Approaches

As indicated, whether a modification is treated as a separate performance obligation or prospectively, the same amount of revenue is recognized before and after the modification. However, under the prospective approach, a blended price ($98.33) is used for sales in the periods after the modification.[15]

Costs to Fulfill a Contract

Companies may also report assets associated with fulfillment costs related to a revenue arrangement. Companies divide fulfillment costs (contract acquisition costs) into two categories:

1. Those that give rise to an asset.
2. Those that are expensed as incurred.

Companies recognize an asset for the incremental costs if these costs are incurred to obtain a contract with a customer. In other words, incremental costs are those that a company would not incur if the contract had not been obtained (e.g., selling commissions). Additional examples that give rise to an asset are as follows.

a. Direct labor, direct materials, and allocation of costs that relate directly to the contract (e.g., costs of contract management and supervision, insurance, and depreciation of tools and equipment).
b. Costs that generate or enhance resources of the company that will be used in satisfying performance obligations in the future. Such costs include intangible design or engineering costs that will continue to give rise to benefits in the future.

Other costs that are expensed as incurred include general and administrative costs (unless those costs are explicitly chargeable to the customer under the contract) as well as costs of wasted materials, labor, or other resources to fulfill the contract that were not reflected in the price of the contract. That is, **companies only capitalize costs that are direct, incremental, and recoverable** (assuming that the contract period is more than one year). **Illustration 18.31** provides an example of costs capitalized to fulfill a contract.

As a practical expedient, a company recognizes the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that the company otherwise would have recognized is one year or less.

Contract Costs

Facts: Rock Integrators enters into a contract to operate Dello Company's information technology data center for 5 years. Rock Integrators incurs selling commission costs of $10,000 to obtain the contract. Before performing the services, Rock Integrators designs and builds a technology platform that interfaces with Dello's systems. That platform is not transferred to Dello. Dello promises to pay a fixed fee of $20,000 per month. Rock Integrators incurs the following additional costs: design services for the platform $40,000, hardware for the platform $120,000, software $90,000, and testing of data center $100,000.

***Question:* What are Rock Integrators' costs for fulfilling the contract to Dello Company?**

Solution: The $10,000 selling commission costs related to obtaining the contract are recognized as an asset. The design services cost of $40,000 and the hardware for the platform of $120,000 are also capitalized. As the technology platform is independent of the contract, the pattern of amortization of this platform may not be related to the terms of the contract. The testing costs are expensed as incurred; in general, these costs are not recoverable.

ILLUSTRATION 18.31 Recognition—Contract Costs

Collectibility

As indicated earlier, if it is probable that the transaction price will not be collected, this is an indication that the parties are not committed to their obligations. As a result, one of the criteria for the existence of a contract is not met, and therefore revenue is not recognized.

Any time a company sells a product or performs a service on account, a collectibility issue occurs. **Collectibility** refers to a customer's credit risk, that is, the risk that a customer will be unable to pay the amount of consideration in accordance with the contract. Under the revenue guidance—as long as a contract exists (it is probable that the customer will pay)—the amount recognized as revenue is not adjusted for customer credit risk.

Thus, companies report the revenue gross (without consideration of credit risk) and then present an allowance for any impairment due to bad debts (recognized initially and subsequently in accordance with the respective bad debt guidance).

An impairment related to bad debts is reported as an operating expense in the income statement. As a result, whether a company will get paid for satisfying a performance obligation is not a consideration in determining revenue recognition. [20]

Disclosure

The disclosure requirements for revenue recognition are designed to help financial statement users understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. To achieve that objective, companies disclose qualitative and quantitative information about all of the following:

- **Contracts with customers.** These disclosures include the disaggregation of revenue, presentation of opening and closing balances in contract assets and contract liabilities, and significant information related to their performance obligations.
- **Significant judgments.** These disclosures include judgments and changes in these judgments that affect the determination of the transaction price, the allocation of the transaction price, and the determination of the timing of revenue.
- **Assets recognized from costs incurred to fulfill a contract.** These disclosures include the closing balances of assets recognized to obtain or fulfill a contract, the amount of amortization recognized, and the method used for amortization.

To implement these requirements and meet the disclosure objectives, companies provide a range of disclosures, as summarized in **Illustration 18.32**. [21][16]

Disclosure Type	Requirements
Disaggregation of revenue	Disclose disaggregated revenue information in categories that depict how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. Reconcile disaggregated revenue to revenue for reportable segments.
Reconciliation of contract balances	Disclose opening and closing balances of contract assets (e.g., unbilled receivables) and liabilities (e.g., deferred revenue) and provide a qualitative description of significant changes in these amounts. Disclose the amount of revenue recognized in the current period relating to performance obligations satisfied in a prior period (e.g., from contracts with variable consideration). Disclose the opening and closing balances of trade receivables if not presented elsewhere.
Remaining performance obligations	Disclose the amount of the transaction price allocated to remaining performance obligations not subject to significant revenue reversal. Provide a narrative discussion of potential additional revenue in constrained arrangements.
Costs to obtain or fulfill contracts	Disclose the closing balances of capitalized costs to obtain and fulfill a contract and the amount of amortization in the period. Disclose the method used to determine amortization for each reporting period.
Other qualitative disclosures	Disclose significant judgments and changes in judgments that affect the amount and timing of revenue from contracts with customers. Disclose how management determines the minimum amount of revenue not subject to the variable consideration constraint.

ILLUSTRATION 18.32 Revenue Disclosures

Evolving Issue

Converged, Converging, or Diverging?

After six years of hard work, the IASB and the FASB were able to create a converged revenue recognition standard. In fact, at the time of issuance by both Boards, it was viewed as a significant milestone in the journey to have a single set of high-quality global accounting standards. In the press release announcing the issuance of the standard, the IASB chair, Hans Hoogervorst, said, "The successful conclusion of this project is a major achievement for both Boards. Together, we have improved the revenue requirements of both IFRS and U.S. GAAP, while managing to achieve a fully converged standard. Our attention now turns to ensuring a successful transition to these new requirements."

While the result of their work is laudable, there were some differences between the two standards even at the time of issuance. In addition, since the standard was issued, both Boards have made several modifications and interpretations which, in some cases, have actually widened the differences between the two standards.

The most significant difference at the time of issuance was the meaning of the word "probable." Under IFRS, *probabl*e is defined to mean "more likely than not," which means more than 50 percent likely. Under U.S. GAAP, *probable* generally means "likely to occur" and is typically considered to be in the 75 percent to 80 percent range.

Since the standards were issued, several accounting policy options have been included in the U.S. standard that have not been included in IFRS. For example, the U.S. standard provides an accounting policy election to determine whether shipping services provided by a third party are a separate performance obligation. IFRS does not provide this election. Further, the U.S. standard provides that taxes collected from customers (for example, sales taxes) can be excluded from revenue as an accounting policy elective. *IFRS 15* discusses whether taxes should be included in the total amount of revenue but requires a jurisdiction-by-jurisdiction analysis as a final determination.

The licensing of intellectual property is a very challenging area in the application of revenue recognition. Both in the initial release and in subsequent modifications, the two standards have diverged in this area. For example, the U.S. standard contains two categories of intellectual property—functional and symbolic—whereas these two categories are not present in *IFRS 15*.

Source: News release, "*IASB and FASB Issue Converged Standard on Revenue Recognition*" (Norwalk, CT: Financial Accounting Foundation, May 28, 2014).

APPENDIX 18A
Long-Term Construction Contracts

LEARNING OBJECTIVE *5

Apply the percentage-of-completion method for long-term contracts.

Revenue Recognition over Time

For the most part, companies recognize revenue at the point of sale because that is when the performance obligation is satisfied. However, as indicated in the chapter, under certain circumstances companies recognize revenue over time. The most notable context in which revenue is recognized over time is long-term construction contract accounting.

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."

A company satisfies a performance obligation and recognizes revenue over time if at least one of the following three criteria is met: **[22]**

1. The customer simultaneously receives and consumes the benefits of the seller's performance as the seller performs.
2. The company's performance creates or enhances an asset (for example, work in process) that the customer controls as the asset is created or enhanced; or
3. The company's performance does not create an asset with an alternative use. For example, the asset cannot be used by another customer. In addition to this alternative use element, at least *one* of the following criteria must be met:

a. Another company would not need to substantially re-perform the work the company has completed to date if that other company were to fulfill the remaining obligation to the customer.

b. The company has a right to payment for its performance completed to date, and it expects to fulfill the contract as promised.[17]

Therefore, if criterion 1, 2, or 3 is met, then a company recognizes revenue over time *if* **it can reasonably estimate its progress toward satisfaction of the performance obligations**. That is, it recognizes revenues and gross profits each period based upon the progress of the construction—referred to as the **percentage-of-completion method**. The company accumulates construction costs plus gross profit recognized to date 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.

Alternatively, if the criteria for recognition over time are not met, the company recognizes revenues and gross profit at a point in time, that is, when the contract is completed. In these 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. This approach is referred to as the **cost-recovery (zero-profit) method**. 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).

Percentage-of-Completion Method

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." 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.

As indicated in the chapter, 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 measure is 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 upfront 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 **Ultra Electronics Holdings** (GBR) measures the percentage of completion by comparing costs incurred to date with the most recent estimate of the total costs required to complete the contract. **Illustration 18A.1** shows the formula for the cost-to-cost basis.

$$\frac{\textbf{Costs Incurred to Date}}{\textbf{Most Recent Estimate of Total Costs}} = \textbf{Percent Complete}$$

ILLUSTRATION 18A.1 Formula for Percentage-of-Completion, Cost-to-Cost Basis

Once Ultra Electronics Holdings 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 18A.2** shows this computation.

Percent Complete	×	Estimated Total Revenue (or Gross Profit)	=	Revenue (or Gross Profit) to Be Recognized to Date

ILLUSTRATION 18A.2 Formula for Total Revenue (or Gross Profit) to Be Recognized to Date

To find the amounts of revenue and gross profit recognized each period, Ultra Electronics Holdings subtracts total revenue or gross profit recognized in prior periods, as shown in **Illustration 18A.3**.

Revenue (or Gross Profit) to Be Recognized to Date	−	Revenue (or Gross Profit) Recognized in Prior Periods	=	Current-Period Revenue (or Gross Profit)

ILLUSTRATION 18A.3 Formula for Amount of Current-Period Revenue (or Gross Profit) 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.

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

To illustrate the percentage-of-completion method, assume that Hardhat Construction has a contract to construct a £4,500,000 bridge at an estimated cost of £4,000,000. The contract starts in July 2022, and the bridge is to be completed in October 2024. The following data pertain to the construction period. (Note that by the end of 2023, Hardhat has revised the estimated total cost from £4,000,000 to £4,050,000.)

	2022	2023	2024
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 percent complete as shown in **Illustration 18A.4**.

	2022	2023	2024
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%
	$\left(\frac{£1,000,000}{£4,000,000}\right)$	$\left(\frac{£2,916,000}{£4,050,000}\right)$	$\left(\frac{£40,050,00}{£4,050,000}\right)$

ILLUSTRATION 18A.4 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.

	2022		2023		2024	
To record costs 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

ILLUSTRATION 18A.5 Journal Entries—Percentage-of-Completion Method, Cost-to-Cost Basis

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 18A.6**.

	To Date	Recognized in Prior Years	Recognized in Current Year
2022			
Revenues (£4,500,000 × .25)	£1,125,000		£1,125,000
Costs	1,000,000		1,000,000
Gross profit	£ 125,000		£ 125,000
2023			
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
2024			
Revenues (£4,500,000 × 1.00)	£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 18A.6 Percentage-of-Completion Revenue, Costs, and Gross Profit by Year

Illustration 18A.7 shows Hardhat's entries to recognize revenue and gross profit each year and to record completion and final approval of the contract.

	2022		2023		2024	
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

ILLUSTRATION 18A.7 Journal Entries to Recognize Revenue and Gross Profit and to Record Contract Completion—Percentage-of-Completion Method, Cost-to-Cost Basis

Note that **Hardhat debits gross profit (as computed in Illustration 18A.6) to Construction in Process**. Similarly, it credits Revenue from Long-Term Contracts for the amounts computed in Illustration 18A.6. 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, in 2022 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 summarized entries over the term of the construction project as shown in Illustration 18A.8.

Construction in Process				
2022 construction costs	£1,000,000	12/31/24	to close completed project	
2022 recognized gross profit	125,000			
2023 construction costs	1,916,000			£4,500,000
2023 recognized gross profit	199,000			
2024 construction costs	1,134,000			
2024 recognized gross profit	126,000			
Total	£4,500,000	Total		£4,500,000

ILLUSTRATION 18A.8 Content of Construction in Process Account—Percentage-of-Completion Method

Recall that the Hardhat Construction example contained a **change in estimated costs**: In the second year, 2023, 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**, as indicated in the chapter. 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 statement of financial position 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 statement of financial position 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 “Costs 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 2022 for Hardhat Construction in **Illustration 18A.9**.

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

ILLUSTRATION 18A.9 Computation of Unbilled Contract Price at 12/31/22

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.”

What happens, as is usually the case, when companies 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 volume of billings and costs are preferable to a summary presentation of the net difference.

Using data from the bridge example, Hardhat Construction would report the status and results of its long-term construction activities in 2022 under the percentage-of-completion method as shown in **Illustration 18A.10**.

Hardhat Construction	
Income Statement (from Illustration 18A.6)	2022
Revenue from long-term contracts	£1,125,000
Costs of construction	1,000,000
Gross profit	£ 125,000

Statement of Financial Position (12/31)		2022
Current assets		
Inventory		
Construction in process	£1,125,000	
Less: Billings	900,000	
Costs and recognized profit in excess of billings		£225,000
Accounts receivable (£900,000 – £750,000)		150,000

ILLUSTRATION 18A.10 Financial Statement Presentation—Percentage-of-Completion Method (2022)

In 2023, its financial statement presentation is as shown in **Illustration 18A.11**.

Hardhat Construction	
Income Statement (from Illustration 18A.6)	2023
Revenue from long-term contracts	£2,115,000
Costs of construction	1,916,000
Gross profit	£ 199,000

Statement of Financial Position (12/31)		2023
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 profit		60,000

ILLUSTRATION 18A.11 Financial Statement Presentation—Percentage-of-Completion Method (2023)

In 2024, Hardhat's financial statements only include an income statement because the bridge project was completed and settled as shown in **Illustration 18A.12**.

