

# Study Unit Two

## Income Statement Items

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## 2.1 Foreign Currency Transaction Gains and Losses

### Definitions

The **functional currency** is the currency of the primary economic environment in which the entity operates. Normally, that environment is the one in which it primarily generates and expends cash.

A **foreign currency** is any currency other than the entity's functional currency.

The current exchange rate is the rate used for currency conversion.

**Foreign currency transaction** terms are stated in a currency different from an entity's functional currency.

- For example, if an entity whose functional currency is the U.S. dollar purchases inventory on credit from a German entity, payment is to be in euros.

### Initial Measurement

The initial measurement of the transaction must be in the reporting entity's functional currency.

- The exchange rate used is the rate in effect on the date the transaction was initially recognized.

#### Example 2-1 Foreign Currency Transaction -- Initial Measurement

On November 15, Year 1, JRF Corporation, a U.S. entity, purchases and receives inventory from Paris Corporation, a French entity. The transaction is fixed in euros and calls for JRF to pay Paris €500,000 on January 15, Year 2. On November 15, Year 1, the euro-dollar exchange rate is \$1.2 to €1.

<u>November 15, Year 1:</u>		
Inventory	\$600,000	
Accounts payable (€500,000 × 1.2 exchange rate)		\$600,000

## Subsequent Measurement

A **foreign currency transaction gain or loss** results from a change in the exchange rate between the date the transaction was recognized, the date of the financial statements, and the date the transaction is settled.

- This gain or loss is included in the income statement in the period the exchange rate changes.
- If the monetary aspect of the transaction has not yet occurred at the end of the reporting period, monetary items (accounts payable and accounts receivable) are measured at the period-end exchange rate.

### Example 2-2 Foreign Currency Transaction -- Gain or Loss

In continuation of Example 2-1, the euro-dollar exchange rate was \$1.4 to €1 on December 31, Year 1, and \$1.55 to €1 on January 15, Year 2.

December 31, Year 1 (financial statements day):

Loss on foreign currency transactions	\$100,000	
Accounts payable [ $\$600,000 - (\text{€}500,000 \times 1.4 \text{ year-end exchange rate})$ ]		\$100,000

For the period between the initial recognition of the transaction (November 15, Year 1) and the date of the financial statements (December 31, Year 1), the dollar has depreciated against the euro. At that date, €500,000 euros cost \$700,000 ( $\text{€}500,000 \times 1.4$ ). On December 31, Year 1, accounts payable is reported at \$700,000, and the loss on foreign currency transactions is reported at \$100,000.

January 15, Year 2 (transaction settlement day):

Accounts payable	\$700,000	
Loss on foreign currency transactions [ $\text{€}500,000 \times (1.55 - 1.4)$ ]	75,000	
Cash ( $\text{€}500,000 \times 1.55 \text{ settlement date exchange rate}$ )		\$775,000

The loss of \$75,000 on foreign currency transactions is included in the Year 2 income statement.

NOTE: The total loss recognized on the exchange rate difference is \$175,000 [ $\text{€}500,000 \times (1.2 - 1.55)$ ].

## 2.2 Earnings per Share (EPS)

**Earnings per share (EPS)** is the amount of current-period earnings that can be associated with a single share of a corporation's common stock.

- The guidance regarding calculation and presentation of EPS must be followed by **public entities** and by other entities that choose to report EPS.
- EPS is calculated only for common stock.



Success Tip

The topic of earnings per share has been tested continually on CPA Exams, often through calculations. Several questions testing earnings per share will likely appear on the exam.

### Basic Earnings per Share (BEPS)

All corporations must report two BEPS amounts on the face of the income statement. Their numerators are **income from continuing operations** and **net income**, respectively.

$$\text{BEPS} = \frac{\text{Income available to common shareholders}}{\text{Weighted-average number of common shares outstanding}}$$

#### Example 2-3 Basic Earnings per Share (BEPS)

At year end, an entity's capital structure consisted of 10,000,000 shares of \$1 par-value common stock. The entity issued no new shares during the year. Its income from continuing operations and net income for the year were \$1,278,000 and \$1,141,000, respectively.

BEPS calculations:

Income from continuing operations: \$1,278,000 ÷ 10,000,000 = \$0.128

Net income: \$1,141,000 ÷ 10,000,000 = \$0.114

If an entity has no discontinued operations, the income from continuing operations equals net income. Thus, one amount of BEPS for net income available to common shareholders is presented on the face of the income statement.

If a discontinued operation is reported, basic and diluted EPS amounts for the discontinued operation are presented on the face of the income statement or in the notes.

