

REVENUE

RECOGNITION

Guidelines for Revenue Recognition

- Revenue recognition involves issues dealing with:

1. Timing (i.e., when revenue is recognized)

2. Measurement (i.e., how much revenue is recognized?)

Guidelines for 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.

Revenue Recognition Principle

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

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

Example

Assume that Airbus signs a contract to sell airplanes to EAL for 100 million Euro

Step 1: Identify the contract with customers

A contract is an agreement between two parties that creates enforceable rights or obligations.

In this case, Airbus has signed a contract to deliver airplanes to EAL.

Step 2: Identify the separate performance obligations in the contract:

Airbus has only one performance obligation—to deliver airplanes to EAL.

If Airbus also agreed to maintain the planes, a separate performance obligation is recorded for this promise.

Step 3: Determine the transaction price

Transaction price is the amount of consideration that a company expects to receive from a customer in exchange for transferring a good or service.

In this case, the transaction price is straightforward—it is €100 million

Step 4: Allocate the transaction price to the separate performance obligations:

In this case, Airbus has only one performance obligation—to deliver airplanes to EAL.

Step 5: Recognize revenue when each performance obligation is

satisfied:
Airbus recognizes revenue of €100 million for the sale of the airplanes to EAL when it satisfies its performance obligation—the delivery of the airplanes to EAL.

Example 2

Access Unlimited (AU) sells smartphones and phone service. AU sells phones for Br350 each and 12-month service plans for Br40 a month. The phones cost AU Br150 each.

AU also bundles the phones together with a 12-month service plan for Br750. On January 1, a customer signs a contract with AU to purchase the bundle, with the service plan starting immediately. The customer pays in full. AU uses the perpetual inventory method. AU prepares financial statements on a quarterly basis.

When does AU recognize revenue, and what is the amount of revenue to be recognized?

Solution:

In step 1, AU identifies the contract with the customer.

In step 2: It separates the transaction into two separate performance obligations—the smartphone and the service plan.

Regarding step 3: The transaction price is

To complete step 4, AU will allocate the Br750 between the phone and the service plan on a relative sales value basis.

Items	Standalone Selling Price	Relative Sales Value [% of Total]	Allocated Transaction Price
Phone	350.00	42.20%	316.50
Service plan	480.00	57.80%	433.50
Total	830.00	100%	750.00

To complete step 5, AU will recognize the Br316.50 revenue for the phone when the phone is delivered to the customer. It will recognize the Br433.50 revenue for the plan over the 12-month service period.

Thus, on **January** 1, AU will record the cash receipt. Because it delivered the phone on that day, it will record Br316.50 of revenue and will also record cost of goods sold and reduce its phone inventory.

Cash	750.00	
Unearned revenue		433.50
Sales revenue		316.50
Cost of goods sold		
Inventory	150.00	150.00

AU will recognize Br108.38 (Br433.50/4 quarters) service revenue over each of the following four quarters.

March 31, June 30, September 30, & December 31:

Unearned revenue	108.38	
Service revenue		108.38

Step 1

**Identify Contract
with Customers**

Contract:

- ▶ Agreement between two or more parties that creates enforceable rights or obligations.
- ▶ Can be written, oral, or implied from customary business practice.
- ▶ An entity applies the following five criteria to identify contracts with customers:

Contract criteria:

1. All parties agree to the contract and commit to performing.
2. Each party's rights are identifiable.
3. Payment terms are identifiable.
4. The contract has commercial substance.
5. Collection of consideration is

*IFRS defines probable as
“more likely than not”,
which implies a probability
of more than 50%.*

If a seller does not satisfy all of the above five criteria, then it should recognize revenue when either:

1. The seller has no remaining obligations to transfer goods or services and substantially all (or all) of the consideration has been received by the seller and is nonrefundable, or
2. The contract has been terminated and any consideration already received from the customer is nonrefundable.

Example 1

Problem: CC Enterprises manufactures designer cases for tablets and is attempting to enter a new market with its product. To implement this strategy, CC sells 5,000 units to a retailer for a contract price of Br75 each. CC is aware that this retailer is struggling financially, but is willing to enter into the contract because of its desire to penetrate a new market. Due to the financial instability of its customer, CC believes that it will need to provide a 20% price concession.