Hardhat Construction	
Income Statement (from Illustration 18A.6)	2024
Revenue from long-term contracts	£1,260,000
Costs of construction	1,134,000
Gross profit	£ 126,000

ILLUSTRATION 18A.12 Financial Statement Presentation—Percentage-of-Completion Method (2024)

In addition, Hardhat should disclose the information shown in **Illustration 18A.13** 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 18A.13 Percentage-of-Completion Method Note Disclosure

Cost-Recovery (Zero-Profit) Method

LEARNING OBJECTIVE *6

Apply the cost-recovery method for long-term contracts.

During the early stages of a contract, a company like **Alcatel-Lucent Enterprise** (FRA) may not be able to estimate reliably the outcome of a long-term construction contract. Nevertheless, Alcatel-Lucent Enterprise is confident that it will recover the contract costs incurred. In this case, Alcatel-Lucent Enterprise uses the **cost-recovery (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 the bridge project illustrated on the preceding pages, Hardhat Construction would report the following revenues and costs for 2022–2024, as shown in **Illustration 18A.14**.

	To Date	Recognized in Prior Years	Recognized in Current Year
2022			
Revenues (costs incurred)	£1,000,000		£1,000,000
Costs	1,000,000		1,000,000
Gross profit	£ 0		£ 0
2023			
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
2024			
Revenues (£4,500,000 × 1.00)	£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 18A.14 Cost-Recovery Method Revenue, Costs, and Gross Profit by Year

Illustration 18A.15 shows Hardhat's entries to recognize revenue and gross profit each year and to record completion and final approval of the contract.

	2022		2023		2024	
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 18A.15 Journal Entries—Cost-Recovery Method

As indicated, no gross profit is recognized in 2022 and 2023. In 2024, Hardhat then recognizes gross profit and closes the Billings and Construction in Process accounts.

Illustration 18A.16 compares the amount of gross profit that Hardhat Construction would recognize for the bridge project under the two revenue recognition methods.

	Percentage-of-Completion	Cost-Recovery
2022	£125,000	£ 0
2023	199,000	0
2024	126,000	450,000

ILLUSTRATION 18A.16 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 18A.17**.

Hardhat Construction			
Income Statement	2022	2023	2024
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)		2022	2023	2024
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 18A.17 Financial Statement Presentation—Cost-Recovery Method

Long-Term Contract Losses

LEARNING OBJECTIVE *7

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

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

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 cost-recovery 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).[18]

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 bridge project. Assume that on December 31, 2023, Hardhat estimates the costs to complete the bridge contract at £1,468,962 instead of £1,134,000. Assuming all other data are the same as before, Hardhat would compute the percentage complete and recognize the loss as shown in **Illustration 18A.18**. Compare these computations with those for 2023 in Illustration 18A.4. 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 (12/31/23)	£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 2023 (£4,500,000 × .665) − £1,125,000	£1,867,500
Costs incurred in 2023	1,916,000
Loss recognized in 2023	£ (48,500)

ILLUSTRATION 18A.18 Computation of Recognizable Loss, 2023—Loss in Current Period

The 2023 loss of £48,500 is a cumulative adjustment of the "excessive" gross profit recognized on the contract in 2022. 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 2023 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 2023 income statement as the difference between the reported revenue of £1,867,500 and the costs of £1,916,000.[19] **Under the cost-recovery method, the company does not recognize a loss in 2023.** 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, 2023, Hardhat Construction 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.

	2022	2023
	Original Estimates	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)	

Under the percentage-of-completion method, Hardhat recognized £125,000 of gross profit in 2022 (see Illustration 18A.18). This amount must be offset in 2023 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 2023. Therefore, Hardhat must recognize a total loss of £181,250 (£125,000 + £56,250) in 2023.

Illustration 18A.19 shows Hardhat's computation of the revenue to be recognized in 2023.

Revenue recognized in 2023:	
Contract price	£4,500,000
Percent complete	× .64*
Revenue recognizable to date	2,880,000
Less: Revenue recognized prior to 2023	1,125,000
Revenue recognized in 2023	£1,755,000
*Cost to date (12/31/23)	£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%	

ILLUSTRATION 18A.19 Computation of Revenue Recognizable, 2023 —Unprofitable Contract

To compute the construction costs to be expensed in 2023, Hardhat adds the total loss to be recognized in 2023 (£125,000 + £56,250) to the revenue to be recognized in 2023. **Illustration 18A.20** shows this computation.

Revenue recognized in 2023 (computed above)		£1,755,000
Total loss recognized in 2023:		
Reversal of 2022 gross profit	£125,000	
Total estimated loss on the contract	56,250	181,250
Construction cost expensed in 2023		£1,936,250

ILLUSTRATION 18A.20 Computation of Construction Expense, 2023 —Unprofitable Contract

Hardhat Construction would record the long-term contract revenues, expenses, and loss in 2023 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 2023, Construction in Process has a balance of £2,859,750 as shown in **Illustration 18A.21**.[20]

Construction in Process			
2022 Construction costs	1,000,000		
2022 Recognized gross profit	125,000		
2023 Construction costs	1,916,000	2023 Recognized loss	181,250
Balance	**2,859,750**		

ILLUSTRATION 18A.21 Content of Construction in Process Account at End of 2023—Unprofitable Contract

Under the cost-recovery method, Hardhat also would recognize the contract loss of £56,250 through the following entry in 2023 (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 statement of financial position. That is, under both the percentage-of-completion and the cost-recovery 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 2023 example above), where the billings exceed the accumulated costs, Hardhat must report separately on the statement of financial position, as a current liability, the amount of the estimated loss. Under both the percentage-of-completion and the cost-recovery methods, Hardhat would take the £56,250 loss, as estimated in 2023, from the Construction in Process account and report it separately as a current liability titled “Estimated liability from long-term contracts.”

APPENDIX 18B
Revenue Recognition for Franchises

LEARNING OBJECTIVE *8

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 when performance obligations in a revenue arrangement are satisfied. **Franchises** represent a challenging area because a variety of performance obligations may exist in a given franchise agreement. As a result, companies must carefully analyze franchise agreements to identify the separate performance obligations, determine when performance obligations are met, and, therefore, when revenue should be recognized.[21]

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 has given rise to accounting challenges, is the third category, **service sponsor–retailer**. Included in this category are such industries and businesses as:

- Soft ice cream/frozen yogurt stores (**Snowflake Gelato**, **FROZ**, **TCBY**, **Dairy Queen**)
- Food drive-ins (**Quick**, **Nordsee**, **McDonald's, KFC**)
- Restaurants (**La Boucherie**, **Mitchells and Butlers, Pizza Hut**)
- Motels (**Steinberger**, **Radisson**, **Marriott**)
- Auto rentals (**Europcar**, **Hertz**, **Avis**)
- Others (**Body Shop**, **Sport 2000**, **Swatch**, **EuroSPAR**, **7-Eleven Stores**)

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.

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. (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.

Franchise Accounting

As indicated, the performance obligations in a franchise arrangement relate to the right to open a business, use of the trade name or other intellectual property of the franchisor, and continuing services, such as marketing help, training, and in some cases supplying inventory and inventory management. Franchisors commonly charge an initial franchise fee as well as continuing franchise fees. The **initial franchise fee** is payment for establishing the franchise relationship and providing some initial services. **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. **Illustration 18B.1** provides an example of a franchise arrangement.

Franchise

Facts: Tum's Pizza Inc. enters into a franchise agreement on December 31, 2022, giving Food Fight Corp. the right to operate as a franchisee of Tum's Pizza for 5 years. Tum's charges Food Fight an initial franchise fee of $50,000 for the right to operate as a franchisee. Of this amount, $20,000 is payable when Food Fight signs the agreement, and the note balance is payable in five annual payments of $6,000 each on December 31. As part of the arrangement, Tum's helps locate the site, negotiate the lease or purchase of the site, supervise the construction activity, and provide employee training and the equipment. Similar training services and equipment are sold separately.

Food Fight also promises to pay ongoing royalty payments of 1% of its annual sales (payable each January 31 of the following year) and is obliged to purchase products from Tum's at its current standalone selling prices at the time of purchase. The credit rating of Food Fight indicates that money can be borrowed at 8%. The present value of an ordinary annuity of five annual receipts of $6,000, each discounted at 8%, is $23,957. The discount of $6,043 represents the interest revenue to be accrued by Tum's over the payment period.

***Question:* What are the performance obligations in this arrangement and the point in time at which the performance obligations for Tum's are satisfied and revenue is recognized?**

Solution: To identify the performance obligations, Tum's must determine whether the promised rights, site selection and construction services, training services, and equipment are distinct.

- Rights to the trade name, market area, and proprietary know-how for 5 years are not individually distinct because they are not sold separately and cannot be used with other goods or services that are readily available to the franchisee. Therefore, those combined rights give rise to a single performance obligation. Tum's satisfies the performance obligation to grant those rights at the point in time when Food Fight obtains control of the rights. That is, once Food Fight begins operating the store, Tum's has no further obligation with respect to these rights.
- Training services and equipment are distinct because similar services and equipment are sold separately. Tum's satisfies those performance obligations when it transfers the services and equipment to Food Fight.
- Tum's cannot recognize revenue for the royalty payments because it is not reasonably assured to be entitled to those sales-based royalty amounts.

That is, these payments represent variable consideration. Therefore, Tum's recognizes revenue for the royalties when (or as) the uncertainty is resolved.

Tum's promise to stand ready to provide products to the franchisee in the future at standalone selling prices is not accounted for as a separate performance obligation in the contract because it does not provide Food Fight with a material right. Thus, revenue from those sales is recorded in the future when the sales are made.

ILLUSTRATION 18B.1 Recognition—Franchise Arrangement

To illustrate the accounting for this franchise, consider the following values for allocation of the transaction price at December 31, 2022.

Rights to the trade name, market area, and proprietary know-how	$20,000
Training services	9,957
Equipment (cost of $10,000)	14,000
Total transaction price	$43,957

Training is completed in January 2023, the equipment is installed in January 2023, and Food Fight holds a grand opening on February 2, 2023. The entries for the Tum's franchise arrangement are summarized in Illustration 18B.2.

Tum's signs the agreement and receives upfront payment and note on December 31, 2022		
Cash	20,000	
Notes Receivable ($30,000 – $6,043)	23,957	
Unearned Franchise Revenue		20,000
Unearned Service Revenue (training)		9,957
Unearned Sales Revenue (equipment)		14,000
Franchise opens; Tum's satisfies the performance obligations related to the franchise rights, training, and equipment (that is, Tum's has no further obligations related to these elements of the franchise) on February 2, 2023		
Unearned Franchise Revenue	20,000	
Franchise Revenue		20,000
Unearned Service Revenue (training)	9,957	
Service Revenue (training)		9,957
Unearned Sales Revenue (equipment)	14,000	
Sales Revenue		14,000
Cost of Goods Sold	10,000	
Inventory		10,000

ILLUSTRATION 18B.2 Franchise Entries—Inception and Commencement of Operations

As indicated, when Food Fight begins operations, Tum's satisfies the performance obligations related to the franchise rights, training, and equipment under the franchise agreement. That is, Tum's has no further obligations related to these elements of the franchise.

During 2023, Food Fight does well, recording $525,000 of sales in its first year of operations. The entries for Tum's related to the first year of operations of the franchise are summarized in Illustration 18B.3.

To record continuing franchise fees on December 31, 2023		
Accounts Receivable ($525,000 × .01)	5,250	
Franchise Revenue		5,250
To record payment received and interest revenue on note on December 31, 2023		
Cash	6,000	
Notes Receivable		6,000
Notes Receivable ($23,957 × .08)	1,917	
Interest Revenue		1,917

ILLUSTRATION 18B.3 Franchise Entries—First Year of Franchise Operations

Tum's will make similar entries in subsequent years of the franchise agreement.

Recognition of Franchise Rights Revenue over Time

In the franchise example presented in Illustration 18B.1, Tum's transferred control of the franchise rights at a point in time—that is, when the franchisee began operations and could benefit from control of the rights—with no further involvement by Tum's. In other situations, depending on the economic substance of the rights, the franchisor may be providing **access to the right** rather than transferring control of the franchise rights. In this case, **the franchise revenue is recognized over time**, rather than at a point in time. The franchise arrangement presented in **Illustration 18B.4** provides an example of a franchise agreement with revenue recognized over time.

Franchise Revenue over Time

Facts: Tech Solvers Corp. is a franchisor in the emerging technology consulting service business. Tech Solvers' stores provide a range of computing services (hardware/software installation, repairs, data backup, device syncing, and network solutions) on popular Apple and PC devices. Each franchise agreement gives a franchisee the right to open a Tech Solvers store and sell Tech Solvers' products and services in the area for 5 years. Under the contract, Tech Solvers also provides the franchisee with a number of services to support and enhance the franchise brand, including (a) advising and consulting on the operations of the store; (b) communicating new hardware and software developments, and service techniques; (c) providing business and training manuals; and (d) providing advertising programs and training. Largely a service operation (all parts and other supplies are purchased as needed by customers), Tech Solvers provides few upfront services to franchisees. Instead, the franchisee recruits service technicians, who are given Tech Solvers' training materials (online manuals and tutorials), which are updated for technology changes on a monthly basis at a minimum.

Tech Solvers enters into a franchise agreement on December 15, 2022, giving a franchisee the rights to operate a Tech Solvers franchise for 5 years. Tech Solvers charges an initial franchise fee of $5,000 for the right to operate as a franchisee, payable upon signing the contract. Tech Solvers also receives ongoing royalty payments of 7% of the franchisee's annual sales (payable each January 15 of the following year). The franchise begins operations in January 2023 and recognizes $85,000 of revenue in 2023.

***Question:* What are the performance obligations in this arrangement and the point in time at which the performance obligations will be satisfied and revenue will be recognized?**

Solution: To identify the performance obligations, Tech Solvers must determine whether the promised rights and the ongoing franchisee technology support and training services are distinct.

- Rights to the trade name, market area, and proprietary know-how for 5 years are not individually distinct because they are not sold separately and cannot be used with other goods or services that are readily available to the franchisee. In addition, these licensed rights have a close connection with the underlying Tech Solvers' intellectual property (its ability to keep its service and training materials up-to-date). Therefore, those combined rights and the ongoing training materials are a single performance obligation. Tech Solvers satisfies the performance obligation over time. That is, once the franchisee begins operating a Tech Solvers franchise, Tech Solvers is providing access to the rights and must continue to perform updates and services.