## Calculation of the BEPS Numerator

**Income available to common shareholders** is the BEPS numerator.

- Thus, neither BEPS amount (income from continuing operations or net income) is calculated directly from the amount reported for that line item on the income statement.
  - Income in the BEPS numerator is reduced by dividends
    - ▶ **Declared in the current period on preferred stock (whether or not paid)** and
    - ▶ **Accumulated for the current period on cumulative preferred stock (whether or not declared).**
  - Dividends paid in the current period for undistributed accumulated preferred dividends for prior years do not affect the calculation. They were included in BEPS of prior years.
- The following calculation is performed for net income and income from continuing operations (or other number):

$$\begin{array}{r}
 \text{Income statement amount} \\
 - \text{Dividends on preferred stock for the current period} \\
 \quad \text{(cumulative or declared noncumulative)} \\
 \hline
 \hline
 \text{Income available to common shareholders}
 \end{array}$$

### Example 2-4 BEPS Numerator

An entity has two classes of preferred stock. It declared a 4% dividend on its \$100,000 of noncumulative preferred stock. The entity did not declare a dividend on its \$200,000 of 6% cumulative preferred stock. Undistributed dividends for the past 4 years have accumulated on this stock. The following is an excerpt from the entity's condensed income statement for the year:

Income from continuing operations before income taxes		\$1,666,667
Income taxes		(666,667)
<b>Income from continuing operations</b>		<u><b>\$1,000,000</b></u>
Discontinued operations:		
Loss from operations of component unit --		
Pipeline Division (including gain on disposal of \$30,000)	\$(216,667)	
Income tax benefit	<u>86,667</u>	
Loss on discontinued operations		(130,000)
<b>Net income</b>		<u><b>\$ 870,000</b></u>

The numerators for income from continuing operations and for net income are calculated as follows:

	<b>Income from Continuing Operations</b>	<b>Net Income</b>
<b>Income statement amounts</b>	<u><b>\$1,000,000</b></u>	<u><b>\$870,000</b></u>
<b>Declared or accumulated preferred dividends:</b>		
Dividends declared on noncumulative preferred stock in the current period	(4,000)	(4,000)
Dividends accumulated on cumulative preferred stock in the current period	<u>(12,000)</u>	<u>(12,000)</u>
<b>Income available to common shareholders</b>	<u><b>\$ 984,000</b></u>	<u><b>\$854,000</b></u>

## Calculation of the BEPS Denominator

The **weighted-average number of common shares outstanding** is determined by relating the portion of the period that the shares were outstanding to the total time in the period.

- Weighting is necessary because some shares may have been issued or reacquired during the period.

### Example 2-5 BEPS Denominator

Using the data from Example 2-4, assume the following common stock transactions during the year just ended:

<u>Date</u>	<u>Stock Transactions</u>	<u>Common Shares Outstanding</u>		<u>Portion of Year</u>	=	<u>Weighted Average</u>
Jan 1	Beginning balance	240,000	x	2 ÷ 12	=	40,000
Mar 1	Issued 60,000 shares	300,000	x	5 ÷ 12	=	125,000
Aug 1	Repurchased 20,000 shares	280,000	x	3 ÷ 12	=	70,000
Nov 1	Issued 80,000 shares	360,000	x	2 ÷ 12	=	60,000
	<b>Total</b>					<b><u>295,000</u></b>

The **BEPS** amounts for income from continuing operations and net income are **\$3.335** ( $\$984,000 \div 295,000$ ) and **\$2.895** ( $\$854,000 \div 295,000$ ), respectively. Basic loss per share (negative BEPS) from discontinued operations of \$0.44 ( $\$130,000 \div 295,000$ ) is reported on the face of the income statement or in the notes.

**Stock dividends** and **stock splits** require an adjustment to the weighted-average of common shares outstanding.

- EPS amounts for all periods presented are adjusted **retroactively** to reflect the change in capital structure as if it had occurred at the **beginning** of the **first period** presented.
- Adjustments are made for such changes even if they occur after the end of the current reporting period but before issuance (or the availability for issuance) of the financial statements.

### Example 2-6 Effect of Stock Dividend and Stock Split on BEPS Denominator

Using the data from Example 2-4, assume declaration of a 50% common stock dividend on June 1 and a 2-for-1 common stock split on October 1:

Date	Stock Transactions	Common Shares Outstanding	Restate for Stock Div.	Restate for Stock Split	Portion of Year	Weighted Average
Jan 1	Beginning balance	240,000	x 1.5	x 2	x 2 ÷ 12	= 120,000
Mar 1	Issued 60,000 shares	300,000	x 1.5	x 2	x 5 ÷ 12	= 375,000
Jun 1	Distrib. 50% stock dividend	450,000				
Aug 1	Repurchased 20,000 shares	430,000		x 2	x 3 ÷ 12	= 215,000
Oct 1	Distrib. 2-for-1 stock split	860,000				
Nov 1	Issued 80,000 shares	940,000			x 2 ÷ 12	= 156,667
	<b>Total</b>					<b><u>866,667</u></b>

The **BEPS** amounts for income from continuing operations and net income are **\$1.135** ( $\$984,000 \div 866,667$ ) and **\$0.985** ( $\$854,000 \div 866,667$ ), respectively. Basic loss per share (negative BEPS) from discontinued operations of \$0.15 ( $\$130,000 \div 866,667$ ) is reported in the income statement or in the notes.

**Contingently issuable shares** are shares issuable for little or no cash consideration upon satisfaction of certain conditions.

- Contingently issuable common shares are treated as outstanding and included in the calculation of the BEPS denominator from the date when the conditions for contingent issuance have been met.

## Diluted Earnings per Share (DEPS)

An entity with **only common stock** outstanding (a simple capital structure) must report only BEPS amounts but not DEPS.

- An entity that does not have a simple capital structure must report DEPS as well as BEPS. Thus, the DEPS calculation includes the effects of **dilutive potential common shares (PCS)**.
  - PCS are securities or other contracts that may entitle the holder to obtain common stock.
  - PCS are included in the DEPS calculation only if they are dilutive.