Does this agreement meet the fifth criterion to determine the existence of a

Solution:

Yes, this agreement meets the definition of a contract. Even though it is not probable that CC will receive the full contract price of Br375,000 (5,000 units at Br75 each), it is probable that CC will collect a portion of the contract price for a transaction price of Br300,000 ($80\% \times \text{Br}375,000$).

Example 2

SBA Inc., a retail developer, sells a building to MM Corporation on September 30, 2017. The contract price is \$5 million. MM pays SBA 10% of the contract price on September 30. The remaining 90% will be paid over the following five years, with Br225,000 due each quarter. The first payment is due on December 31, 2017. The payments are nonrefundable. If MM defaults, then SBA keeps the payments that it has received up to that point, but is not entitled to further compensation. In addition, ownership of the building will revert back to SBA.

MM intends to open a hotel in the building. However, the building is not located in an attractive area. SBA is aware that MM will only have adequate resources to make the required payments if the hotel is profitable. Accordingly, on September 30, SBA concludes that it is not probable that it will collect the transaction price.

MM remits the Br500,000 deposit and the first two required quarterly payments of Br225,000 each to SBA on December 31, 2017, and March 31, 2018, respectively. On June 30, 2018, MM does not make the required payment and terminates the contract.

What are the required journal entries for SBA Inc. from September 30, 2017, through June 30, 2018?

Solutio n

Because SBA does not consider it probable that it will collect the transaction price from the buyer, this arrangement does not meet the definition of a contract and thus must be accounted for under the alternative method. SBA will not recognize revenue until June 30, 2018, when the contract has been terminated and all consideration it has received to date is nonrefundable. In addition, on September 30, 2017, SBA will not derecognize the building. The journal entries follow.

30-Sep-17

Cash

500,000

Unearned revenue

500,000

31-Dec-17

Cash

225,000

Unearned revenue

225,000

31-Mar-18

Cash

225,000

Unearned revenue

225,000

30-Jun-18

**Unearned
revenue**

950,000

Revenue

950,000

Example 3

CompStores ordered 1,000 Tri-Box systems on December 20, 2017, at a price of Br250 per unit. Assume that CompStores and TrueTech can cancel the order without penalty prior to delivery. TrueTech made delivery on January 1, 2018, and received Br250,000 on January 25, 2018.

When does TrueTech's arrangement with CompStores qualify as a contract for purposes of revenue recognition?

Solutio n

Solution: The arrangement qualifies as a contract on January 1, 2018. That's the date TrueTech makes delivery to CompStores.

Prior to delivery, neither TrueTech nor CompStores had performed an obligation under the contract, and both parties could cancel the order without penalty, so the arrangement didn't qualify as a contract for purposes of revenue recognition.

Step 2

Identify Separate Performance Obligation in the Contract

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- A seller needs to identify the various performance obligations in a contract to allocate the transaction price to these different performance obligations and to recognize revenue when or as it satisfies each individual one.

Example

1

Consider a company that offers online access to a clip-art library. The only way customers can access the clip art is by using the online access service.

Solution: Even though a clip art library and an online access service might be capable of being distinct outside the context of the contract, within the contract they are so intertwined that they are more appropriately thought of as a single

Example

2

CRD Corp. contracts with a customer to license and install payroll application software. In addition to the software license, CRD Corp. will provide installation services as part of this contract. The installation service could be performed by other entities because CRD does not customize the software.

Identify the separate performance obligations in this contract.

Solution

CRD promises both the software license and installation service. The software license provides a benefit on a standalone basis because it is not dependent upon installation by CRD, because the software can be installed by another entity. Therefore, the software license and the installation are not interdependent. In addition because the installation service does not modify the software and could be performed by another entity, the software and installation service are separately identifiable in the contract. Thus, the software license and the installation

Example

3

CRD Corp. contracts with a customer to license and install a payroll software application. In addition to the software license, CRD Corp. will provide installation services as part of this contract. The installation service customizes the software to integrate with other systems that the customer is currently using. Identify the separate performance obligations in this contract.

Solution

Because the installation service will modify the software and the software cannot be used until it is installed, the software and installation service are interdependent and are not separately identifiable in the contract.

Therefore, the second condition for being distinct is not met: The promise to deliver the software is not separately identifiable from the promise to install. Thus, the contract contains only one performance obligation—the software license and the installation service combined.