- Tech Solvers cannot recognize revenue for the royalty payments because it is not reasonably assured to be entitled to those revenue-based royalty amounts. That is, these payments represent variable consideration. Therefore, Tech Solvers recognizes revenue for the royalties when (or as) the uncertainty is resolved.

ILLUSTRATION 18B.4 Revenue Recognition over Time—Franchise

The entries for Tech Solvers related to the franchise are summarized in **Illustration 18B.5**.

Franchise agreement signed and receipt of upfront payment and note on December 15, 2022		
Cash	5,000	
Unearned Franchise Revenue		5,000
Franchise begins operations in January 2023 and records $85,000 of revenue for the year ended December 31, 2023, on December 31, 2023		
Unearned Franchise Revenue	1,000	
Franchise Revenue ($5,000 ÷ 5)		1,000
Accounts Receivable	5,950	
Franchise Revenue ($85,000 × .07)		5,950
To record payment received from franchisee on January 15, 2024		
Cash	5,950	
Accounts Receivable		5,950

ILLUSTRATION 18B.5 Franchise Entries—Revenue Recognized over Time

As indicated, Tech Solvers satisfies the performance obligation related to the franchise rights and training materials over time (in this case, on a straight-line basis). Continuing franchise fees are recognized when uncertainty related to the variable consideration is resolved.

In summary, analysis of the characteristics of the Tech Solvers franchise indicates that it does not reflect a right that is transferred at a point in time. That is, Tech Solvers has a continuing obligation to provide updated materials and ongoing support, suggesting the control of the right has not been transferred to the franchisee. Thus, revenue from the franchise rights is recognized over time.

Review and Practice

Key Terms Review

asset-liability approach

assurance-type warranty

bill-and-hold arrangement

*Billings account

collectibility

consignee

consignment

consignor

*continuing franchise fees

contract

contract assets

contract liability

contract modification

*cost-recovery (zero-profit) method

*cost-to-cost basis

*franchisee

*franchises

*franchisor

*initial franchise fee

*input measures

*output measures

*percentage-of-completion method

performance obligation

principal-agent relationship

repurchase agreements

revenue recognition principle

service-type warranty

[transaction price](#)

[upfront fees](#)

[warranties](#)

Learning Objectives Review

1 Understand the fundamental concepts related to revenue recognition and measurement.

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. Increasing complexity of business and revenue arrangements have resulted in revenue recognition practices being identified as the most prevalent reasons for accounting restatements. A number of the revenue recognition issues relate to possible fraudulent behavior by company executives and employees, but are also sometimes due to incomplete and inconsistent accounting guidelines for revenue recognition. A recent standard provides a set of guidelines to follow in determining when revenue should be reported and how it should be measured. The standard is comprehensive and applies to all companies. As a result, comparability and consistency in reporting revenue should be enhanced.

The five steps in the revenue recognition process are: (1) identify the contract with customers, (2) identify the separate performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the separate performance obligations, and (5) recognize revenue when each performance obligation is satisfied.

2 Understand and apply the five-step revenue recognition process.

Identify the contract with customers. A contract is an agreement that creates enforceable rights or obligations. A company applies the revenue guidance to contracts with customers.

Identify the separate performance obligations in the contract. A performance obligation is a promise in a contract to provide a product or service to a customer. A contract may be comprised of multiple performance obligations. The accounting for multiple performance obligations is based on evaluation of whether the product or service is distinct within the contract. If each of the goods or services is distinct, but all are interdependent and interrelated, these goods and services are combined and reported as one performance obligation.

Determine the transaction price. The transaction price is the amount of consideration that a company expects to receive from a customer in exchange for transferring goods and services. In determining the transaction price, companies must consider the following factors: (1) variable consideration, (2) time value of money, (3) non-cash consideration, and (4) consideration paid or payable to a customer.

Allocate the transaction price to the separate performance obligations. If more than one performance obligation exists in a contract, allocate the transaction price based on relative standalone selling prices. Estimates of standalone selling price can be based on (1) an adjusted market assessment, (2) the expected cost plus a margin approach, or (3) a residual approach.

Recognize revenue when the company satisfies its performance obligation. A company satisfies its performance obligation when the customer obtains control of the good or service. Companies satisfy performance obligations either at a point in time or over a period of time. Companies recognize revenue over a period of time if one of the following criteria is met: (1) the customer receives and consumes the benefits as the seller performs, (2) the customer controls the asset as it is created, or (3) the company does not have an alternative use for the asset.

3 Apply the five-step process to major revenue recognition issues.

Refer to Illustration 18.26 for a summary of the accounting for (a) sales returns and allowances, (b) repurchase agreements, (c) bill-and-hold arrangements, (d) principal-agent relationships, (e) consignments, (f) warranties, and (g) non-refundable upfront fees.

4 Describe presentation and disclosure regarding revenue.

Under the asset-liability approach for recognizing revenue, companies present contract assets and contract liabilities on their statements of financial position. Contract assets are rights to receive consideration. A contract liability is a company's obligation to transfer goods or services to a customer for which the company has received consideration from the customer. Companies must determine if new performance obligations are created by a contract modification and may also report assets associated with fulfillment costs and contract acquisition costs related to a revenue arrangement. Companies disclose qualitative and quantitative information about (a) contracts with customers with disaggregation of revenue, presentation of opening and closing balances in contract assets and contract liabilities, and significant information related to their performance obligations; (b) significant judgments that affect the determination of the transaction price, the allocation of the transaction price, and the determination of the timing of revenue; and (c) assets recognized from costs incurred to fulfill a contract.

*5 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.

*6 Apply the cost-recovery method for long-term contracts.

Under this method, companies recognize gross profit only at the point of sale, that is, when the company completes the contract. The company accumulates costs of long-term contracts in process and current billings. This method (sometimes referred to as the zero-profit method) recognizes revenue only to the extent of costs incurred that are expected to be recoverable. Profit is recognized only after all costs are incurred.

*7 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 cost-recovery methods, the company must recognize in the current period the entire expected contract loss.

*8 Explain revenue recognition for franchises.

In a franchise arrangement, the franchisor satisfies its performance obligation for a franchise license when control of the franchise rights is transferred, generally when the franchisee begins operation of the franchise. In situations where the franchisor provides *access to the rights* rather than transferring control of the franchise rights, the franchise rights' revenue is recognized over time rather than at a point in time. Franchisors recognize continuing franchise fees over time (as uncertainty related to the variable consideration is resolved).

Enhanced Review and Practice

Go online for multiple-choice questions with solutions, review exercises with solutions, and a full glossary of all key terms.

Practice Problem

Outback Industries manufactures emergency power equipment. Its most popular generator is a model called the E-Booster, which has a retail price of $1,500 and costs Outback $740 to manufacture. It sells the E-Booster on a standalone basis directly to businesses, as well as providing installation services. Outback also distributes the E-Booster through a consignment agreement with Lenz Home Store. Income data for Outback's first quarter of 2022 from operations other than the E-Booster generator are as follows.

Revenues	$6,500,000
Expenses	4,350,000

Outback has the following information related to four E-Booster revenue arrangements during the first quarter of 2022.

1. Outback entered into an arrangement with the Grocers Co-op to deliver E-Boosters for the meat lockers in the grocers' stores. Outback provides a 5% volume discount for E-Boosters purchased by Grocers Co-op if at least $450,000 of E-Boosters are purchased during 2022. By March 31, 2022, Outback has made sales of $360,000 ($1,500 × 240 generators) to Grocers Co-op. Based on prior experience with this promotion in two neighboring states, the discount threshold is met for the year if more than one-half of the target has been met by mid-year.
2. On January 1, 2022, Outback sells 20 E-Boosters to Nick's Liquors. Nick's signs a 6-month note due in 6 months at an annual interest rate of 12%. Outback allows Nick's to return any E-Boosters that it cannot use within 120 days and receive a full refund. Based on prior experience, Outback estimates that three units will be returned (using the most likely outcome approach). Outback's costs to recover the products will be immaterial, and the returned generators are expected to be resold at a profit. No E-Boosters have been returned as of March 31, 2022, and Outback still estimates that three units will be returned in the future.

3. Outback sells 30 E-Boosters to First Bank, to provide uninterrupted power for bank branches with ATMs, for a total contract price of $50,000. In addition to the E-Boosters, Outback also provides installation at a standalone selling price of $200 per E-Booster; the cost to Outback to install is $150 per E-Booster. The E-Boosters are delivered and installed on March 1, 2022, and full payment is made to Outback.
4. Outback ships 300 E-Boosters to Lenz Home Store on consignment. By March 31, 2022, Lenz Home Store has sold three-fourths of the consigned merchandise at the listed price of $1,500 per unit. Lenz Home Store notifies Outback of the sales, retains an 8% commission, and remits the cash due to Outback.

Instructions

a. Determine income for Outback Industries for the first quarter of 2022. (Ignore taxes.)

b. In reviewing the credit history of Nick's Liquors, Outback has some concerns about the collectibility of the full amount due on the note. Briefly discuss how collectibility of the note affects revenue recognition and income measurement for Outback.

Solution

a. The amount of revenue and expense recognized on each of the arrangements is as follows.

1.	Sales revenue [.95 × ($1,500 × 240)]		$342,000	
	Cost of goods sold ($740 × 240)		177,600	
	Gross profit			$164,400
2.	Sales revenue (20 × $1,500)		30,000	
	Less: Estimated returns (3 × $1,500)		4,500	
	Net sales		25,500	
	Cost of goods sold (17 × $740)		12,580	
	Gross profit		12,920	
	Interest revenue ($30,000 × .12 × $^3/_{12}$)		900	
	Income on this arrangement			13,820
3.	The total transaction price of $50,000 is allocated between the equipment and installation. The transaction price for the			

	equipment and installation is allocated based on relative standalone selling prices:			
	Equipment: $44,118 = ($45,000 ÷ $51,000*) × $50,000 Installation: $5,882 = ($6,000 ÷ $51,000) × $50,000 *$45,000 + $6,000			
	Sales revenue	$44,118		
	Cost of goods sold (30 × $740)	22,200		
	Gross profit		21,918	
	Installation revenue	5,882		
	Installation expense (30 × $150)	4,500		
	Net profit		1,382	
	Income on this arrangement			23,300
4.	Sales revenue (225* × $1,500)		337,500	
	Cost of goods sold (225 × $740)		166,500	
	Gross profit		171,000	
	Commission expense ($337,500 × .08)		27,000	
	Net income on this arrangement			144,000
	Income on E-Booster			$345,520
	*300 × .75			
	Outback Industries' income for the quarter: $6,500,000 – $4,350,000 + $345,520 = $2,495,520.			

b. Whether a company will get paid for satisfying a performance obligation is not a consideration in determining revenue recognition. That is, the amount recognized is not adjusted for customer credit risk. If significant doubt exists at contract inception about collectibility, Outback reports the revenue gross and then presents an allowance for any impairment due to bad debts, which will reduce net income and which is reported as an operating expense in the income statement.

Exercises, Problems, Problem Solution Walkthrough Videos, Data Analytics Activities, and many more assessment tools and resources are available for practice in Wiley's online courseware.

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

Questions

1. Explain the current environment regarding revenue recognition.

2. What was viewed as a major criticism of IFRS as it relates to revenue recognition?

3. Describe the revenue recognition principle.

4. Identify the five steps in the revenue recognition process.

5. Describe the critical factor in evaluating whether a performance obligation is satisfied.

6. When is revenue recognized in the following situations? (a) Revenue from selling products, (b) revenue from services performed, (c) revenue from permitting others to use company assets, and (d) revenue from disposing of assets other than products.

7. Explain the importance of a contract in the revenue recognition process.

8. On October 10, 2022, Executor SpA entered into a contract with Belisle Inc. to transfer Executor's specialty products (sales value of €10,000, cost of €6,500) on December 15, 2022. Belisle agrees to make a payment of €5,000 upon delivery and signs a promissory note to pay the remaining balance on January 15, 2023. What entries does Executor make in 2022 on this contract? Ignore time value of money considerations.

9. What is a performance obligation? Under what conditions does a performance obligation exist?

10. When must multiple performance obligations in a revenue arrangement be accounted for separately?

11. Engelhart Implements Inc. sells tractors to area farmers. The price for each tractor includes GPS positioning service for 9 months (which facilitates field settings for planting and harvesting equipment). The GPS service is regularly sold on a standalone basis by Engelhart for a monthly fee. After the 9-month period, the consumer can renew the service on a fee basis. Does Engelhart have one or multiple performance obligations? Explain.

12. What is the transaction price? What additional factors related to the transaction price must be considered in determining the transaction price?

13. What are some examples of variable consideration? What are the two approaches for estimating variable consideration?

14. Allee Corp. is evaluating a revenue arrangement to determine proper revenue recognition. The contract is for construction of 10 speedboats for a contract price of $400,000. The customer needs the boats in its showrooms by February 1, 2023, for the sales season; the customer provides a bonus payment of $21,000 if all boats are delivered by the February 1 deadline. The bonus is reduced by $7,000 each week that the boats are delivered after the deadline until no bonus is paid if the boats are delivered after February 15, 2023. Allee frequently includes such bonus terms in its contracts and thus has good historical data for estimating the probabilities of completion at different dates. It estimates an equal probability (25%) for each full delivery outcome. What approach should Allee use to determine the transaction price for this contract? Explain.

15. Refer to the information in Question 14. Assume that Allee has limited experience with a construction project on the same scale as the 10 speedboats. How does this affect the accounting for the variable consideration?

16. In measuring the transaction price, explain the accounting for (a) time value of money and (b) non-cash consideration.

17. What is the proper accounting for volume discounts on sales of products?

18. On what basis should the transaction price be allocated to various performance obligations? Identify the approaches for allocating the transaction price.

19. Fuhremann Co. is a full-service manufacturer of surveillance equipment. Customers can purchase any combination of equipment, installation services, and training as part of Fuhremann's security services. Thus, these performance obligations are separate with individual standalone selling prices. Laplante Ltd. purchased cameras, installation, and training at a total price of £80,000. Estimated standalone selling prices of the equipment, installation, and training are £90,000, £7,000, and £3,000, respectively. How should the transaction price be allocated to the equipment, installation, and training?

20. When does a company satisfy a performance obligation? Identify the indicators of satisfaction of a performance obligation.