**Dilution** is a reduction in BEPS (or an increase in loss per share) resulting from the assumption that

- **Convertible** securities (preferred stock or debt) were converted
- **Stock options** were exercised

### Calculation of DEPS

DEPS measures performance after considering the effect on the numerator and denominator of dilutive PCS. DEPS is calculated as follows:

- **The BEPS denominator is increased** to include the weighted-average number of additional shares of common stock that would have been outstanding if dilutive PCS had been issued.
- **The BEPS numerator** is adjusted to **add back** any dividends on convertible preferred stock and the after-tax interest expense (an amount that includes amortization of discount or premium) related to any convertible debt.

$$\text{DEPS} = \frac{\text{BEPS numerator} + \text{Effect of dilutive PCS}}{\text{BEPS denominator} + \text{Effect of dilutive PCS}}$$

#### Example 2-7 Calculation of DEPS

Green Company's current year BEPS is \$40 (\$400,000 income available to common shareholders ÷ 10,000 weighted-average number of common shares outstanding). No dividend was declared this year, and the company's effective tax rate is 30%. The following PCS were outstanding during the year:

- \$500,000 face amount, 10-year, 6%, convertible bonds. The bonds were originally issued at par, and each \$5,000 bond is convertible into 10 of Green's common shares.
- 10,000 shares of \$20 par, 10%, cumulative, convertible preferred stock. The conversion ratio is 5 shares of preferred stock to 2 shares of common stock.

-- Continued on next page --

### Example 2-7 -- Continued

Assuming that the bonds and the preferred stock are dilutive securities, the DEPS for the period is calculated as follows:

#### Adjustment of BEPS Numerator

**Convertible bonds:** The BEPS numerator is adjusted to add back the after-tax amount of interest expense recognized in the current period associated with the convertible bonds. Because the bonds were issued at par, interest expense is calculated using the bonds' stated rate. Thus, the amount added back is calculated as follows:

$$\$500,000 \text{ face amount} \times 6\% \times (1.0 - .30) = \$21,000$$

**Cumulative convertible preferred stock:** The BEPS numerator is adjusted to add back any convertible preferred dividends that were declared or accumulated. No dividends were declared. However, the income available to common shareholders of \$400,000 reflected the dividends accumulated for the current period on cumulative convertible preferred stock. Thus, the amount added back is calculated as follows:

$$10,000 \text{ preferred shares} \times \$20 \text{ par} \times 10\% = \$20,000$$

#### Adjustment of BEPS Denominator

**Convertible bonds:** The BEPS denominator is increased to include the weighted-average number of additional shares of common stock that would have been outstanding if the dilutive convertible bonds (PCS) had been converted. Thus, the increase is calculated as follows:

$$(\$500,000 \text{ face amount} \div \$5,000 \text{ par}) \times 10 = 1,000 \text{ common shares}$$

**Cumulative convertible preferred stock:** The BEPS denominator is increased to include the weighted-average number of additional shares of common stock that would have been outstanding if the dilutive convertible preferred stock (PCS) had been converted. Thus, the increase is calculated as follows:

$$10,000 \text{ preferred shares} \div (5 \div 2) \text{ conversion ratio} = 4,000 \text{ common shares}$$

$$\text{The DEPS for the year is } \$29.40 = \frac{\$400,000 + \$21,000 + \$20,000}{10,000 + 1,000 + 4,000}$$

- The calculation of DEPS does not assume the conversion or exercise of antidilutive securities, i.e., securities that increase EPS or decrease loss per share.
- Dilutive PCS issued during a period are included in the DEPS denominator for the period they were outstanding.
  - Moreover, dilutive convertible securities that were actually converted are included for the period **before** conversion. Common shares actually issued are included for the period **after** conversion.
- Previously reported DEPS is not retroactively adjusted for subsequent conversions or changes in the market price of the common stock.

Three methods are used to determine the **dilutive effect** of PCS:

1. The if-converted method for convertible securities,
2. The treasury stock method for call options, and
3. The reverse treasury stock method for put options.

## The If-Converted Method

The if-converted method calculates DEPS assuming the conversion of all dilutive convertible securities at the **beginning** of the period or at the **time of issue, if later**.

- The conversion of **antidilutive** securities (those whose conversion increase EPS or decrease loss per share) is **not assumed**. Thus, convertible PCS are antidilutive if the current dividend or after-tax interest per common share issuable exceeds BEPS.

In determining whether PCS are dilutive, each issue or series of issues of PCS are considered separately (rather than in the aggregate) and in sequence from the most dilutive to the least dilutive. The goal of this process is to maximize the dilution of BEPS (lowest possible DEPS).

- The **control number** to establish whether PCS are dilutive or antidilutive is the BEPS for the period.
  - If a discontinued operation is reported, the control number is BEPS from continuing operations.
- The issue with the lowest earnings per incremental share is included in DEPS before issues with higher earnings per incremental share. If the issue with the lowest earnings per incremental share is found to be dilutive with respect to BEPS, it is included in a trial calculation of DEPS.
- If the issue with the next lowest earnings per incremental share is dilutive with respect to the first trial calculation of DEPS, it is included in a new DEPS calculation that adjusts the numerator and denominator from the prior calculation.
- This process continues until all issues of PCS have been tested.