Step 3

**Determine the
Transaction Price**

Special Cases

- 1. Estimating Variable Consideration**
- 2. Right of Return**
- 3. The Time Value Of Money**

1. Estimating Variable Consideration

- Variable consideration is the portion of a transaction price that depends on the outcome of future events.
- Variable consideration is estimated as either the ***expected value*** or the ***most likely amount***

- If there are ***several*** possible outcomes, the expected value will be more appropriate.
- On the other hand, if only ***two outcomes*** are possible, the most likely amount might be the best indication of the amount the seller will likely receive.

**Examp
e**

TrueTech enters into a contract with ProSport Gaming to add ProSport's online games to the Tri-Net network. ProSport offers popular games and wants those games offered on the Tri-Net so ProSport can sell gems, weapons, health potions, and other game features that allow players to advance more quickly in a game. On January 1, 2018, ProSport pays TrueTech an upfront fixed fee of \$300,000 for six months of featured access. ProSport also will pay TrueTech a bonus of \$180,000 if Tri-Net users access ProSport games for at least 15,000 hours during the six-month period. TrueTech estimates a 75% chance that it will achieve the usage target and receive the \$180,000 bonus.

TrueTech would record the following entry for the receipt of the cash on January 1, 2018:

Cash	300,000
Deferred revenue	
300,000	

Subsequent entries to recognize revenue depend on whether TrueTech estimates the transaction price as the expected value or the

Alternative 1: Expected Value

The expected value would be calculated as a probability-weighted transaction price.

<u>Possible Amounts</u>	<u>Probabilities</u>
<u>Expected Amounts</u>	
\$480,000 (\$300,000 fixed fee + 180,000 bonus)	$\times 75\% = \$$
360,000	
\$300,000 (\$300,000 fixed fee + 0 bonus)	$\times 25\% =$
<u>75,000</u>	
Expected value of the contract price at inception	
\$435,000	

Alternative 2: Most Likely Amount

Because there is a greater chance of qualifying for the bonus than of not qualifying for the bonus, a transaction price based on the most likely amount would be \$300,000 + \$180,000, or **\$480,000**

Let's assume that TrueTech bases the estimate on the most likely amount, **\$480,000**. In each successive month TrueTech would recognize one month's revenue based on a total transaction price of \$480,000.

Because it previously recorded \$300,000 as deferred revenue, at the end of each month TrueTech would reduce deferred revenue by one-sixth of the \$300,000 as well as recognizing a bonus receivable for one-sixth of the \$180,000 bonus it expects to receive.

Deferred revenue ($\$300,000 \div 6$ months) 50,000

Bonus receivable ($\$180,000 \div 6$ months) **30,000**

After six months, TrueTech's deferred revenue account would have been reduced to a zero balance, and the bonus receivable account would have a balance of \$180,000 ($\$30,000 \times 6$).

At that point, TrueTech would know if the usage of ProSport products had reached the bonus threshold and would record one of the following two journal entries:

If TrueTech receives the bonus

Cash	180,000
Bonus receivable	
180,000	

If TrueTech does not receive the bonus

Service revenue	180,000
Bonus receivable	
180,000	

If TrueTech instead used the expected value as its estimate of the transaction price, the journal entries would be the same except that the amount of revenue recognized each month would be \$72,500 (**\$435,000** ÷ 6 months).

The reduction in the deferred revenue liability each month would still be \$50,000, and the amount of bonus receivable accrued each month would be \$22,500 (\$135,000 ÷ 6 months).

2. Right of Return

- Retailers usually give customers the right to return merchandise if customers decide they don't want it, are not satisfied with it, or are unable to resell it.
- is not a performance obligation
- represents a potential failure to satisfy the original performance obligation to provide goods that the customer wants to keep

EXAMPLE

Assume that TrueTech sold 1,000 Tri-Boxes to CompStores for \$240 each. TrueTech would record the following entry:

Cash ($\$240 \times 1,000$)	240,000
Sales revenue	
.....	240,000

If TrueTech estimates that CompStores will return five percent of the Tri-Boxes purchased, TrueTech would record a liability for that amount:

Sales returns ($\$240,000 \times 5\%$ estimated returns)	12,000
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3. THE TIME VALUE OF MONEY

- Arises when payment occurs either before [deferred revenue] or after delivery [account receivable], i.e. these arrangements in part are financing transactions
- In the case of an account receivable, the seller is making a loan to the customer between delivery and payment.
- In the case of a payment prior to delivery, the customer is making a loan to the seller by paying in advance.