21. Under what conditions does a company recognize revenue over a period of time?

22. How do companies recognize revenue from a performance obligation over time?

23. Explain the accounting for sales with right of return.

24. What are the reporting issues in a sale with a repurchase agreement?

25. Explain a bill-and-hold arrangement. When is revenue recognized in these situations?

26. Explain a principal-agent relationship and its significance to revenue recognition.

27. What is the nature of a sale on consignment?

28. What are the two types of warranties? Explain the accounting for each type.

29. Campus Cellular provides cell phones and 1 year of cell service to students for an upfront, non-refundable fee of $300 and a usage fee of $5 per month. Students may renew the service for each year they are on campus (on average, students renew their service one time). What amount of revenue should Campus Cellular recognize in the first year of the contract?

30. Describe the conditions when contract assets and liabilities are recognized and presented in financial statements.

31. Explain the accounting for contract modifications.

32. Explain the reporting for (a) costs to fulfill a contract and (b) collectibility.

33. What qualitative and quantitative disclosures are required related to revenue recognition?

***34.** 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.

***35.** For what reasons should the percentage-of-completion method be used over the cost-recovery method whenever possible?

***36.** 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.

***37.** 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?

***38.** Why in franchise arrangements may it be improper to recognize the entire franchise fee as revenue at the date of sale?

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

Brief Exercises

BE18.1 (LO 1) Leno Computers manufactures tablet computers for sale to retailers such as Fallon Electronics. Leno sold and delivered 200 tablet computers to Fallon for $20,000 on January 5, 2022. Fallon agreed to pay for the 200 tablet computers within 30 days. Fallon has a good credit rating and should have no difficulty in making payment to Leno. (a) Explain whether a valid contract exists between Leno Computers and Fallon Electronics. (b) Leno

Computers has not yet delivered the tablet computers to Fallon Electronics. What might cause a valid contract not to exist between Leno and Fallon?

BE18.2 (LO 1) On May 10, 2022, Cosmo Co. enters into a contract to deliver a product to Greig Inc. on June 15, 2022. Greig agrees to pay the full contract price of $2,000 on July 15, 2022. The cost of the goods is $1,300. Cosmo delivers the product to Greig on June 15, 2022, and receives payment on July 15, 2022. Prepare the journal entries for Cosmo related to this contract. Either party may terminate the contract without compensation until one of the parties performs.

BE18.3 (LO 1, 2) Hillside Company enters into a contract with Sanchez Inc. to provide a software license and 3 years of customer support. The customer-support services require specialized knowledge that only Hillside Company's employees can provide. How many performance obligations are in the contract?

BE18.4 (LO 2) Destin Company signs a contract to manufacture a new 3D printer for $80,000. The contract includes installation which costs $4,000 and a maintenance agreement over the life of the printer at a cost of $10,000. The printer cannot be operated without the installation. Destin Company as well as other companies could provide the installation and maintenance agreement. What are Destin Company's performance obligations in this contract?

BE18.5 (LO 2) Ismail Construction enters into a contract to design and build a hospital. Ismail is responsible for the overall management of the project and identifies various goods and services to be provided, including engineering, site clearance, foundation, procurement, construction of the structure, piping and wiring, installation of equipment, and finishing. Does Ismail have a single performance obligation to the customer in this revenue arrangement? Explain.

BE18.6 (LO 2) Nair A.G. enters into a contract with a customer to build an apartment building for €1,000,000. The customer hopes to rent apartments at the beginning of the school year and provides a performance bonus of €150,000 to be paid if the building is ready for rental beginning August 1, 2023. The bonus is reduced by €50,000 each week that completion is delayed. Nair commonly includes these completion bonuses in its contracts and, based on prior experience, estimates the following completion outcomes:

Completed by	Probability
August 1, 2023	70%
August 8, 2023	20
August 15, 2023	5
After August 15, 2023	5

Determine the transaction price for this contract.

BE18.7 (LO 2) Referring to the revenue arrangement in BE18.6, determine the transaction price for the contract, assuming (a) Nair is only able to estimate whether or not the building can be completed by August 1, 2023 (Nair estimates that there is a 70% chance that the building will be completed by August 1, 2023), and (b) Nair has limited information with which to develop a reliable estimate of completion by the August 1, 2023, deadline.

BE18.8 (LO 2) Presented below are three revenue recognition situations.

a. Yang sells goods to MTN for ¥1,000,000, payment due at delivery.
b. Yang sells goods on account to Grifols for ¥800,000, payment due in 30 days.
c. Yang sells goods to Magnus for ¥500,000, payment due in two installments, the first installment payable in 18 months and the second payment due 6 months later. The present value of the future payments is ¥464,000.

Indicate the transaction price for each of these situations and when revenue will be recognized.

BE18.9 (LO 2) On January 2, 2022, Adani SE sells goods to Geo Company in exchange for a zero-interest-bearing note with a face value of €11,000, with payment due in 12 months. The fair value of the goods at the date of sale is €10,000 (cost €6,000). Prepare the journal entry or entries to record this transaction on January 2, 2022. How much total revenue should be recognized in 2022?

BE18.10 (LO 2) On March 1, 2022, Parnevik Company sold goods to Goosen Inc. for $660,000 in exchange for a 5-year, zero-interest-bearing note in the face amount of $1,062,937 (an imputed rate of 10%). The goods have an inventory cost on Parnevik's books of $400,000. Prepare the journal entries for Parnevik on (a) March 1, 2022, and (b) December 31, 2022.

BE18.11 (LO 2, 3) Telephone Sellers sells prepaid telephone cards to customers. Telephone Sellers then pays the telecommunications company, TeleExpress, for the actual use of its telephone lines related to the prepaid telephone cards. Assume that Telephone Sellers sells £4,000 of prepaid cards in January 2022. 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.

BE18.12 (LO 2, 3) Manual Company sells goods to Nolan Company during 2022. 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. What amount of revenue should Manual report for the sale of the 11,000 units in the first quarter of the year?

BE18.13 (LO 3) On July 10, 2022, Amodt Music sold CDs to retailers on account and recorded sales revenue of $700,000 (cost $560,000). Amodt grants the right to return CDs that do not sell in 3 months following delivery. Past experience indicates that the normal return rate is 15%. By October 11, 2022, retailers returned CDs to Amodt and were granted credit of $78,000. Prepare Amodt's journal entries to record (a) the sale on July 10, 2022, (b) $78,000 of returns on October 11, 2022, and (c) any entry necessary on October 31, 2022. Assume that Amodt prepares financial statement on October 31, 2022.

BE18.14 (LO 3) Kristin Company sells 300 units of its products for $20 each to Logan Inc. for cash. Kristin allows Logan to return any unused product within 30 days and receive a full refund. The cost of each product is $12. To determine the transaction price, Kristin decides that the approach that is most predictive of the amount of consideration to which it will be entitled is the probability-weighted amount. Using the probability-weighted amount, Kristin estimates that (1) 10 products will be returned and (2) the returned products are expected to be resold at a profit. Indicate the amount of (a) net sales, (b) estimated liability for refunds, and (c) cost of goods sold that Kristin should report in its financial statements (assume that none of the products have been returned at the financial statement date).

BE18.15 (LO 3) On June 1, 2022, Mills Company sells €200,000 of shelving units to a local retailer, ShopBarb, which is planning to expand its stores in the area. Under the agreement, ShopBarb asks Mills to retain the shelving units at its factory until the new stores are ready for installation. Title passes to ShopBarb at the time the agreement is signed. The shelving units are delivered to the stores on September 1, 2022, and ShopBarb pays in full. Prepare the journal entries for this bill-and-hold arrangement (assuming that conditions for recognizing the sale as a bill-and-hold sale have been met) for Mills on June 1 and September 1, 2022. The cost of the shelving units to Mills is €110,000.

BE18.16 (LO 3) Travel SA sells tickets for a Caribbean cruise on ShipAway Cruise Lines to Carmel Company employees. The total cruise package price to Carmel Company employees is €70,000. Travel SA receives a commission of 6% of the total price. Travel SA therefore remits €65,800 to ShipAway. Prepare the journal entry to record the remittance and revenue recognized by Travel SA on this transaction.

BE18.17 **(LO 3)** 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 journal entry when the cash is received.

BE18.18 **(LO 3)** Talarczyk Company sold 10,000 Super-Spreaders on December 31, 2022, at a total price of $1,000,000, with a warranty guarantee that the product was free of any defects. The cost of the spreaders sold is $550,000. The assurance warranties extend for a 2-year period and are estimated to cost $40,000. Talarczyk also sold extended warranties (service-type warranties) related to 2,000 spreaders for 2 years beyond the 2-year period for $12,000. Given this information, determine the amounts to report for the following at December 31, 2022: sales revenue, warranty expense, unearned warranty revenue, warranty liability, and cash.

BE18.19 **(LO 4)** On May 1, 2022, Mount Company enters into a contract to transfer a product to Eric Company on September 30, 2022. It is agreed that Eric will pay the full price of $25,000 in advance on June 15, 2022. Eric pays on June 15, 2022, and Mount delivers the product on September 30, 2022. Prepare the journal entries required for Mount in 2022.

BE18.20 **(LO 3)** Nate Beggs signs a 1-year contract with BlueBox Video. The terms of the contract are that Nate is required to pay a non-refundable initiation fee of €100. No annual membership fee is charged in the first year. After the first year, membership can be renewed by paying an annual membership fee of €5 per month. BlueBox determines that its customers, on average, renew their annual membership three times after the first year before terminating their membership. What amount of revenue should BlueBox recognize in its first year?

BE18.21 **(LO 4)** Stengel Co. enters into a 3-year contract to perform maintenance service for Laplante SE. Laplante promises to pay €100,000 at the beginning of each year (the standalone selling price of the service at contract inception is €100,000 per year). At the end of the second year, the contract is modified and the fee for the third year of service, which reflects a reduced menu of maintenance services to be performed at Laplante locations, is reduced to €80,000 (the standalone selling price of the services at the beginning of the third year is €80,000 per year). Briefly describe the accounting for this contract modification.

***BE18.22** **(LO 5)** Ting Group began work on a ¥7,000,000 contract in 2022 to construct an office building. During 2022, Ting Group incurred costs of ¥1,700,000, billed its customers for ¥1,200,000, and collected ¥960,000. At December 31, 2022, the estimated additional costs to complete the project total

¥3,300,000. Prepare Ting's 2022 journal entries using the percentage-of-completion method.

***BE18.23** (LO 6) Guillen, Inc. began work on a $7,000,000 contract in 2022 to construct an office building. Guillen uses the cost-recovery method. At December 31, 2022, 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, 2022, statement of financial position.

***BE18.24** (LO 7) Archer Construction Company began work on a $420,000 construction contract in 2022. During 2022, Archer incurred costs of $278,000, billed its customer for $215,000, and collected $175,000. At December 31, 2022, the estimated additional costs to complete the project total $162,000. Prepare Archer's journal entry to record profit or loss, if any, using the percentage-of-completion method.

***BE18.25** (LO 8) 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 four equal annual installments of $12,500 each. These installments have a present value of $41,402. As part of the total franchise fee, Frozen Delight also provides training (with a fair value of $2,000) to help franchisees get the store ready to open. The franchise agreement is signed on April 1, 2022, training is completed and the store opens on July 1, 2022. Prepare the journal entries required by Frozen Delight in 2022.

Exercises

E18.1 (LO 1) **(Fundamentals of Revenue Recognition)** Presented below are five different situations. Provide an answer to each of these questions.

1. The Kawaski Jeep dealership sells both new and used Jeeps. Some of the Jeeps are used for demonstration purposes; after 6 months, these Jeeps are then sold as used vehicles. Should Kawaski Jeep record these sales of used Jeeps as revenue or as a gain?
2. One of the main indicators of whether control has passed to the customer is whether revenue has been earned. Is this statement correct?
3. One of the five steps in determining whether revenue should be recognized is whether the sale has been realized. Do you agree?
4. One of the criteria that contracts must meet to apply the revenue standard is that collectibility of the sales price must be reasonably possible. Is this correct?

5. Many believe the distinction between revenue and gains is important in the financial statements. Given that both revenues and gains increase net income, why is the distinction important?

E18.2 (LO 1) (Fundamentals of Revenue Recognition) Respond to the questions related to the following statements.

1. A wholly unperformed contract is one in which the company has neither transferred the promised goods or services to the customer nor received, or become entitled to receive, any consideration. Why are these contracts not recorded in the accounts?
2. Performance obligations are the unit of account for purposes of applying the revenue recognition standard and therefore determine when and how revenue is recognized. Is this statement correct?
3. Elaina Company contracts with a customer and provides the customer with an option to purchase additional goods for free or at a discount. Should Elaina Company account for this option?
4. The transaction price is generally not adjusted to reflect the customer's credit risk, meaning the risk that the customer will not pay the amount to which the entity is entitled under the contract. Comment on this statement.

E18.3 (LO 1, 2) (Existence of a Contract) On May 1, 2022, Richardson Inc. entered into a contract to deliver one of its specialty mowers to Kickapoo Landscaping Co. The contract requires Kickapoo to pay the contract price of €900 in advance on May 15, 2022. Kickapoo pays Richardson on May 15, 2022, and Richardson delivers the mower (with cost of €575) on May 31, 2022.

Instructions

a. Prepare the journal entry on May 1, 2022, for Richardson.
b. Prepare the journal entry on May 15, 2022, for Richardson.
c. Prepare the journal entry on May 31, 2022, for Richardson.

E18.4 (LO 2) (Determine Transaction Price) Jupiter Company sells goods to Danone Inc. by accepting a note receivable on January 2, 2022. The goods have a sales price of $610,000 (cost of $500,000). The terms are net 30. If Danone pays within 5 days, however, it receives a cash discount of $10,000. Past history indicates that the cash discount will be taken. On January 28, 2022, Danone makes payment to Jupiter for the full sales price.

Instructions

a. Prepare the journal entry or entries to record the sale and related cost of goods sold for Jupiter Company on January 2, 2022, and the payment on January 28, 2022. Assume that Jupiter Company records the January 2, 2022, transaction using the net method.

b. Prepare the journal entry or entries to record the sale and related cost of goods sold for Jupiter Company on January 2, 2022, and the payment on January 28, 2022. Assume that Jupiter Company records the January 2, 2022, transaction using the gross method.