### Example 2-8 The If-Converted Method for DEPS

Using the data from Example 2-7 on the previous pages, assume that Green's current-year BEPS is \$23.20 (\$232,000 income available to common shareholders ÷ 10,000 weighted-average number of common shares outstanding). The DEPS for the period is calculated as follows:

The earnings per incremental share of the convertible bonds is \$21 (\$21,000 ÷ 1,000). The earnings per incremental share of the cumulative convertible preferred stock is \$5 (\$20,000 ÷ 4,000).

Because the preferred stock's earnings per incremental share (\$5) is lower than bond's earnings per incremental share (\$21), it is more dilutive. Thus, it is compared first with the BEPS for the period (the control number). Because \$5 is lower than \$23.20, the cumulative convertible preferred stock is dilutive. Accordingly, it is included in the trial calculation of DEPS.

$$\text{The result is } \$18 = \frac{\$232,000 + \$20,000}{10,000 + 4,000}$$

The next step is to compare the earnings per incremental share of the convertible bonds (\$21) with the new control number (\$18). Because it is higher than the control number, the convertible bonds are antidilutive and must not be included in the calculation of DEPS. Thus, the DEPS for the period is **\$18**.

NOTE: The inclusion of convertible bonds and preferred stock in the calculation of DEPS results in DEPS of \$18.20 [(\$232,000 + \$20,000 + \$21,000) ÷ (10,000 + 4,000 + 1,000)]. This amount (\$18.20) is not the lowest possible DEPS (\$18).

NOTE: The inclusion of only convertible bonds in the calculation of DEPS results in DEPS of \$23 [(\$232,000 + \$21,000) ÷ (10,000 + 1,000)]. This amount also is not the lowest DEPS possible (\$18).

If a discontinued operation is reported, the same number of shares used to adjust the denominator for income from continuing operations is used to adjust the DEPS denominator for income from discontinued operations. This rule applies even if the effect on the other amounts is antidilutive.

## Treasury Stock Method

The second method used to determine the dilutive effect of PCS is the treasury stock method. It is used to determine the dilutive effect of outstanding **call options**.

- Call options are **dilutive** only if the **average market price** for the period of the common shares is **greater** than the **exercise price** of the options (they are in the money).

The treasury stock method assumes that

- The options are exercised at the beginning of the period (or time of issuance, if later),
- Common shares are issued, and
- The proceeds of exercise are used to purchase common stock at the period's average market price.

If the options are dilutive, their exercise affects only the denominator in the computation of DEPS. Any additional number of common shares outstanding (incremental shares) is added as an adjustment of the BEPS denominator.

- Because the numerator in the computation of DEPS is not affected, the earnings per incremental share is \$0. Thus, options are generally the most dilutive PCS. They should be included first (before other series of PCS) in the trial calculation of DEPS.

The number of incremental shares from dilutive call options that must be included in the denominator of the DEPS computation is calculated as follows:

- Proceeds from exercising the options (Number outstanding  $\times$  Exercise price).
- Number of shares assumed purchased (Proceeds from exercise  $\div$  Average market price for the period of common shares).
- Number of incremental shares (Number of common shares assumed issued – Number of common shares assumed purchased).
  - The number of common shares assumed issued is the amount of common shares that would have been issued assuming all the options were exercised.

### Example 2-9 The Effect of Call Options on DEPS

Troupe Company's current-year BEPS is \$11 (\$440,000 net income  $\div$  40,000 weighted-average number of common shares outstanding). Unexercised call options to purchase 20,000 shares of Troupe's common stock at \$20 per share were outstanding at the beginning and end of the year. For the year, the average market price per share of Troupe's common stock was \$25. The DEPS for the current year is calculated as follows:

- The call options are dilutive because the exercise price (\$20) is less than the average market price (\$25).
- The proceeds from exercising the options are \$400,000 (20,000 number of call options outstanding  $\times$  \$20 exercise price of the options).
- The number of shares assumed purchased is 16,000 (\$400,000 proceeds from exercising the options  $\div$  \$25 average market price).
- The number of incremental shares is **4,000** (20,000 number of common shares assumed issued – 16,000 number of common shares assumed purchased).
- The number of incremental shares is added to the BEPS denominator in the computation of DEPS.

Thus, DEPS for the current year is  $\$10 = \frac{\$440,000}{40,000 + 4,000}$

## Reverse Treasury Stock Method

The third method used to determine the dilutive effect of PCS is the reverse treasury stock method. It is used when the entity has entered into contracts to repurchase its own stock, for example, when it has **written put options** held by other parties.

- When the contracts are **in the money** (the exercise price exceeds the average market price), the potential dilutive effect on EPS is calculated by
  - Assuming the issuance at the beginning of the period of sufficient shares to raise the proceeds needed to satisfy the contracts,
  - Assuming those proceeds are used to repurchase shares, and
  - Including the excess of shares assumed to be issued over those assumed to be repurchased in the calculation of the DEPS denominator.

## 2.3 Revenue from Contracts with Customers

The guidance for recognition of revenue from contracts with customers (ASC 606) provides a **single, principles-based** model for all contracts with customers regardless of the industry-specific or transaction-specific fact pattern.

The **core principle** is that an entity recognizes revenue for the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in the exchange.