EXAMPLE

On July 1, 2015, ABC Company sold goods to XYZ Company for Br 900,000 in exchange for a 4-year, zero-interest-bearing note with a face amount of Br 1,416,163. The goods have a cost on ABC's books of Br 590,000.

Questions:

- (a) How much revenue should ABC Company record on July 1, 2015?
- (b) How much revenue should it report related to this transaction on December 31, 2015?

Entry to record ABC's sale to XYZ Company on July 1, 2015, is as follows.

Notes Receivable		1,416,163
Sales Revenue	900,000	
Discount on Notes Receivable		516,163
Cost of Goods Sold	590,000	
Inventory	590,000	

Entry to record interest revenue at the end of the year, December 31, 2015.

Discount on Notes Receivable

54,000

Interest Revenue ($12\% \times \frac{1}{2} \times \text{Br } 900,000$)

54,000

Companies are not required to reflect the time value of money if the time period for payment is less than a year.

Step 4
Allocating Transaction
Price to Separate
Performance Obligations

Measures of standalone prices:

- 1. Adjusted market assessment approach**
- 2. Expected cost plus margin approach**
- 3. Residual approach**

**Examp
le**

XYZ Industries enters into a contract with a customer to sell three products for a total transaction price of \$650,000. Each product is appropriately classified as a separate performance obligation. XYZ Industries only sells products A and B on an individual basis so it must estimate the standalone selling price for product C. Information related to these three products is provided in the following table.

Product	Standalone Selling Price	Market Competitor Prices	Forecasted Cost
A	\$175,000	\$133,000	\$120,000
B	300,000	312,000	250,000
C	Not available	<u>200,000</u>	<u>130,000</u>
Total		<u><u>\$645,000</u></u>	<u><u>\$500,000</u></u>

How should XYZ Industries allocate the transaction price to the three products under each of the following three approaches:

- (a) the adjusted market assessment approach,
- (b) the expected-cost-plus-a-margin approach, and
- (c) the residual approach?

Solutions:

a. Adjusted market assessment approach

XYZ Industries should estimate the standalone selling prices based on the prices that the customers in the market would be willing to pay, such as **competitor prices**, and then allocate on a relative basis as follows:

Product	Market Competitor Prices	Percentage of Total	Allocated Transaction Price
A	\$ 133,000	20.62%	\$ 134,030
B	312,000	48.37	314,405
C	<u>200,000</u>	<u>31.01</u>	<u>201,565</u>
Total	<u><u>\$645,000</u></u>	<u><u>100.00%</u></u>	<u><u>\$650,000</u></u>

b. Expected-cost-plus-a-margin approach

XYZ Industries should estimate the standalone selling prices based on forecasted cost with an appropriate margin. Given a total cost of \$500,000 and a total transaction price of \$650,000, an appropriate margin would be 30% ($\$650,000/\$500,000$). Thus, to determine the allocated transaction price for each product, multiply the forecasted cost for each product by 1.30.

Product	Forecasted cost	Allocated transaction price
A	\$120,000	\$156,000
B	250,000	325,000
C	<u>130,000</u>	<u>169,000</u>
Total	<u><u>\$500,000</u></u>	<u><u>\$650,000</u></u>

c. Residual approach

Using the residual approach, XYZ Industries estimates the standalone selling price for product C by deducting the available standalone selling prices for products A and B from the total transaction price, which results in a residual amount of \$175,000 for Product C.

Product	Standalone Selling Price
Transaction Price	\$650,000
A	(175,000)
B	<u>(300,000)</u>
C	<u><u>\$ 175,000</u></u>

Example 2

**It is a Reading
Assignment**

Step 5
Recognize Revenue
When (or As) Each
Performance Obligation
is Satisfied

Recognizing Revenue at a Single Point in Time

Recognizing Revenue over a Period of Time

Recognizing Revenue at a Single Point in Time

Recognizes revenue recognizes revenue at a single point in time when control passes to the customer, which is more likely if the **customer**:

- a) has obligation to pay seller
- b) has legal title to the asset
- c) has possession of the asset
- d) has assumed the risks and rewards of ownership
- e) has accepted the asset

The entity should consider all of the facts and circumstances to make this determination.