E18.5 (LO 2) (Determine Transaction Price) Jeff Heun, president of Concrete Always, agrees to construct a concrete cart path at Dakota Golf Club. Concrete Always enters into a contract with Dakota to construct the path for $200,000. In addition, as part of the contract, a performance bonus of $40,000 will be paid based on the timing of completion. The performance bonus will be paid fully if completed by the agreed-upon date. The performance bonus decreases by $10,000 per week for every week beyond the agreed-upon completion date. Jeff has been involved in a number of contracts that had performance bonuses as part of the agreement in the past. As a result, he is fairly confident that he will receive a good portion of the performance bonus. Jeff estimates, given the constraints of his schedule related to other jobs, that there is 55% probability that he will complete the project on time, a 30% probability that he will be 1 week late, and a 15% probability that he will be 2 weeks late.

Instructions

a. Determine the transaction price that Concrete Always should compute for this agreement.

b. Assume that Jeff Heun has reviewed his work schedule and decided that it makes sense to complete this project on time. Assuming that he now believes that the probability for completing the project on time is 90% (otherwise it will be finished 1 week late), determine the transaction price.

E18.6 (LO 2) (Determine Transaction Price) Bill Amends, owner of Real Estate Inc., buys and sells commercial properties. Recently, he sold land for $3,000,000 to the Blackhawk Group, a developer that plans to build a new shopping mall. In addition to the $3,000,000 sales price, Blackhawk Group agrees to pay Real Estate Inc. 1% of the retail sales of the mall for 10 years. Blackhawk estimates that retail sales in a typical mall are $1,000,000 a year. Given the substantial increase in online sales in the retail market, Bill had originally indicated that he would prefer a higher price for the land instead of the 1% royalty arrangement and suggested a price of $3,250,000. However, Blackhawk would not agree to those terms.

Instructions

What is the transaction price for the land and related royalty payment that Real Estate Inc. should record?

E18.7 (LO 2) (Determine Transaction Price) Blair Biotech enters into a licensing agreement with Pang Pharmaceutical for a drug under development. Blair will receive a payment of ¥10,000,000 if the drug receives regulatory approval. Based on prior experience in the drug-approval process, Blair determines that the drug has a 90% chance of approval, and a 10% chance of denial.

Instructions

a. Determine the transaction price of the arrangement for Blair Biotech.

b. Assuming that regulatory approval was granted on December 20, 2022, and that Blair received the payment from Pang on January 15, 2023, prepare the journal entries for Blair. The license meets the criteria for point-in-time revenue recognition.

E18.8 (LO 2, 3) (Determine Transaction Price) Aaron's Agency sells an insurance policy offered by Capital Insurance Company for a commission of $100 on January 2, 2022. In addition, Aaron will receive an additional commission of $10 each year for as long as the policyholder does not cancel the policy. After selling the policy, Aaron does not have any remaining performance obligations. Based on Aaron's significant experience with these types of policies, it estimates that policyholders on average renew the policy for 4.5 years. It has no evidence to suggest that previous policyholder behavior will change.

Instructions

a. Determine the transaction price of the arrangement for Aaron, assuming 100 policies are sold.

b. Determine the revenue that Aaron will recognize in 2022.

E18.9 (LO 2, 3) (Determine Transaction Price) Taylor Marina has 300 available slips that rent for $800 per season. Payments must be made in full by the start of the boating season, April 1, 2023. The boating season ends October 31, and the marina has a December 31 year-end. Slips for future seasons may be reserved if paid for by December 31, 2023. Under a new policy, if payment for 2024 season slips is made by December 31, 2023, a 5% discount is allowed. If payment for 2025 season slips is made by December 31, 2023, renters get a 20% discount (this promotion hopefully will provide cash flow for major dock repairs).

On December 31, 2022, all 300 slips for the 2023 season were rented at full price. On December 31, 2023, 200 slips were reserved and paid for the 2024 boating season, and 60 slips were reserved and paid for the 2025 boating season.

Instructions

a. Prepare the appropriate journal entries for December 31, 2022, and December 31, 2023.

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

E18.10 (LO 2) (Allocate Transaction Price) Geraths Windows manufactures and sells custom storm windows for three-season porches. Geraths also provides installation service for the windows. The installation process does not involve changes in the windows, so this service can be performed by other vendors. Geraths enters into the following contract on July 1, 2022, with a local homeowner. The customer purchases windows for a price of $2,400 and chooses Geraths to do the installation. Geraths charges the same price for the windows whether it does the installation, or not. The installation service is estimated to have a standalone selling price of $600. The customer pays Geraths $2,000 (which equals the standalone selling price of the windows, at a cost of $1,100) upon delivery and the remaining balance upon installation of the windows. The windows are delivered on September 1, 2022, Geraths completes installation on October 15, 2022, and the customer pays the balance due.

Instructions

Prepare the journal entries for Geraths in 2022. (Round amounts to nearest dollar.)

E18.11 (LO 2) (Allocate Transaction Price) Refer to the revenue arrangement in E18.10.

Instructions

Repeat the requirements, assuming that (a) Geraths estimates the standalone selling price of the installation based on an estimated cost of $400 plus a margin of 20% on installation cost, and that (b) given the uncertainty of finding skilled labor, Geraths is unable to develop a reliable estimate for the standalone selling price of the installation. (Round amounts to nearest dollar.)

E18.12 (LO 3) (Allocate Transaction Price) Shaw Ltd. sells goods that cost £300,000 to Ricard Company for £410,000 on January 2, 2022. The sales price includes an installation fee, which has a standalone selling price of £40,000. The standalone selling price of the goods is £370,000. The installation is considered a separate performance obligation and is expected to take 6 months to complete.

Instructions

a. Prepare the journal entries (if any) to record the sale on January 2, 2022.

b. Shaw prepares an income statement for the first quarter of 2022, ending on March 31, 2022 (installation was completed on June 18, 2022). How much revenue should Shaw recognize related to its sale to Ricard?

E18.13 (LO 3) (Allocate Transaction Price) Crankshaft Company manufactures equipment. Crankshaft's products range from simple automated machinery to complex systems containing numerous components. Unit selling prices range from €200,000 to €1,500,000 and are quoted inclusive of installation. 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. Crankshaft has the following arrangement with Winkerbean SA.

- Winkerbean purchases equipment from Crankshaft for a price of €1,000,000 and contracts with Crankshaft to install the equipment. Crankshaft charges the same price for the equipment whether it does the installation or not. Using market data, Crankshaft determines installation service is estimated to have a standalone selling price of €50,000. The cost of the equipment is €600,000.
- Winkerbean is obligated to pay Crankshaft the €1,000,000 upon the delivery and installation of the equipment.

Crankshaft delivers and installs the equipment on September 30, 2022. The equipment has a useful life of 10 years. Assume that the equipment and the installation are two distinct performance obligations which should be accounted for separately.

Instructions

a. How should the transaction price of €1,000,000 be allocated among the service obligations?

b. Prepare the journal entries for Crankshaft for this revenue arrangement on September 30, 2022, assuming Crankshaft receives payment when installation is completed.

E18.14 (LO 3) (Allocate Transaction Price) Refer to the revenue arrangement in E18.13.

Instructions

Repeat requirements (a) and (b), assuming that Crankshaft does not have the market data to determine the standalone selling price of the installation services. As a result, an expected cost plus margin approach is used. The cost of installation is €36,000; Crankshaft prices these services with a 25% margin relative to cost.

E18.15 (LO 3) (Allocate Transaction Price) Appliance Center is an experienced home appliance dealer. Appliance Center also offers a number of services for 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 (i.e., the three components are distinct). Identify the separate performance obligations related to the Appliance Center revenue arrangement.

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

E18.16 (LO 3) (Sales with Returns) On March 10, 2022, Steele Company sold to Barr Hardware 200 tool sets at a price of $50 each (cost $30 per set) with terms of n/60, f.o.b. shipping point. Steele allows Barr to return any unused tool sets within 60 days of purchase. Steele estimates that: (1) 10 sets will be returned, (2) the cost of recovering the products will be immaterial, and (3) the returned tools sets can be resold at a profit. On March 25, 2022, Barr returned six tool sets and received a credit to its account.

Instructions

a. Prepare journal entries for Steele to record (1) the sale on March 10, 2022, (2) the return on March 25, 2022, and (3) any adjusting entries required on March 31, 2022 (when Steele prepares financial statements). Steele believes the original estimate of returns is correct.
b. Indicate the income statement and statement of financial position reporting by Steele at March 31, 2022, of the information related to the Barr sales transaction.

E18.17 (LO 3) (Sales with Returns) Refer to the revenue arrangement in E18.16. Assume that instead of selling the tool sets on credit, Steele sold them for cash.

Instructions

a. Prepare journal entries for Steele to record (1) the sale on March 10, 2022, (2) the return on March 25, 2022, and (3) any adjusting entries required on March 31, 2022 (when Steele prepares financial statements). Steele believes the original estimate of returns is correct.
b. Indicate the income statement and statement of financial position reporting by Steele at March 31, 2022, of the information related to the Barr sale.

E18.18 (LO 3) (Sales with Allowances) On October 2, 2022, Laplante Company sold $6,000 of its elite camping gear (with a cost of $3,600) to Lynch Outfitters. As part of the sales agreement, Laplante includes a provision that, if Lynch is dissatisfied with the product, Laplante will grant an allowance on the sales price or agree to take the product back (although returns are rare, given the long-term relationship between Laplante and Lynch). Laplante expects total allowances to Lynch to be $800. On October 16, 2022, Laplante grants an allowance of $400 to Lynch because the color for some of the items delivered was not the same as what appeared in the catalog.

Instructions

a. Prepare journal entries for Laplante to record (1) the sale on October 2, 2022, (2) the granting of the allowance on October 16, 2022, and, (3) any adjustment required on October 31, 2022 (when Laplante prepares financial statements). Laplante now estimates additional allowances of $250 will be granted to Lynch in the future.

b. Indicate the reporting of information related to the Lynch transaction in Laplante’s October 31, 2022 income statement and statement of financial position.

E18.19 (LO 3) (Sales with Returns) On June 3, 2022, Hunt Company sold to Ann Mount merchandise having a sales price of $8,000 (cost $6,000) with terms of n/60, f.o.b. shipping point. Hunt estimates that merchandise with a sales value of $800 will be returned. An invoice totaling $120 was received by Mount on June 8 from Olympic Transport Service for the freight cost. Upon receipt of the goods, on June 8, Mount returned to Hunt $300 of merchandise containing flaws. Hunt expects the returned items to be resold at a profit. The freight on the returned merchandise was $24, paid by Hunt on June 8. On July 16, the company received a check for the balance due from Mount. No further returns are expected.

Instructions

Prepare journal entries for Hunt Company to record all the events in June and July.

E18.20 (LO 3) (Sales with Returns) Organic Growth Company is presently testing a number of new agricultural seed planters that it has recently developed. 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 estimates returns of 20%. Organic Growth sells these planters on account for $1,500,000 (cost $750,000) on January 2, 2022. Customers are required to pay the full amount due by March 15, 2022.

Instructions

a. Prepare the journal entry for Organic Growth at January 2, 2022.

b. Assume that one customer returns the planters on March 1, 2022, due to unsatisfactory performance. Prepare the journal entry to record this transaction, assuming this customer purchased $100,000 of planters from Organic Growth. The other receivables are collected.

c. Assume Organic Growth prepares financial statements quarterly. Prepare the necessary entries (if any) to adjust Organic Growth’s financial results for the above transactions on March 31, 2022, assuming remaining expected returns of $200,000.

E18.21 (LO 3) (Sales with 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%. The costs of recovery are expected to be immaterial, and the textbooks are expected to be resold at a profit.

Instructions

a. Identify the revenue recognition criteria that Uddin should employ concerning textbook sales, and briefly discuss the reasoning for your answer.

b. On July 1, 2022, Uddin shipped books invoiced at $15,000,000 (cost $12,000,000). Prepare the journal entry to record this transaction.

c. On October 3, 2022, $1.5 million of the invoiced July sales were returned according to the return policy, and the remaining $13.5 million was paid. Prepare the journal entries for the return and payment.

d. Assume Uddin prepares financial statements on October 31, 2022, the close of the fiscal year. No other returns are anticipated. Indicate the amounts reported on the income statement and statement of financial position related to the above transactions.

E18.22 (LO 3) (Sales with Repurchase) Cramer AG sells idle machinery to Enyart SE on July 1, 2022, for €40,000. Cramer agrees to repurchase this equipment from Enyart on June 30, 2023, for a price of €42,400 (an imputed interest rate of 6%).

Instructions

a. Prepare the journal entry for Cramer for the transfer of the asset to Enyart on July 1, 2022.

b. Prepare any other necessary journal entries for Cramer in 2022.

c. Prepare the journal entry for Cramer when the machinery is repurchased on June 30, 2023.

E18.23 (LO 3) (Repurchase Agreement) Zagat Ltd. enters into an agreement on March 1, 2022, to sell Werner Metal aluminum ingots. As part of the agreement, Zagat also agrees to repurchase the ingots on May 1, 2022, at the original sales price of €200,000 plus 2%.

Instructions

a. Prepare Zagat's journal entry necessary on March 1, 2022.
b. Prepare Zagat's journal entry for the repurchase of the ingots on May 1, 2022.

E18.24 (LO 3) (Bill and Hold) 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 Ltd., which consisted of building 35 different types of concession counters for a new soccer arena under construction. Under the terms of the contract, Stadium will pay Wood-Mode £2,000,000 upon completion of the counters. 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 for 2 months at its manufacturing plant until the arena is completed. Stadium acknowledges in writing that it ordered the counters and now own them. 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 counters 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 or entries that Wood-Mode should make, assuming it signed a valid sales contract and received at the time the £300,000 deposit.

E18.25 (LO 3) (Consignment Sales) On May 3, 2022, 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, 2022, 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.

E18.26 (LO 3) (Warranty Arrangement) On January 2, 2022, Grando Company sells production equipment to Fargo Inc. for $50,000. Grando includes a 2-year assurance warranty with the sale of all its equipment. The customer receives and pays for the equipment on January 2, 2022. During 2022, Grando incurs costs related to warranties of $900. At December 31, 2022, Grando estimates that $650 of warranty costs will be incurred in the second year of the warranty.