This guidance applies to all contracts with customers **except** the following:

- Leases
- Financial instruments
- Contractual rights and obligations within the scope of specific topics, such as receivables, derivatives and hedging, insurance, and guarantees (other than product or service warranties)
- Nonmonetary exchanges between entities in the same line of business to facilitate sales to customers or potential customers

Below is the **five-step model** for recognizing revenue from contracts with customers.

- Step 1: Identify the contract(s) with a customer.
- Step 2: Identify the performance obligations in the contract.
- Step 3: Determine the transaction price.
- Step 4: Allocate the transaction price to the performance obligations in the contract.
- Step 5: Recognize revenue when (or as) a performance obligation is satisfied.

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## Step 1: Identify the Contract with a Customer

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

A contract is accounted for under ASC 606 if **all** of the following criteria are met:

- The contract was approved by the parties.
- The contract has commercial substance.
- Each party's rights can be identified regarding
  - Goods or services to be transferred and
  - The payment terms.
- It is probable that the entity will collect substantially all of the consideration to which it is entitled according to the contract.
  - **Probable** means the future event is likely to occur.

If the criteria described above are not met (e.g., if collectibility cannot be reliably estimated), the consideration received is recognized as a liability, and **no revenue is recognized** until the criteria are met.

- However, even when the criteria described above are not met, revenue in the amount of **nonrefundable consideration** received from the customer is recognized if at least one of the following has occurred:
  - The contract has been terminated.
  - Control over the goods or services was transferred to the customer and the entity has stopped transferring (and has no obligation to transfer) additional goods or services to the customer.
  - The entity (1) has no obligation to transfer goods or services and (2) has received substantially all consideration from the customer.

A **contract modification** exists when the parties approve a change in the scope or price of a contract.

- It is accounted for as a **separate contract** if the following conditions are met:
  - The scope of the contract increases because of the addition of promised goods or services that are distinct, and
  - The price of the contract increases by an amount of consideration that reflects the entity's standalone selling prices of the additional promised goods or services.

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## Step 2: Identify the Performance Obligations in the Contract

A **performance obligation** is a promise in a contract with a customer to transfer to the customer

- A good or service that is distinct or
- A series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer.

Promised goods or services are **distinct** if

- The customer can benefit from them either on their own or together with other resources that are readily available (**capable of being distinct**) and
- The entity's promise to transfer them to the customer is separately identifiable from other promises in the contract (**distinct within the context of the contract**). A **separately identifiable good or service**
  - Does not significantly modify or customize another good or service promised in the contract and
  - Is not highly dependent on, or highly interrelated with, other goods or services promised in the contract.

Customer options to acquire **additional goods or services for free or at a discount** have many forms, such as sales incentives, coupons, customer award points, or other discounts on future goods or services.

- When the option to acquire additional goods or services (e.g., a coupon or discount voucher) provides a material right to the customer, it results in a separate performance obligation in the contract.
  - A material right is an option that the customer would not receive without entering into that contract. An example is a discount in addition to the range of discounts typically given for those goods or services.
  - But an option to acquire an additional good or service at a price that reflects its standalone selling price does **not** provide a material right.

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### Step 3: Determine the Transaction Price

The **transaction price** is the amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer.

- It excludes amounts collected on behalf of third parties (e.g., sales taxes).
- Any consideration payable to the customer, such as coupons, credits, or vouchers, reduces the transaction price.
- To determine the transaction price, an entity should consider the effects of the **time value of money** and **variable consideration**.

The revenue recognized must reflect the price that a customer would have paid for the promised goods or services if the cash payment had been made when they were transferred to the customer (i.e., the cash selling price).

- Thus, the transaction price is adjusted for the effect of the time value of money when the contract includes a **significant financing component**.
- The following factors should be considered in assessing whether a contract includes a significant financing component:
  - The difference between
    - ▶ The cash selling price of the promised goods or services and
    - ▶ The amount of consideration to be received
  - The combined effect of
    - ▶ The expected time between the payment and the delivery of the promised goods or services and
    - ▶ Market interest rates

The transaction price should **not** be adjusted for the effect of the time value of money if

- The time between the payment and the delivery of the promised goods or services to the customer is **1 year or less**
- The customer paid in advance and the transfer of goods or services is at the discretion of the customer
  - An example is a bill-and-hold contract in which the seller provides storage services for goods it sold to the buyer.
- A substantial amount of the consideration promised is **variable** and its amount or timing varies with future circumstances that are **not** within the control of the entity or the customer
  - An example is consideration in the form of a sales-based royalty.

Interest income or expense is recognized using the **effective interest method**.

- It must be presented in the income statement **separately** from revenue from contracts with customers.