➤ **Recognizing Revenue over a Period of Time**

Recognizes revenue over a period of time if (criteria):

- a) Customer consumes benefit as work performed,
- b) Customer controls asset as it's created, or
- c) Seller is creating an asset that has no alternative use to the seller and the seller has right to receive payment for

REVENUE RECOGNITION OVER TIME

The most notable context in which revenue may be recognized over time is **long-term construction contract accounting**.

Long-term contracts are a type of transaction where firms report revenue, costs, and gross profit **over time**, as opposed to at **a point in time**.

Long-term contracts frequently provide that seller (builder) may bill purchaser at intervals [continuous sale].

Two methods of accounting for long-term construction contracts:

- ◆ Percentage-of-completion method
- ◆ Cost-recovery (zero-profit) method

Example 1

At the beginning of 2018, the Harding Construction Company received a contract to build an office building for \$5 million. Harding will construct the building according to specifications provided by the buyer, and the project is estimated to take three years to complete. According to the contract, Harding will bill the buyer in installments over the construction period according to a prearranged schedule. Information related to the contract is as follows:

	2018	2019	2020
Construction costs incurred during the year	\$ 1,500,000	\$ 1,000,000	\$1,600,000
Construction costs incurred in prior years	-0-	1,500,000	2,500,000
Cumulative actual construction costs	1,500,000	2,500,000	4,100,000
Estimated costs to complete at end of year	2,250,000	1,500,000	-0-
Total estimated and actual construction costs	\$3,750,000	\$4,000,000	\$4,100,000
Billings made during the year	\$ 1,200,000	\$ 2,000,000	\$1,800,000
Cash collections during year	1,000,000	1,400,000	2,600,000

Percentage-of-Completion: Accounting Procedures

	2018	2019	2020
Construction costs:			
Construction costs incurred during the year	\$1,500,000	\$1,000,000	\$1,600,000
Construction costs incurred in prior years	<u>—0—</u>	<u>1,500,000</u>	<u>2,500,000</u>
Actual costs to date	1,500,000	2,500,000	4,100,000
Estimated remaining costs to complete	<u>2,250,000</u>	<u>1,500,000</u>	<u>—0—</u>
Total cost (estimated + actual)	<u><u>\$3,750,000</u></u>	<u><u>\$4,000,000</u></u>	<u><u>\$4,100,000</u></u>
Contract price	\$5,000,000	\$5,000,000	\$5,000,000
<i>Multiplied by:</i>	×	×	×
Percentage of completion	$\left(\frac{\$1,500,000}{\$3,750,000} \right)$	$\left(\frac{\$2,500,000}{\$4,000,000} \right)$	$\left(\frac{\$4,100,000}{\$4,100,000} \right)$
$\frac{\text{Actual costs to date}}{\text{Total cost (est. + actual)}}$	<u>= 40%</u>	<u>= 62.5%</u>	<u>= 100%</u>
<i>Equals:</i>			
Cumulative revenue to be recognized to date	\$2,000,000	\$3,125,000	\$5,000,000
<i>Less:</i>			
Revenue recognized in prior periods	<u>—0—</u>	<u>(2,000,000)</u>	<u>(3,125,000)</u>
<i>Equals:</i>			
Revenue recognized in the current period	<u><u>\$2,000,000</u></u>	<u><u>\$1,125,000</u></u>	<u><u>\$1,875,000</u></u>
Journal entries to recognize revenue:			
Construction in progress (CIP)	500,000	125,000	275,000
Cost of construction	1,500,000	1,000,000	1,600,000
Revenue from long-term contracts	\$2,000,000	\$1,125,000	\$1,875,000

Example 2

Percentage-of-Completion Method: Profitable Contract

Hardhat Construction Company has a contract to construct a £4,500,000 bridge at an estimated cost of £4,000,000. The contract is to start in July 2015, and the bridge is to be completed in October 2017. The following data pertain to the construction period.