Instructions

a. Prepare the journal entry or entries to record this transaction during 2022 (assuming financial statements are prepared on December 31, 2022). (Ignore cost of goods sold.)

b. Repeat the requirements for (a), assuming that in addition to the assurance warranty, Grando sold an extended warranty (service-type warranty) for an additional 2 years (2024–2025) for $800.

E18.27 (LO 3) (Warranties) Celic SA manufactures and sells computers, which include an assurance-type warranty for the first 90 days. Celic offers an optional extended coverage plan under which it will repair or replace any defective part for 3 years from the expiration of the assurance-type warranty. Because the optional extended coverage plan is sold separately, Celic determines that the 3 years of extended coverage represents a separate performance obligation. The total transaction price for the sale of a computer and an extended warranty is €3,600 on October 1, 2022. Celic determines the standalone selling price of the computer and the warranty are €3,200 and €400, respectively. Based on historical experience, Celic estimates that it will incur €200 in costs to repair defects that arise within the 90-day coverage period for the assurance-type warranty. The cost of the computer is €1,440. Assume that the €200 in costs to repair defects in the computer occurred on October 25, 2022.

Instructions

a. Prepare the journal entry or entries to record the October transactions related to sale of the computer.

b. Briefly describe the accounting for the service-type warranty after the 90-day assurance-type warranty period.

E18.28 (LO 4) (Existence of a Contract) On January 1, 2022, Gordon Co. enters into a contract to sell a customer a wiring base and shelving unit that sits on the base in exchange for $3,000. The contract requires delivery of the base first but states that payment for the base will not be made until the shelving unit is delivered. Gordon identifies two performance obligations and allocates $1,200 of the transaction price to the wiring base and the remainder to the shelving unit. The cost of the wiring base is $700; the shelves have a cost of $320.

Instructions

a. Prepare the journal entry for Gordon on January 1, 2022.

b. Prepare the journal entry for Gordon on February 5, 2022, when the wiring base is delivered to the customer.

c. Prepare the journal entry for Gordon on February 25, 2022, when the shelving unit is delivered to the customer and Gordon receives full payment.

E18.29 (LO 4) (Contract Modification) In September 2022, Gaertner Corp. commits to selling 150 of its iPhone-compatible docking stations to Better Buy Co. for $15,000 ($100 per product). The stations are delivered to Better Buy over the next 6 months. After 90 stations are delivered, the contract is modified, and Gaertner promises to deliver an additional 45 products for an additional $4,275 ($95 per station). All sales are cash on delivery.

Instructions

a. Prepare the journal entry for Gaertner for the sale of the first 90 stations. The cost of each station is $54.

b. Prepare the journal entry for the sale of 10 more stations after the contract modification, assuming that the price for the additional stations reflects the standalone selling price at the time of the contract modification. In addition, the additional stations are distinct from the original products, as Gaertner regularly sells the products separately.

c. Prepare the journal entry for the sale of 10 more stations (as in [b]), assuming that the pricing for the additional products *does not* reflect the standalone selling price of the additional products and the prospective method is used.

E18.30 (LO 4) (Contract Modification) Tyler Financial Services performs bookkeeping and tax-reporting services to startup companies in the Oconomowoc area. On January 1, 2022, Tyler entered into a 3-year service contract with Walleye Tech. Walleye promises to pay $10,000 at the beginning of each year, which at contract inception is the standalone selling price for these services. At the end of the second year, the contract is modified and the fee for the third year of services is reduced to $8,000. In addition, Walleye agrees to pay an additional $20,000 at the beginning of the third year to cover the contract for 3 additional years (i.e., 4 years remain after the modification). The extended contract services are similar to those provided in the first 2 years of the contract.

Instructions

a. Prepare the journal entries for Tyler in 2022 and 2023 related to this service contract.

b. Prepare the journal entries for Tyler in 2024 related to the modified service contract, assuming a prospective approach.

c. Repeat the requirements for part (b), assuming Tyler and Walleye agree on a revised set of services (fewer bookkeeping services but more tax services) in the extended contract period and the modification results in a separate performance obligation.

E18.31 (LO 4) (Contract Costs) Rex's Reclaimers entered into a contract with Dan's Demolition to manage the processing of recycled materials on Dan's various demolition projects. Services for the 3-year contract include collecting, sorting, and transporting reclaimed materials to recycling centers or contractors who will reuse them. Rex's incurs selling commission costs of €2,000 to obtain the contract. Before performing the services, Rex's also designs and builds receptacles and loading equipment that interface with Dan's demolition equipment at a cost of €27,000. These receptacles and equipment are retained by Rex's and can be used for other projects. Dan's promises to pay a fixed fee of €12,000 per year, payable every 6 months for the services under the contract. Rex's incurs the following costs: design services for the receptacles to interface with Dan's equipment €3,000, loading equipment controllers €6,000, and special testing and inspection fees €2,000 (some of Dan's projects are on government property).

Instructions

a. Determine the costs that should be capitalized as part of Rex's Reclaimers revenue arrangement with Dan's Demolition.

b. Dan's also expects to incur general and administrative costs related to this contract, as well as costs of wasted materials and labor that likely cannot be factored into the contract price. Can these costs be capitalized? Explain.

E18.32 (LO 4) (Contract Costs, Collectibility) Refer to the information in E18.31.

Instructions

a. Does the accounting for capitalized costs change if the contract is for 1 year rather than 3 years? Explain.

b. Dan's Demolition is a startup company; as a result, there is more than insignificant uncertainty about Dan's ability to make the 6-month payments on time. Does this uncertainty affect the amount of revenue to be recognized under the contract? Explain.

***E18.33 (LO 5, 6) (Recognition of Profit on Long-Term Contracts)** During 2022, Nilsen Company started a construction job with a contract price of $1,600,000. The job was completed in 2024. The following information is available.

	2022	2023	2024
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 2023.

c. Compute the amount of gross profit to be recognized each year, assuming the cost-recovery method is used.

***E18.34 (LO 5) (Analysis of Percentage-of-Completion Financial Statements)** In 2022, Steinrotter Construction 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, 2022, are shown below.

Statement of Financial Position		
Accounts receivable		€18,000
Construction in process	€65,000	
Less: Billings	61,500	
Costs and recognized profit in excess of billings		3,500
Income Statement		
Income (before tax) on the contract recognized in 2022		€19,500

Instructions

a. How much cash was collected in 2022 on this contract?

b. What was the initial estimated total income before tax on this contract?

***E18.35 (LO 5) (Gross Profit on Uncompleted Contract)** On April 1, 2022, 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 2022, Dougherty incurred costs of $800,000 related to the project. The estimated cost at December 31, 2022, 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, 2022. Show supporting computations in good form.

***E18.36 (LO 5, 6) (Recognition of Revenue on Long-Term Contract and Entries)** Hamilton Construction Company uses the percentage-of-completion method of accounting. In 2022, Hamilton began work under contract #E2-D2, which provided for a contract price of $2,200,000. Other details follow:

	2022	2023
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 2022? In 2023?

b. Assuming the same facts as those above except that Hamilton uses the cost-recovery method of accounting, what amount of the total contract price would be recognized as revenue in 2023?

c. Prepare a complete set of journal entries for 2022 (using the percentage-of-completion method).

***E18.37 (LO 5, 6) (Recognition of Profit and Statement of Financial Position Amounts for Long-Term Contracts)** Yanmei Construction Company began operations on January 1, 2022. 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, 2022, and the amount to be shown as "costs and recognized profit in excess of billings" or "billings in excess of costs and recognized profit" at December 31, 2022, under each of the following methods. Show supporting computations in good form.

a. Cost-recovery method.

b. Percentage-of-completion method.

***E18.38 (LO 8) (Franchise Entries)** Pacific Crossburgers Inc. charges an initial franchise fee of $70,000. Upon the signing of the agreement (which covers 3 years), 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. The franchise agreement is signed on May 1, 2022, and the franchise commences operation on July 1, 2022.

Instructions

Prepare the journal entries in 2022 for the franchisor under the following assumptions. (Round to the nearest dollar.)

a. No future services are required by the franchisor once the franchise starts operations.

b. The franchisor has substantial services to perform, once the franchise begins operations, to maintain the value of the franchise.

c. The total franchise fee includes training services (with a value of $2,400) for the period leading up to the franchise opening and for 2 months following opening.

***E18.39 (LO 8) (Franchise Fee, Initial Down Payment)** On January 1, 2022, Lesley Benjamin signed an agreement, covering 5 years, 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, 2023. The agreement provides that the down payment is non-refundable and that no future services are required of the franchisor once the franchise commences operations on April 1, 2022. Lesley Benjamin's credit rating indicates that she can borrow money at 11% for a loan of this type.

Instructions

a. Prepare journal entries for Campbell for 2022-related revenue for this franchise arrangement.

b. Prepare journal entries for Campbell for 2022-related revenue for this franchise arrangement, assuming that in addition to the franchise rights, Campbell also provides 1 year of operational consulting and training services, beginning on the signing date. These services (included in the contract price) have a value of $3,600.

c. Repeat the requirements for part (a), assuming that Campbell must provide services to Benjamin throughout the franchise period to maintain the franchise value.

Problems

P18.1 (LO 2, 3) (Allocate Transaction Price, Upfront Fees) Tablet Tailors sells tablet PCs combined with Internet service, which permits the tablet to connect to the Internet anywhere and set up a Wi-Fi hot spot. It offers two bundles with the following terms.

1. Tablet Bundle A sells a tablet with 3 years of Internet service. The price for the tablet and a 3-year Internet connection service contract is €500. The standalone selling price of the tablet is €250 (the cost to Tablet Tailors is €175). Tablet Tailors sells the Internet access service independently for an upfront payment of €300. On January 2, 2022, Tablet Tailors signed 100 contracts, receiving a total of €50,000 in cash.
2. Tablet Bundle B includes the tablet and Internet service plus a service plan for the tablet PC (for any repairs or upgrades to the tablet or the Internet connections) during the 3-year contract period. That product bundle sells for €600. Tablet Tailors provides the 3-year tablet service plan as a separate product with a standalone selling price of €150. Tablet Tailors signed 200 contracts for Tablet Bundle B on July 1, 2022, receiving a total of €120,000 in cash.

Instructions

a. Prepare any journal entries to record the revenue arrangement for Tablet Bundle A on January 2, 2022, and December 31, 2022.

b. Prepare any journal entries to record the revenue arrangement for Tablet Bundle B on July 1, 2022, and December 31, 2022.

c. Repeat the requirements for part (a), assuming that Tablet Tailors has no reliable data with which to estimate the standalone selling price for the Internet service.

P18.2 (LO 2, 3, 4) (Allocate Transaction Price, Modification of Contract) Refer to the Tablet Bundle A revenue arrangement in P18.1. In response to competitive pressure for Internet access for Tablet Bundle A, after 2 years of the 3-year contract, Tablet Tailors offers a modified contract and extension incentive. The extended contract services are similar to those provided in the first 2 years of the contract. Signing the extension and paying €90 (which equals the standalone selling of the revised Internet service package) extends access for 2 more years of Internet connection. Forty Tablet Bundle A customers sign up for this offer.

Instructions

a. Prepare the journal entries when the contract is signed on January 2, 2024, for the 40 extended contracts. Assume the modification does not result in a separate performance obligation.

b. Prepare the journal entries on December 31, 2024, for the 40 extended contracts (the first year of the revised 3-year contract).

P18.3 (LO 2, 3) (Allocate Transaction Price, Discounts, Time Value) Grill Master Company sells total outdoor grilling solutions, providing gas and charcoal grills, accessories, and installation services for custom patio grilling stations.

Instructions

Respond to the requirements related to the following independent revenue arrangements for Grill Master products and services.

a. Grill Master offers contract GM205, which is comprised of a free-standing gas grill for small patio use plus installation to a customer's gas line for a total price $800. On a standalone basis, the grill sells for $700 (cost $425), and Grill Master estimates that the standalone selling price of the installation service (based on cost-plus estimation) is $150. (The selling of the grill and the installation services should be considered two performance obligations.) Grill Master signed 10 GM205 contracts on April 20, 2022, and customers paid the contract price in cash. The grills were delivered and installed on May 15, 2022. Prepare journal entries for Grill Master for GM205 in April and May 2022.

b. The State of Kentucky is planning major renovations in its parks during 2022 and enters into a contract with Grill Master to purchase 400 durable, easy maintenance, standard charcoal grills during 2022. The grills are priced at $200 each (with a cost of $160 each), and Grill Master provides a 6% volume discount if the state purchases at least 300 grills during 2022. On April 17, 2022, Grill Master delivered and received payment for 280 grills. Based on prior experience with the State of Kentucky renovation projects, the delivery of this many grills makes it certain that the state will meet the discount threshold. Prepare the journal entries for Grill Master for grills sold on April 17, 2022. Assume the company records sales transaction net.

c. Grill Master sells its specialty combination gas/wood-fired grills to local restaurants. Each grill is sold for $1,000 (cost $550) on credit with terms 3/30, net/90. Prepare the journal entries for the sale of 20 grills on September 1, 2022, and upon payment, assuming the customer paid on (1) September 25, 2022, and (2) October 15, 2022. Assume the company records sales net.

d. On October 1, 2022, Grill Master sold one of its super deluxe combination gas/charcoal grills to a local builder. The builder plans to install it in one of its "Parade of Homes" houses. Grill Master accepted a 3-year, zero-interest-bearing note with face amount of $5,324. The grill has an inventory cost of $2,700. An interest rate of 10% is an appropriate market rate of interest for this customer. Prepare the journal entries on October 1, 2022, and December 31, 2022.

P18.4 (LO 2, 3) (Allocate Transaction Price, Discounts, Time Value) Economy Appliance Co. manufactures low-price, no-frills appliances that are in great demand for rental units. Pricing and cost information on Economy's main products are as follows.

Item	Standalone Selling Price (Cost)
Refrigerator	$500 ($260)
Range	560 (275)
Stackable washer/dryer unit	700 (400)

Customers can contract to purchase each item individually at the stated prices or as a three-item bundle with a price of $1,800. The bundle price includes delivery and installation. Economy also provides installation (not a separate performance obligation).