### Example 2-10 Significant Financing Component

On January 1, Year 1, BIF Co. sold and transferred a machine to a customer for \$583,200 that is payable on December 31, Year 2. Other customers pay \$500,000 upon delivery of the same machine at contract inception. The cost of the machine to BIF is \$400,000. BIF determined that the contract includes a significant financing component because of the difference between the consideration (\$583,200) and the cash selling price (\$500,000). The contract includes an implicit interest rate of 8%. The following entries are recorded by BIF:

<u>January 1, Year 1:</u>			
Accounts receivable	\$500,000	Cost of goods sold	\$400,000
Revenue		Machine inventory	\$400,000
	\$500,000		
<u>December 31, Year 1:</u>			
Accounts receivable ( $\$500,000 \times 8\%$ )	\$40,000		
Interest income			\$40,000
<u>December 31, Year 2:</u>			
Accounts receivable ( $\$540,000 \times 8\%$ )	\$43,200	Cash	\$583,200
Interest income		Accounts receivable	\$583,200
	\$43,200		

### Example 2-11 Significant Financing Component -- Advance Payment

On January 1, Year 1, Eva Co. received a payment of \$100,000 for delivering a machine to a customer at the end of Year 2. The cost of the machine to Eva is \$70,000. Eva determined that (1) the contract includes a significant financing component and (2) a financing rate of 10% is an appropriate discount rate. The following entries are recorded by Eva:

<u>January 1, Year 1:</u>		<u>December 31, Year 1:</u>	
Cash	\$100,000	Interest expense ( $\$100,000 \times 10\%$ )	\$10,000
Contract liability	\$100,000	Contract liability	\$10,000
<u>December 31, Year 2:</u>			
Interest expense ( $\$110,000 \times 10\%$ )	\$11,000	Contract liability	\$121,000
Contract liability		Revenue	\$121,000
	\$11,000		
Cost of goods sold	70,000		
Machine inventory			
	70,000		

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## Variable Consideration

If a contract includes a variable amount, an entity must estimate the consideration to which it will be entitled in exchange for transferring the promised goods or services to a **customer**. For example, the contract price may vary because of the following:

- Refunds due to a right of return provided to customers (Study Unit 6, Subunit 1)
- Prompt payment discounts (Study Unit 5, Subunit 1)
- Volume discounts
- Other uncertainties in contract price based on the occurrence or nonoccurrence of some future event

Variable consideration is **estimated** using one of the following methods:

- The **expected value** is the sum of probability-weighted amounts in the range of possible consideration amounts. This method may provide an appropriate estimate if an entity has many contracts with similar characteristics.
- The **most likely amount** is the single most likely amount in a range of possible consideration amounts. This method may provide an appropriate estimate if the contract has only two possible outcomes. For example, a construction entity either will receive a performance bonus for finishing construction on time or will not.

The estimated transaction price must be updated at the **end** of each reporting period.

**Constraint.** Revenue from variable consideration is recognized only to the extent that it is **probable** that a **significant reversal** will **not** occur when the uncertainty associated with the variable consideration is subsequently resolved.

A **volume discount** offered as an incentive to increase future sales requires the customer to purchase a specified quantity of goods or services to receive a discount. The discount may be applied (1) **prospectively** on additional goods purchased in the future or (2) **retrospectively** on all goods purchased to date.

- A **prospective volume discount** that provides a **material right** to the customer is accounted for as a separate performance obligation in the contract (Study Unit 9, Subunit 4).
- **Retrospective volume discounts** are accounted for as **variable consideration**. The uncertainty of the contract price for current goods sold is based on the occurrence or nonoccurrence of some future event (i.e., whether the customer completes the specified volume of purchase).

### Example 2-12 Retrospective Volume Discount

Barashka Co. manufactures wool coats. On October 1, Year 1, Barashka entered into a 3-year contract with a customer to sell coats for \$200 per unit. Based on the contract, if the customer purchased more than 3,000 coats over the contract period, the contract price per coat would be retroactively reduced to \$150. The cost per coat to Barashka is \$80. Barashka determined that the contract has no significant financing component.

The retrospective volume discount is variable consideration. In Year 1, the customer purchased with cash 100 coats, and Barashka estimated that the customer's purchases would not exceed 3,000 during the contract period. Thus, based on the most likely amount method, the contract price per coat was \$200.

The following entries were recorded by Barashka in Year 1:

Cash (100 × \$200)	\$20,000	Cost of goods sold (100 × \$80)	\$8,000
Sales revenue		Inventory of coats	\$8,000
	\$20,000		

The winter in Year 2 was colder than expected. The customer purchased an additional 2,200 coats. Accordingly, Barashka estimated that the customer would purchase more than 3,000 coats over the contract period. The price per coat therefore was retrospectively reduced to \$150, and Year 2 revenue is calculated as a cumulative catch up adjustment. Year 2 revenue of \$325,000 was the difference between total revenue that should be recognized for Year 1 and Year 2 of \$345,000 [(2,200 + 100) × \$150] minus revenue recognized in Year 1 of \$20,000. A contract liability is recognized for the excess of consideration received over the amount of revenue recognized. It equals the future amount of goods to be transferred to the customer for which the consideration was already received.

The following entries were recorded by Barashka in Year 2:

Cash (2,200 × \$200)	\$440,000	Cost of goods sold (2,200 × \$80)	\$176,000
Sales revenue		Inventory of coats	\$176,000
Contract liability	115,000		
	\$325,000		

As expected, the customer purchased an additional 1,100 coats in Year 3. Accordingly, 3,400 (100 + 2,200 + 1,100) coats were purchased during the contract period. In Year 3, the customer retroactively received the discount on all the coats previously purchased, paying cash of \$50,000 [(3,400 × \$150) – (\$440,000 + \$20,000)].