	<u>2015</u>	<u>2016</u>	<u>2017</u>
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

	<u>2015</u>	<u>2016</u>	<u>2017</u>
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

	<u>2015</u>	<u>2016</u>	<u>2017</u>
Contract price	<u>£4,500,000</u>	<u>£4,500,000</u>	<u>£4,500,000</u>
Less estimated cost:			
Costs to date	1,000,000	2,916,000	4,050,000
Estimated costs to complete	<u>3,000,000</u>	<u>1,134,000</u>	<u>—</u>
Estimated total costs	<u>4,000,000</u>	<u>4,050,000</u>	<u>4,050,000</u>
Estimated total gross profit	<u>£ 500,000</u>	<u>£ 450,000</u>	<u>£ 450,000</u>
Percent complete	25%	72%	100%
	$\left(\frac{£1,000,000}{£4,000,000} \right)$	$\left(\frac{£2,916,000}{£4,050,000} \right)$	$\left(\frac{£4,050,000}{£4,050,000} \right)$

	<u>2015</u>	<u>2016</u>	<u>2017</u>
Costs to date	£1,000,000	£2,916,000	£4,050,000
Estimated costs to complete	3,000,000	1,134,000	—
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Cash collected during the year	750,000	1,750,000	2,000,000

	<u>2015</u>	<u>2016</u>	<u>2017</u>
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

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

	<u>To Date</u>	<u>Recognized in Prior Years</u>	<u>Recognized in Current Year</u>
<u>2015</u>			
Revenues ($£4,500,000 \times 25\%$)	£1,125,000		£1,125,000
Costs	<u>1,000,000</u>		<u>1,000,000</u>
Gross profit	<u>£ 125,000</u>		<u>£ 125,000</u>
<u>2016</u>			
Revenues ($£4,500,000 \times 72\%$)	£3,240,000	£1,125,000	£2,115,000
Costs	<u>2,916,000</u>	<u>1,000,000</u>	<u>1,916,000</u>
Gross profit	<u>£ 324,000</u>	<u>£ 125,000</u>	<u>£ 199,000</u>
<u>2017</u>			
Revenues ($£4,500,000 \times 100\%$)	£4,500,000	£3,240,000	£1,260,000
Costs	<u>4,050,000</u>	<u>2,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 450,000</u>	<u>£ 324,000</u>	<u>£ 126,000</u>

	<u>To Date</u>	<u>Recognized in Prior Years</u>	<u>Recognized in Current Year</u>
<u>2015</u>			
Revenues (£4,500,000 × 25%)	£1,125,000		£1,125,000
Costs	<u>1,000,000</u>		<u>1,000,000</u>
Gross profit	<u>£ 125,000</u>		<u>£ 125,000</u>
<u>2016</u>			
Revenues (£4,500,000 × 72%)	£3,240,000	£1,125,000	£2,115,000
Costs	<u>2,916,000</u>	<u>1,000,000</u>	<u>1,916,000</u>
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Revenues (£4,500,000 × 100%)	£4,500,000	£3,240,000	£1,260,000
Costs	<u>4,050,000</u>	<u>2,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 450,000</u>	<u>£ 324,000</u>	<u>£ 126,000</u>

	<u>2015</u>	<u>2016</u>	<u>2017</u>
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

Content of Construction in Process Account—Percentage-of-Completion Method

Construction in Process			
2015 Construction costs	£1,000,000	12/31/17	To close
2015 Recognized gross profit	125,000		completed
2016 Construction costs	1,916,000		project
2016 Recognized gross profit	199,000		£4,500,000
2017 Construction costs	1,134,000		
2017 Recognized gross profit	126,000		
Total	<u>£4,500,000</u>	Total	<u>£4,500,000</u>

Financial Statement Presentation—Percentage-of-Completion

Computation of Unbilled Contract Price at 12/31/15

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

Financial Statement Presentation—Percentage-of-Completion Method (2015)

HARDHAT CONSTRUCTION COMPANY	
<u>Income Statement</u> (from Illustration 18A-6)	<u>2015</u>
Revenue from long-term contracts	£1,125,000
Costs of construction	<u>1,000,000</u>
Gross profit	<u>£ 125,000</u>
<u>Statement of Financial Position (12/31)</u>	<u>2015</u>
Current assets	
Accounts receivable (£900,000 – £750,000)	£ 150,000
Inventory	
Construction in process	£1,125,000
Less: Billings	<u>900,000</u>
Costs and recognized profit in excess of billings	225,000

Financial Statement Presentation—Percentage-of-Completion Method (2016)

HARDHAT CONSTRUCTION COMPANY	
<u>Income Statement</u> (from Illustration 18A-6)	2016
Revenue from long-term contracts	£2,115,000
Costs of construction	1,916,000
Gross profit	£ 199,000
<u>Statement of Financial Position (12/31)</u>	
Current assets	
Accounts receivable ($£150,000 + £2,400,000 - £1,750,000$)	£ 800,000
Current liabilities	
Billings	£3,300,000
Less: Construction in process	<u>3,240,000</u>
Billings in excess of costs and recognized profits	60,000

**Cost-Recovery (Zero-Profit) Method:
Profitable contract**

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.