Instructions

Respond to the requirements related to the following independent revenue arrangements for Economy Appliance Co.

a. On June 1, 2022, Economy sold 100 washer/dryer units without installation to Wangerin Rentals for $70,000. Wangerin is a newer customer and is unsure how this product will work in its older rental units. Economy offers a 60-day return privilege and estimates, based on prior experience with sales on this product, 4% of the units will be returned. Prepare the journal entries for the sale and related cost of goods sold on June 1, 2022.

b. YellowCard Property Managers operates upscale student apartment buildings. On May 1, 2022, Economy signs a contract with YellowCard for 300 appliance bundles to be delivered and installed in one of its new buildings. YellowCard pays 20% cash at contract signing and will pay the balance upon installation no later than August 1, 2022. Prepare journal entries for Economy on (1) May 1, 2022, and (2) August 1, 2022, when all appliances are installed.

c. Refer to the arrangement in (b). It would help YellowCard secure lease agreements with students if the installation of the appliance bundles can be completed by July 1, 2022. YellowCard offers a 10% bonus payment if Economy can complete installation by July 1, 2022. Economy estimates its chances of meeting the bonus deadline to be 90%, based on a number of prior contracts of similar scale. Repeat the requirement for part (b), given this bonus provision. Assume installation is completed by July 1, 2022.

d. Epic Rentals would like to take advantage of the bundle price for its 400-unit project; on February 1, 2022, Economy signs a contract with Epic for 400 bundles. Under the agreement, Economy will hold the appliance bundles in its warehouses until the new rental units are ready for installation. Epic pays 10% cash at contract signing. On April 1, 2022, Economy completes manufacture of the appliances in the Epic bundle order and places them in the warehouse. Economy and Epic have documented the warehouse arrangement and identified the units designated for Epic. The units are ready to ship, and Economy may not sell these units to other customers. Prepare journal entries for Economy on (1) February 1, 2022, and (2) April 1, 2022.

P18.5 (LO 2, 3) (Allocate Transaction Price, Returns, and Consignments) Ritt Ranch & Farm is a distributor of ranch and farm equipment. Its products include small tools, power equipment for trench-digging and fencing, grain dryers, and barn winches. Most products are sold direct via its company catalog and Internet site. However, given some of its specialty products, select farm implement stores carry Ritt's products. Pricing and cost information on three of Ritt's most popular products are as follows.

Item	Standalone Selling Price (Cost)
Mini-trencher	$ 3,600 ($2,000)
Power fence hole auger	1,200 (800)
Grain/hay dryer	14,000 (11,000)

Instructions

Respond to the requirements related to the following independent revenue arrangements for Ritt Ranch & Farm.

a. On January 1, 2022, Ritt sells 40 augers to Mills Farm Services for $48,000. Mills signs a 6-month note at an annual interest rate of 12%. Ritt allows Mills to return any auger that it cannot use within 60 days and receive a full refund. Based on prior experience, Ritt estimates that 5% of units sold to customers like Mills will be returned (using the most likely outcome approach). Ritt's costs to recover the products will be immaterial, and the returned augers are expected to be resold at a profit. Prepare the journal entry for Ritt on January 1, 2022.

b. On August 10, 2022, Ritt sells 16 mini-trenchers to a farm co-op in western Minnesota. Ritt provides a 4% volume discount on the mini-trenchers if the co-op has a 15% increase in purchases from Ritt compared to the prior year. Given a slowdown in the farm economy, sales to the co-op have been flat, and it is highly uncertain that the benchmark will be met. Prepare the journal entry for Ritt on August 10, 2022.

c. Ritt sells three grain/hay dryers to a local farmer at a total contract price of $45,200. In addition to the dryers, Ritt provides installation, which has a standalone selling price of $1,000 per unit installed. The contract payment also includes a $1,200 maintenance plan for the dryers for 3 years after installation. Ritt signs the contract on June 20, 2022, and receives a 20% down payment from the farmer. The dryers are delivered and installed on October 1, 2022, and full payment is made to Ritt. Prepare the journal entries for Ritt in 2022 related to this arrangement.

d. On April 25, 2022, Ritt ships 100 augers to Farm Depot, a farm supply dealer in Nebraska, on consignment. By June 30, 2022, Farm Depot has sold 60 of the consigned augers at the listed price of $1,200 per unit. Farm Depot notifies Ritt of the sales, retains a 10% commission, and remits the cash due Ritt. Prepare the journal entries for Ritt and Farm Depot for the consignment arrangement.

P18.6 (LO 3) (Warranty, Customer Loyalty Program) Hale Hardware takes pride in being the "shop around the corner" that can compete with the bigbox home improvement stores by providing good service from knowledgeable sales associates (many of whom are retired local handymen). Hale has developed the following two revenue arrangements to enhance its relationships with customers, and hopes to increase its bottom line.

1. Hale sells a specialty portable winch that is popular with many of the local customers for use at their lake homes (putting docks in and out, launching boats, etc.). The Hale winch is a standard manufacture winch, which Hale modifies so that it can be used for a variety of tasks. Hale sold 70 of these winches during 2022 at a total price of $21,000, with a warranty guarantee that the product was free of any defects. The cost of winches sold is $16,000. The assurance warranties are for a 3-year period with an estimated cost of $2,100. In addition, Hale sold extended warranties related to 20 Hale winches for 2 years beyond the 3-year period for $400 each.
2. To bolster its already strong customer base, Hale implemented a customer loyalty program that rewards a customer with 1 loyalty point for every $10 of purchases on a select group of Hale products. Each point is redeemable for a $1 discount on any purchases of Hale merchandise in the following 2 years. During 2022, customers purchased select group products for $100,000 (all products are sold to provide a 45% gross profit) and earned 10,000 points redeemable for future purchases. The standalone selling price of the purchased products is $100,000. Based on prior experience with incentives programs like this, Hale expects 9,500 points to be redeemed related to these sales (Hale appropriately uses this experience to estimate the value of future consideration related to bonus points).

Instructions

a. Identify the separate performance obligations in the Hale warranty and bonus point programs, and briefly explain the point in time when the performance obligations are satisfied.

b. Prepare the journal entries for Hale related to the sales of Hale winches with warranties.

c. Prepare the journal entries for the bonus point sales for Hale in 2022.

d. How much additional sales revenue is recognized by Hale in 2023, assuming 4,500 bonus points are redeemed?

P18.7 (LO 3) (Customer Loyalty Program) Martz SA has a customer loyalty program that rewards a customer with 1 customer loyalty point for every €10 of purchases. Each point is redeemable for a €3 discount on any future purchases. On July 2, 2022, customers purchase products for €300,000 (with a cost of

€171,000) and earn 30,000 points redeemable for future purchases. Martz expects 25,000 points to be redeemed. Martz estimates a standalone selling price of €2.50 per point (or €75,000 total) on the basis of the likelihood of redemption. The points provide a material right to customers that they would not receive without entering into a contract. As a result, Martz concludes that the points are a separate performance obligation.

Instructions

a. Determine the transaction price for the product and the customer loyalty points.
b. Prepare the journal entries to record the sale of the product and related points on July 2, 2022.
c. At the end of the first reporting period (July 31, 2022), 10,000 loyalty points are redeemed. Martz continues to expect 25,000 loyalty points to be redeemed in total. Determine the amount of loyalty point revenue to be recognized at July 31, 2022.

P18.8 (LO 2, 3) (Time Value, Gift Cards) Presented below are two independent revenue arrangements for Colbert Company.

Instructions

Respond to the requirements related to each revenue arrangement.

a. Colbert sells 3D printer systems. Recently, Colbert provided a special promotion of zero-interest financing for 2 years on any new 3D printer system. Assume that Colbert sells Lyle Cartright a 3D system, receiving a $5,000 zero-interest-bearing note on January 1, 2022. The cost of the 3D printer system is $4,000. Colbert imputes a 6% interest rate on this zero-interest note transaction. Prepare the journal entry to record the sale on January 1, 2022, and compute the total amount of revenue to be recognized in 2022.
b. Colbert sells 20 non-refundable $100 gift cards for 3D cartridges on March 1, 2022. The cartridges have a standalone selling price of $100 (cost $80). The gift cards' expiration date is June 30, 2022. Colbert estimates that customers will not redeem 10% of these gift cards. The cumulative pattern of redemption is as follows.

	Redemption Total
March 31	50%
April 30	80

June 30	85

Prepare the 2022 journal entries related to the gift cards at March 1, March 31, April 30, and June 30.

***P18.9 (LO 5, 6) (Recognition of Profit on Long-Term Contract)** Shanahan Construction Company has entered into a contract beginning January 1, 2022, 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.

	2022	2023	2024
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 cost-recovery method, compute the estimated gross profit that would be recognized during each year of the construction period.

***P18.10 (LO 5, 6, 7) (Long-Term Contract with Interim Loss)** On March 1, 2022, 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, 2024. The annual contract costs incurred, estimated costs to complete the contract, and accumulated billings to Fabrik for 2022, 2023, and 2024 are given below.

	2022	2023	2024
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, 2022, 2023, and 2024. (Ignore income taxes.)

b. Using the cost-recovery method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2022, 2023, and 2024. (Ignore incomes taxes.)

***P18.11 (LO 5, 6, 7) (Long-Term Contract with an Overall Loss)** On July 1, 2022, 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, 2024, the building was deemed substantially completed. Following are accumulated contract costs incurred, estimated costs to complete the contract, and accumulated billings to Gumbel for 2022, 2023, and 2024.

	At 12/31/22	At 12/31/23	At 12/31/24
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, 2022, 2023, and 2024. (Ignore income taxes.)

b. Using the cost-recovery method, prepare schedules to compute the profit or loss to be recognized as a result of this contract for the years ended December 31, 2022, 2023, and 2024. (Ignore income taxes.)

***P18.12 (LO 8) (Franchise Revenue)** Amigos Burrito Inc. sells franchises to independent operators throughout the United States. The contract with a 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 $100,000 zero-interest-bearing note is payable with a $20,000 payment at the end of each of the 5 subsequent years. The present value of an ordinary annuity of five annual receipts of $20,000, each discounted at 10%, is $75,816.
2. 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 the 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. This continuing involvement by Amigos helps maintain the brand value of the franchise.

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, recipe innovations, and the privilege of purchasing ingredients from Amigos at or below prevailing market prices.

Amigos Burrito's management estimates that the value of the services rendered to the franchisee at the time the contract is signed is $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%.

Instructions

a. Discuss the alternatives that Amigos Burrito Inc. might use to account for the franchise fees.

b. Prepare the journal entries for the initial and continuing franchise fees, assuming:

   1. Franchise agreement is signed on January 5, 2022.
   2. Amigos completes franchise startup tasks and the franchise opens on July 1, 2022.
   3. The franchisee records $260,000 in sales in the first 6 months of operations and remits the monthly franchise fee on December 31, 2022.

c. Briefly describe the accounting for unearned franchise fees, assuming that once the franchise opens. Amigos has little or no involvement with the franchisee related to expert advice on employee and management training, quality control, and promotion.

Concepts for Analysis

CA18.1 (LO 1) (Five-Step Revenue Process) Revenue is recognized based on a five-step process that is applied to a company's revenue arrangements.

Instructions

a. Briefly describe the five-step process.

b. Explain the importance of contracts when analyzing revenue arrangements.

c. How are fair value measurement concepts applied in implementation of the five-step process?

d. How does the five-step process reflect application of the definitions of assets and liabilities?

CA18.2 (LO 2) (Satisfying Performance Obligations) Judy Schaeffer is trying to understand the revenue recognition principle as it relates to the five-step revenue recognition process.

Instructions

a. Describe the revenue recognition principle.

b. Briefly discuss how the revenue recognition principle relates to the definitions of assets and liabilities. What is the importance of control?

c. Judy recalls that previous revenue recognition guidance required that revenue not be recognized unless the revenue was realized or realizable (also referred to as collectibility). Is collectibility a consideration in the recognition of revenue? Explain.

CA18.3 (LO 2) (Recognition of Revenue—Theory) Revenue is usually recognized at the point of sale (a point in time). 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 point-of-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 over time. Give an example of the circumstances in which revenue is recognized over time and accounting merits of its use instead of the point-of-sale basis.

CA18.4 (LO 2) (Recognition of Revenue—Theory) Revenue is recognized for accounting purposes when a performance obligation is satisfied. In some situations, revenue is recognized over time as the fair values of assets and liabilities change. In other situations, however, accountants have developed guidelines for recognizing revenue at the point of sale.

Instructions

(Ignore income taxes.)

a. Explain and justify why revenue is often recognized at time of sale.
b. Explain in what situations it would be appropriate to recognize revenue over time.

CA18.5 (LO 3) (Discounts) Fahey AG sells Stairmasters to a retailer, Physical Fitness SE, for €2,000,000. Fahey has a history of providing price concessions on this product if the retailer has difficulty selling the Stairmasters to customers. Fahey has experience with sales like these in the past and estimates that the maximum amount of price concessions is €300,000.

Instructions

a. Determine the amount of revenue that Fahey should recognize for the sale of Stairmasters to Physical Fitness SE.
b. According to IFRS, in some situations, the amount of revenue recognized may be constrained. Explain how the accounting for the Stairmasters sales might be affected by the revenue constraint due to variable consideration or returns.
c. Some believe that revenue recognition should be constrained by collectibility. Is such a view consistent with IFRS? Explain.

CA18.6 (LO 3, 4) (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. *Cutting Edge* is producing close to capacity and expects 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, has indicated that a loan could be offered to *Cutting Edge* only if it can increase its current ratio, and decrease its debt to equity ratio to a specified level. Jonathan Embry, the marketing manager of *Cutting Edge*, devises a plan to meet these requirements. Embry wants to initiate an advertising campaign to immediately increase circulation. After purchasing another magazine's mailing list, the marketing department will contact potential customers. The campaign will include:

1. An offer to subscribe to *Cutting Edge* at three-fourths the normal price.
2. A special offer for all new subscribers: at any time a subscriber can request the most current world atlas 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. The average cancellation rate has been 25%. On average, each company increased its initial circulation threefold and in the long run increased circulation to twice the level that existed before the promotion. In addition, it is anticipated that 60% of the new subscribers will take advantage of the atlas premium. Embry feels confident that the new subscriptions resulting 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 estimate of 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?

CA18.7 (LO 3, 4) (Recognition of Revenue—Bonus Credits) 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 summarizes Griseta & Dubel's expectations for the percentages of a normal month's activity, which is defined as the level of operations expected when expansion of activities ceases or tapers off to a stable rate. The company expects that it will reach this level in the third year and that sales of credits will average $6,000,000 per month throughout the 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.

b. Apply the revenue recognition factors to the Griseta & Dubel Inc. revenue arrangement.

c. Provide statement of financial position accounts that should be used, and indicate how each should be classified.