The following entries were recorded by Barashka in Year 3:

Cash	\$ 50,000	Cost of goods sold (1,100 × \$80)	\$88,000
Contract liability	115,000	Inventory of coats	\$88,000
Sales revenue (1,100 × \$150)			
	\$165,000		

**Consideration payable to a customer** includes cash amounts that an entity pays, or expects to pay, to the customer (or to other parties that purchase the entity's goods or services from the customer).

- Consideration payable to a customer is recognized as a **reduction** of the **transaction price** and therefore of revenue.

#### Example 2-13 Consideration Paid to a Customer

Haf Company is a manufacturer of printing machines, and Gary Company is a large electronics retail store. On January 1, Year 1, Haf entered into a 1-year contract with Gary to sell 5,000 printing machines for \$400 each. The contract also required Haf to make a nonrefundable payment of \$150,000 to Gary at the inception of the contract. The \$150,000 payment compensates Gary for needed changes in shelving to accommodate the new printing machines.

The consideration payable to Gary of \$150,000 is accounted for as a reduction of the transaction price. Accordingly, (1) the total transaction price is \$1,850,000  $[(5,000 \times \$400) - \$150,000]$ , and (2) the revenue recognized on the sale of each printing machine is \$370  $(\$1,850,000 \div 5,000)$ .

- Revenue is reduced for consideration payable to a customer at the **later** of when the entity
  - Recognizes revenue for the transfer of the related goods or services to the customer or
  - Promises to pay the consideration to the customer.

## Step 4: Allocate the Transaction Price to the Performance Obligations in the Contract

After separate performance obligations are identified and the total transaction price is determined, the transaction price is allocated to performance obligations on the basis of relative standalone selling prices.

A **standalone selling price** is the price at which an entity would sell a promised good or service separately to a customer.

- The best evidence of a standalone selling price is the **observable price** of a good or service when it is (1) sold separately (2) in similar circumstances and (3) to similar customers (e.g., the list price of a good or service).

If the standalone price is **not directly observable**, it must be estimated. The following are suitable approaches:

- **Adjusted market assessment.** An entity evaluates the market in which it sells goods or services and estimates the price that a customer in that market would be willing to pay for them.
  - For example, the prices of competitors for similar goods or services adjusted for the entity's costs and margins are estimates of standalone selling prices.
- **Expected cost plus an appropriate margin.** An entity forecasts its expected costs of satisfying a performance obligation and adds an appropriate margin for that cost.
- **Residual.** An entity estimates the standalone selling price by reference to the total transaction price minus the sum of the observable standalone selling prices of other goods or services promised in the contract. The residual approach may be used only in limited circumstances.

### Example 2-14 Allocation of Contract Price

A company entered into a contract with a customer to sell a machine and provide 3 years of maintenance services for the machine. The total consideration is \$200,000. The company determined that the machine and the maintenance services are distinct performance obligations. The company regularly sells machines separately at a directly observable standalone selling price of \$160,000. But it does not sell maintenance services on a standalone basis. Based on the expected cost plus an appropriate margin approach, the estimated standalone selling price for 3 years of maintenance services was \$90,000. The transaction price is allocated to each performance obligation in the contract using relative standalone selling prices.

<u>Performance Obligation</u>	<u>Standalone Selling Price</u>	<u>Allocation of the Contract Price</u>
Machine	\$160,000	<b>\$128,000</b> = $(\$160,000 \div \$250,000) \times \$200,000$
Maintenance services	90,000	<b>72,000</b> = $(\$90,000 \div \$250,000) \times \$200,000$
<b>Total</b>	<b><u>\$250,000</u></b>	<b><u>\$200,000</u></b>

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## Step 5: Recognize Revenue when (or as) a Performance Obligation Is Satisfied

An entity recognizes revenue when (or as) it satisfies a performance obligation by transferring a promised good or service (an asset) to a **customer**.

- An **asset** is transferred when (or as) the customer obtains control of that asset.

**Control** of an asset is transferred when the customer

- Has the ability to direct the use of the asset and
- Obtains substantially all of the remaining benefits (potential cash flows) from the asset.

A performance obligation can be satisfied either over time or at a point in time.

- Recognizing revenue **over time** requires transfer of the control of goods or services to a customer over time and therefore satisfaction of a performance obligation over time. **One** of the following criteria must be met:
  - The customer **simultaneously** receives and consumes the benefits provided by the entity's performance as the entity performs. For example, cleaning services are provided to a customer's offices every day throughout the accounting period.
  - The entity's performance **creates or enhances an asset** that the customer controls as the asset is created or enhanced. For example, a construction company erects a building on the customer's land.
  - The asset created has **no alternative use** to the entity, and the entity has an enforceable **right** to payment for the performance completed to date. For example, an aerospace company contracts to build a satellite designed for the unique needs of a specific customer.
    - ▶ An entity does not have an alternative use for an asset if the entity is restricted contractually or limited practically from directing the asset for another use.
- The accounting for contracts in which revenue is recognized over time is described in Subunit 2.4.
- If a performance obligation is **not satisfied over time**, an entity satisfies the performance obligation **at a point in time**.
  - Revenue is recognized at a point in time when the customer obtains **control** over the promised asset. The following indicators of the transfer of control should be considered:
    - ▶ The entity has a present right to payment for the asset.
    - ▶ The customer has legal title to the asset.
    - ▶ The entity has transferred physical possession of the asset.
    - ▶ The customer has the significant risks and rewards of ownership of the asset.
    - ▶ The customer has accepted the asset.