The zero-gross profit approach involves the following accounting procedures:

1. Accumulate construction costs by debiting an asset (inventory) account called construction in progress (CIP).
2. When the contractor sends bills to the customer throughout the project, increase accounts receivable with a debit and increase with a credit the account

3. When the contractor receives cash from the customer, increase cash with a debit and decrease accounts receivable with a credit.
4. Recognize the actual costs incurred and the same amount of revenue each year. Thus, the firm reports no gross profit. Record the total gross profit at the conclusion of the project.
5. At the end of the project, remove from the books the CIP account with a credit and the billings on construction in progress account with a debit.

Illustration: Hardhat Construction would report the following revenues and costs for 2015–2017

	<u>To Date</u>	<u>Recognized in Prior Years</u>	<u>Recognized in Current Year</u>
<u>2015</u>			
Revenues (costs incurred)	£1,000,000		£1,000,000
Costs	<u>1,000,000</u>		<u>1,000,000</u>
Gross profit	<u>£ 0</u>		<u>£ 0</u>
<u>2016</u>			
Revenues (costs incurred)	£2,916,000	£1,000,000	£1,916,000
Costs	<u>2,916,000</u>	<u>1,000,000</u>	<u>1,916,000</u>
Gross profit	<u>£ 0</u>	<u>£ 0</u>	<u>£ 0</u>
<u>2017</u>			
Revenues ($£4,500,000 \times 100\%$)	£4,500,000	£2,916,000	£1,584,000
Costs	<u>4,050,000</u>	<u>2,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 450,000</u>	<u>£ 0</u>	<u>£ 450,000</u>

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

	<u>To Date</u>	<u>Recognized in Prior Years</u>	<u>Recognized in Current Year</u>
<u>2015</u>			
Revenues (costs incurred)	£1,000,000		£1,000,000
Costs	<u>1,000,000</u>		<u>1,000,000</u>
Gross profit	<u>£ 0</u>		<u>£ 0</u>
<u>2016</u>			
Revenues (costs incurred)	£2,916,000	£1,000,000	£1,916,000
Costs	<u>2,916,000</u>	<u>1,000,000</u>	<u>1,916,000</u>
Gross profit	<u>£ 0</u>	<u>£ 0</u>	<u>£ 0</u>
<u>2017</u>			
Revenues ($£4,500,000 \times 100\%$)	£4,500,000	£2,916,000	£1,584,000
Costs	<u>4,050,000</u>	<u>2,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 450,000</u>	<u>£ 0</u>	<u>£ 450,000</u>

Journal Entries—Cost-Recovery Method

	<u>2015</u>	<u>2016</u>	<u>2017</u>
Construction Expenses	1,000,000	1,916,000	
Revenue from Long-Term Contracts		1,916,000	
(To recognize costs and related expenses)	1,000,000		
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)			

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

	<u>To Date</u>	<u>Recognized in Prior Years</u>	<u>Recognized in Current Year</u>
<u>2015</u>			
Revenues (costs incurred)	£1,000,000		£1,000,000
Costs	<u>1,000,000</u>		<u>1,000,000</u>
Gross profit	<u>£ 0</u>		<u>£ 0</u>
<u>2016</u>			
Revenues (costs incurred)	£2,916,000	£1,000,000	£1,916,000
Costs	<u>2,916,000</u>	<u>1,000,000</u>	<u>1,916,000</u>
Gross profit	<u>£ 0</u>	<u>£ 0</u>	<u>£ 0</u>
<u>2017</u>			
Revenues ($£4,500,000 \times 100\%$)	£4,500,000	£2,916,000	£1,584,000
Costs	<u>4,050,000</u>	<u>2,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 450,000</u>	<u>£ 0</u>	<u>£ 450,000</u>