CA18.8 (LO 2) Ethics (Revenue Recognition—Membership Fees) Muscle Health Club (MHC) offers 1-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, company 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?

***CA18.9 (LO 5) Writing (Long-Term Contract—Percentage-of-Completion)** Widjaja Group is accounting for a long-term construction contract using the percentage-of-completion method. The 4-year contract 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 Group.

Instructions

a. What is the theoretical justification for Widjaja Group'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 Group's 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 first year of the 4-year contract, of using the percentage-of-completion method instead of the cost-recovery method? Discuss.

Using Your Judgment

Financial Reporting Problem

Marks and Spencer plc (M&S)

The financial statements of **M&S** (GBR) are presented in Appendix A. The company's complete annual report, including the notes to the financial statements, is available online.

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 2019?

b. What was the percentage of increase or decrease in M&S's sales from 2018 to 2019?

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.

Comparative Analysis Case

adidas and Puma

The financial statements of **adidas** (DEU) and **Puma** (DEU) are presented in Appendices B and C, respectively. The complete annual reports, including the notes to the financial statements, are available online.

Instructions

Use the companies' financial information to answer the following questions.

a. What were adidas's and Puma's net revenues (sales) for the year 2018? Which company increased its revenues more (amounts and percentage) from 2017 to 2018?

b. Are the revenue recognition policies of adidas and Puma similar? Explain.

c. In which foreign countries (geographic areas) did adidas (see Note) and Puma experience significant revenues in 2018?

Financial Statement Analysis Case

British Airways

The following note appears in the "Summary of Significant Accounting Policies" section of the annual report of **British Airways** (GBR).

Summary of significant accounting policies (in part)

Revenue

Passenger and cargo revenue is recognised when the transportation service is provided. Passenger tickets net of discounts are recorded as current liabilities in the 'sales in advance of carriage' account until recognised as revenue. Unused tickets are recognised as revenue using estimates regarding the timing of recognition based on the terms and conditions of the ticket and historical trends. Other revenue is recognised at the time the service is provided. Commission costs are recognised at the same time as the revenue to which they relate and are charged to operating expenditure.

Key accounting estimates and judgments

Passenger revenue recognition

Passenger revenue is recognised when the transportation is provided. Ticket sales that are not expected to be used for transportation ('unused tickets') are recognised as revenue using estimates regarding the timing of recognition based on the terms and conditions of the ticket and historical trends. During the current year, changes in estimates regarding the timing of revenue recognition primarily for unused flexible tickets were made, resulting in increased revenue in the current year of £109 million. During the prior year, changes in estimates regarding the timing of revenue recognition for unused restricted tickets were made, resulting in increased revenue in the prior year of £36 million. Both the above changes reflect more accurate and timely data obtained through the increased use of electronic tickets.

Instructions

a. Identify the revenue recognition policies used by British Airways as discussed in its note on significant accounting policies.

b. Under what conditions are the revenue recognition methods identified in the first paragraph of British Airways' note acceptable?

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

Accounting, Analysis, and Principles

Diversified Industries manufactures sump-pumps. Its most popular product is called the Super Soaker, which has a retail price of $1,200 and costs $540 to manufacture. It sells the Super Soaker on a standalone basis directly to businesses. Diversified also provides installation services for these commercial customers, who want an emergency pumping capability (with regular and back-up generator power) at their businesses. Diversified also distributes the Super Soaker through a consignment agreement with Menards. Income data for the first quarter of 2022 from operations other than the Super Soaker are as follows.

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

Diversified has the following information related to two Super Soaker revenue arrangements during the first quarter of 2022.

1. Diversified sells 30 Super Soakers to businesses in flood-prone areas for a total contract price of $54,600. As part of the contract, Diversified also provides installation (at a cost of $150 per pump). On a standalone basis, the fair value of this service is $200 per unit installed. The contract payment also includes a $10 per month service plan for the pumps for 3 years after installation (Diversified's cost to provide this service is $7 per month). The

Super Soakers are delivered and installed on March 1, 2022, and full payment is made to Diversified. Any discount is applied to the pump/installation bundle.

2. Diversified ships 300 Super Soakers to Menards on consignment. By March 31, 2022, Menards has sold two-thirds of the consigned merchandise at the listed price of $1,200 per unit. Menards notifies Diversified of the sales, retains a 5% commission, and remits the cash due Diversified.

Accounting

Determine Diversified Industries' 2022 first-quarter net income. (Ignore taxes.)

Analysis

Determine free cash flow (see Chapter 5) for Diversified Industries for the first quarter of 2022. In the first quarter, Diversified had depreciation expense of $175,000 and a net increase in working capital (change in accounts receivable and accounts payable) of $250,000. In the first quarter, capital expenditures were $500,000; Diversified paid dividends of $120,000.

Principles

Explain how the five-step revenue recognition process, when applied to Diversified's two revenue arrangements, reflects the concept of control in the definition of an asset and trade-offs between relevance and faithful representation.

Bridge to the Profession

Authoritative Literature References

[1] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014).

[2] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), Introduction.

[3] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 9–12.

[4] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 23.

[5] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 47–49.

[6] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 73–80.

[7] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 9(e).

[8] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 47–49.

[9] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 50–54.

[10] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 57.

[11] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 56.

[12] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 63.

[13] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 57.

[14] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 38.

[15] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. B70.

[16] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. B79–B82.

[17] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. B34–B38.

[18] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 20.

[19] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. 21.

[20] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 9, 31, B10.

[21] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 110–129.

[22] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. 35–37.

[23] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), par. BC296.

[24] International Financial Reporting Standard 15, *Revenue from Contracts with Customers* (London, U.K.: IFRS Foundation, May 2014), paras. B52–B56.

Research Case

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, generous return or bill-and-hold provisions might lead to challenges to revenue recognition under IFRS. The company CFO would like you to research the issue to provide an authoritative answer.

Instructions

Access the IFRS authoritative literature at the IFRS website (you may register for free IFRS access at this site). Under the Standards Development tab, click on Work plan for IFRS and go to Revenue Recognition. Click on "Summary of Board Deliberations." 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. Describe the accounting when there is a right of return.

d. When goods are sold on a bill-and-hold basis, what conditions must be met to recognize revenue upon receipt of the order?

Notes

1 See, for example, "Preliminary Views on Revenue Recognition in Contracts with Customers," *IASB/FASB Discussion Paper* (December 19, 2008). Some noted that U.S. 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 comprehensive guidance was provided for service transactions. Conversely, IFRS lacked guidance in certain fundamental areas, such as multiple-deliverable arrangements. In addition, there were inconsistencies in applying revenue recognition principles to long-term contracts versus other elements of revenue recognition.

2 BEAN disregards revenue guidance for a contract that is wholly unperformed and for which each party can unilaterally terminate the contract without

compensation.

3 We provide expanded discussion and examples of variation in transaction price, including variable consideration, later in the chapter.

4 While in the BEAN example, recognition occurred at a point in time, in certain cases companies satisfy performance obligations over a period of time. We address the criteria for determining point-in-time versus over-time recognition later in the chapter.

5 A valid contract exists when (1) the contract has commercial substance, (2) the parties have approved the contract, (3) the contract identifies the rights of the parties, (4) payment terms are identified, and (5) it is probable that the consideration will be collected. The IASB included this last criterion (which acts like a collectibility threshold) because the Board concluded that the assessment of a customer's credit risk was important to determine whether a contract is valid. That is, under the revenue standard (discussed later in the chapter), collectibility is not a consideration for determining whether revenue is recognized. However, collectibility may be a consideration in assessing whether parties to the contract are committed to perform. In determining whether it is probable that a company will collect the amount of consideration to which it is entitled, the company assesses both the customer's ability and intent to pay as amounts become due. [7]

6 In practice, determining whether multiple performance obligations exist can be complex. Indicators that help to understand whether performance obligations should be accounted for separately are (1) the performance obligations have a standalone selling price and (2) the goods or services are not highly interdependent or interrelated. *For homework purposes, you need to determine the objective of the transaction*. If the objective is to transfer individual goods or services, then account for these performance obligations separately.

7 Conditions such as one of the following would indicate that the revenue is constrained (or not recognized):

1. The amount of consideration is highly susceptible to factors outside the company's influence. Factors include volatility in a market, the judgment of third parties, weather conditions, and a high risk of obsolescence of the promised good or service.
2. The uncertainty about the amount of consideration is not expected to be resolved for a long period of time.
3. The company's experience (or other evidence) with similar types of performance obligations is limited.

4. The contract has a large number and broad range of possible consideration amounts. **[10]**

8 A selling price is highly variable when a company sells the same good or service to different customers (at or near the same time) for a broad range of amounts. A selling price is uncertain when a company has not yet established a price for a good or service and the good or service has not previously been sold. **[13]**

9 As indicated, at the date of sale, both sales revenue and accounts receivable are recorded at their gross amounts without consideration of sales returns and allowances. Then, at the end of the reporting period, adjusting entries are made, resulting in both sales revenues and accounts receivable being reported at net amounts, and which reflect actual and estimated returns and allowances. As discussed in Chapter 7, most companies follow this adjusting entry approach because estimating net sales at the date of sale is often difficult and time-consuming. In addition, recording accounts receivables net at the sale date may lead to a lack of correspondence between the control account and the subsidiary ledger related to accounts receivable. By waiting to make the necessary adjusting entries at the end of the reporting period, information related to actual sales returns and allowances is available, and a company still achieves the IASB's objective of reflecting accounts receivable and sales revenue at the amount the company is entitled to receive (and inventories and cost of goods sold at cost).

10 Beyond financing motivations, a company may transfer inventory to another party on a short-term basis to avoid inventory taxes. If the counterparty is able to use the inventory during the transfer period, the transaction may more appropriately be accounted for as a rental agreement.

11 If the repurchase price is less than the selling price, then the transaction is accounted for as a lease. **[15]** The accounting for leases is discussed in Chapter 21.

12 Indicators that the company's performance obligation is to arrange for the providing of goods or the performing of services by another party (i.e., the company is an agent and should recognize revenue in the net amount) include the following: (a) the other party is primarily responsible for fulfilling the contract; (b) the company does not have inventory risk before or after the customer order, during shipping, or on return; and (c) the company does not have latitude in establishing prices for the other party's goods or services and, hence, the benefit that the company can receive from those goods or services is constrained. **[17]**

13 As with the accounting for sales returns and allowances, the entries shown here reflect a gross (as opposed to net) treatment of the warranty obligation. That is, at the date of sale, Maverick recorded sales with an assurance warranty at the gross amount, without adjustment for expected warranty costs (sometimes referred to as the expense warranty approach). Then at the end of the accounting period when financial statements are prepared, Maverick prepares adjusting entries to record a liability for any remaining estimated warranty expenses (after accounting for actual warranty expenditures). Companies generally do not use the net method because it requires additional analysis and bookkeeping to adjust the warranty liability for unused warranty claims.

14 The initiation fee might be viewed as a separate performance obligation (it provides a renewal option at a lower price than normally charged, perhaps with different services). In this situation, in the first period, Bigelow would report revenue of £600 (£50 × 12). The initiation fee would then be allocated to years two and three (£100 in each year) unless forfeited earlier.

15 Another approach to account for a contract modification is to report the information in a cumulative catch-up manner. In other words, assuming that these new products are part of the original contract, companies adjust the revenue account to reflect the cumulative effect for periods prior to when the modification occurred. An example of a catch-up situation is a long-term construction contract, which is discussed in more detail in Appendix 18A. Use of the prospective approach avoids the complexity of opening up the accounting for previously satisfied performance obligations. However, it ignores any adjustments to revenue that have already been recognized. **[19]** *For homework purposes, unless instructed otherwise, use the prospective approach for modifications that do not result in a separate performance obligation*. Expanded discussion of the prospective and cumulative catch-up (retrospective) approaches to accounting changes is provided in Chapter 22.

16 See *PricewaterhouseCoopers Dataline 2013–2014.*

17 The right to payment for performance completed to date does not need to be for a fixed amount. However, the company must be entitled to an amount that would compensate the company for performance completed to date (even if the customer can terminate the contract for reasons other than the company's failure to perform as promised). Compensation for performance completed to date includes payment that approximates the selling price of the goods or services transferred to date (for example, recovery of the company's costs plus a reasonable profit margin).

18 The accounting for losses reflects application of the accounting for onerous contracts. [23]

19 In 2024, 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 (2022) − £48,500 (2023) + £38,538 (2024)]. This amount is the difference between the total contract revenue of £4,500,000 and the total contract costs of £4,384,962.

20 If the costs in 2024 are £1,640,250 as projected, at the end of 2024 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 records the revenue remaining to be recognized in 2024 of £1,620,000 [£4,500,000 (total contract price) − £1,125,000 (2022) − £1,755,000 (2023)] with the construction expense to be recognized in 2024 of £1,620,000 [total costs of £4,556,250 less the total costs recognized in prior years of £2,936,250 (2022, £1,000,000; 2023, £1,936,250)], a zero profit results. Thus, the total loss has been recognized in 2023, the year in which it first became evident.

21 Franchises are an example of a license, or a similar right, to use intellectual property. In such arrangements, a company grants a customer the right to use, but not own, intellectual property of the company. Other examples of intellectual property include (1) software and technology; (2) motion pictures, music, and other forms of media and entertainment; and (3) patents, trademarks, and copyrights. Generally, revenue is recognized in these situations when the customer obtains control of the rights. In some cases, a license is a promise to provide a right, which transfers to the customer at a point in time. In other cases, a license is a promise to provide access to an entity's intellectual property, which transfers benefits to the customer over time. [24]

Sources: Cheryl de Mesa Graziano, "Revenue Recognition: A Perennial Problem," *Financial Executive, www.fei.org/mag/articles/7-2005_revenue.cfm,* (July 14, 2005); S. Taub, "SEC Accuses Ex-CFO of Channel Stuffing," *CFO.com* (September 30, 2006); B. Elder, "Rolls-Royce Hit by Accounting Concerns," *Financial Times* (February 18, 2014); W. Ma, "China Securities Regulator Probes Sinovel Wind Group," *Wall Street Journal* (January 13, 2014); "Turquoise Hill Announces Restatement of Previously Reported Financial Results," *www.marketwired.com* (November 8, 2013); and Audit Analytics, "An Updated Overview of KAMs," *AuditAnalytics.com* (December 20, 2019).