Comparison of Gross Profit Recognized under Different Methods

	<u>Percentage-of-Completion</u>	<u>Cost-Recovery</u>
2015	£125,000	£ 0
2016	199,000	0
2017	126,000	450,000

Financial Statement Presentation—Cost-Recovery Method

HARDHAT CONSTRUCTION COMPANY			
<u>Income Statement</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Revenue from long-term contracts	£1,000,000	£1,916,000	£1,584,000
Costs of construction	<u>1,000,000</u>	<u>1,916,000</u>	<u>1,134,000</u>
Gross profit	<u>£ 0</u>	<u>£ 0</u>	<u>£ 450,000</u>

<u>Statement of Financial Position (12/31)</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Current assets			
Inventories			
Construction in process	£1,000,000		
Less: Billings	<u>900,000</u>		
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	<u>2,916,000</u>		
Billings in excess of costs and recognized profits		£ 384,000	£ –0–

Long-Term Contract Losses

1. Loss in Current Period on a Profitable Contract [Periodic loss occurs for profitable project]

- ▶ Percentage-of-completion method only, the estimated cost increase requires a current-period adjustment of gross profit recognized in prior periods.

2. Loss on an Unprofitable Contract [Loss is projected on the entire project]

- ▶ Under both percentage-of-completion and cost-recovery methods, the company must recognize in the current period the entire expected contract loss.

Example: Loss in Current Period

	2014	2015	2016
Contract price	\$675,000	\$675,000	\$675,000
Cost incurred current year	150,000	287,400	215,436
Estimated cost to complete in future years	450,000	215,436	0
Billings to customer current year	135,000	360,000	180,000
Cash receipts from customer Current year	112,500	262,500	300,000

Prepare the journal entries to record revenue and expense for 2014, 2015, and 2016 assuming the estimated cost to complete at the end of 2015 was \$215,436.

	2014	2015	2016
Costs incurred to date	\$ 150,000	\$ 437,400	\$ 652,836
Estimated cost to complete	450,000	215,436	
Est. total contract costs	600,000	652,836	652,836
Est. percentage complete	25.0%	67.0%	100.0%
Contract price	675,000	675,000	675,000
Revenue recognizable	168,750	452,250	675,000
Rev. recognized prior year		(168,750)	(452,250)
Rev. recognized currently	168,750	283,500	222,750
Costs incurred currently	(150,000)	(287,400)	(215,436)
Gross profit recognized	\$ 18,750	\$ (3,900)	\$ 7,314

	2014	2015	2016
Construction in Process	18,750		7,314
Construction Expenses	150,000		215,436
Revenue from LT Contracts	168,750		222,750
Construction in Process		3,900	
Construction Expenses		287,400	
Revenue from LT Contracts		283,500	

	2014	2015	2016
Contract price	\$675,000	\$675,000	\$675,000
Cost incurred current year	150,000	287,400	246,038
Estimated cost to complete in future years	450,000	246,038	0
Billings to customer current year	135,000	360,000	180,000
Cash receipts from customer Current year	112,500	262,500	300,000

Prepare the journal entries for 2014, 2015, and 2016 assuming the estimated cost to complete at the end of 2015 was **\$246,038** instead of \$170,100.

Example: Loss on Unprofitable Contract

	2014	2015	2016
Costs incurred to date	\$ 150,000	\$ 437,400	\$ 683,438
Estimated cost to complete	450,000	246,038	
Est. total contract costs	600,000	683,438	683,438
Est. percentage complete	25.0%	64.0%	100.0%
Contract price	675,000	675,000	675,000
Revenue recognizable	168,750	432,000	675,000
Rev. recognized prior year		(168,750)	(432,000)
Rev. recognized currently	168,750	263,250	243,000
Costs incurred currently	(150,000)	(290,438)	(243,000)
Gross profit recognized	\$ 18,750	\$ (27,188)	\$ -

$\$675,000 - 683,438 = (8,438)$ cumulative
loss

	2014	2015	2016
Construction in Process	18,750		-
Construction Expenses	150,000		243,000
Revenue from LT Contracts	168,750		243,000

Construction Expenses	290,438
Construction in Process	27,188
Revenue from LT Contracts	263,250

For the **Cost-Recovery** method, companies would recognize the following loss :

	2014	2015	2016
Loss on LT Contracts		8,438	
Construction in Process		8,438	