## Balance Sheet Presentation

A **contract liability** is recognized for an entity's obligation to transfer goods or services to a customer for which the entity has received consideration from the customer.

- Deposits and other advance payments by the customer, such as sales of gift certificates, are recognized as contract liabilities (Study Unit 9, Subunit 4).

A **contract asset** is recognized for an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer.

- However, the entity must have an **unconditional** right to the consideration to recognize a **receivable**.
- A right to consideration is unconditional if only the passage of time is required before payment of that consideration is due.

Contract assets and contract liabilities resulting from different contracts must not be presented net in the statement of financial position.

## Incremental Costs of Obtaining a Contract

The incremental costs of obtaining a contract with a customer must be capitalized (**recognized as an asset**) if the entity expects to recover them.

- The asset recognized must be **amortized** on a systematic basis consistent with the transfer to the customer of the goods or services to which the asset relates.

The cost of obtaining a contract may be **expensed as incurred** if its amortization period is **1 year or less**.

Costs to obtain a contract that would have been incurred **regardless** of whether the contract was obtained must be **expensed as incurred**.

- But costs explicitly chargeable to the customer regardless of whether the contract is obtained are capitalized.

### Example 2-15 Costs of Obtaining a Contract

A company wins a bid to provide consulting services for 5 years to a new customer. The following costs were incurred to obtain the contract:

External legal fees for due diligence	\$30,000
Commissions to sales employees	<u>20,000</u>
<b>Total costs incurred to obtain the contract</b>	<b><u>\$50,000</u></b>

The commissions to sales employees of \$20,000 are incremental costs of obtaining the contract. Because the company expects to recover those costs through future fees for consulting services, they must be capitalized. The costs capitalized are amortized over 5 years as the services are delivered to the customer. The external legal fees for due diligence of \$30,000 must be expensed as incurred. Such costs are not incremental costs of obtaining the contract. They would have been incurred regardless of whether the contract was obtained.

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## Costs Incurred to Fulfill a Contract

Costs incurred to fulfill a contract must be capitalized (recognized as an asset) only if they meet all of the following criteria:

- The costs relate directly to a current or anticipated contract.
- The costs generate or enhance resources of the entity that will be used in satisfying performance obligations **in the future**.
- The costs are expected to be recovered.

The asset recognized must be **amortized** on a systematic basis consistent with the transfer to the customer of the goods or services to which the asset relates.

## 2.4 Recognition of Revenue over Time

For each performance obligation satisfied over time, an entity must recognize revenue over time. For this purpose, the entity measures the **progress toward complete satisfaction** using the **output method** or the **input method**.

- To determine the appropriate method, an entity must consider the nature of the good or service that it promised to transfer to the customer.
- The chosen method should describe the entity's performance in transferring control of the promised asset to the customer.

At the end of each reporting period, the progress toward complete satisfaction of the performance obligation must be **remeasured** and updated for any changes in the outcome of the performance obligation.

- Such changes must be accounted for prospectively as a **change in accounting estimate**.

The **input method** recognizes revenue on the basis of (1) the entity's inputs to the satisfaction of the performance obligation relative to (2) the total expected inputs to the satisfaction of that performance obligation.

- Examples of input include
  - Costs incurred,
  - Labor hours expended,
  - Resources consumed,
  - Time elapsed, or
  - Machine hours used.
- In long-term construction contracts, **costs incurred relative to total estimated costs** often are used to measure the progress toward completion. This method is the **cost-to-cost** method.
  - Only costs that contribute to progress in satisfying the performance obligation are used in the cost-to-cost method. Thus, the following costs must not be included in measuring the progress:
    - ▶ Costs incurred that relate to significant inefficiencies in the entity's performance (e.g., abnormal amounts of wasted materials or labor) that were not chargeable to the customer under the contract
    - ▶ General and administrative costs not directly related to the contract
    - ▶ Selling and marketing costs

### Example 2-16 Cost-to-Cost Method

On January 1, Year 1, a contractor agrees to build on the customer's land a bridge that is expected to be completed at the end of Year 3. The promised bridge is a single performance obligation to be satisfied over time. The contractor determines that the progress toward completion of the bridge is reasonably measurable using the input method based on costs incurred. The contract price is \$2,000,000, and expected total costs of the project are \$1,200,000.

	Year 1	Year 2	Year 3
Costs incurred during each year	\$300,000	\$600,000	\$550,000
Costs expected in the future	900,000	600,000	

#### Year 1:

By the end of Year 1, 25% [ $\$300,000 \div (\$300,000 + \$900,000)$ ] of the total expected costs have been incurred. Using the input method based on costs incurred, the contractor recognizes 25% of the total expected revenue ( $\$2,000,000$  contract price  $\times$  25% = \$500,000).

Revenue	\$500,000
Construction costs	(300,000)
<b>Gross profit -- Year 1</b>	<b><u>\$200,000*</u></b>

\* The gross profit in Year 1 of \$200,000 also may be calculated as total expected gross profit from the project of \$800,000 ( $\$2,000,000$  contract price  $-$   $\$1,200,000$  total expected construction costs) times the progress toward completion of the contract of 25%.

#### Year 2:

By the end of Year 2, total costs incurred are \$900,000 ( $\$300,000 + \$600,000$ ). Given that \$600,000 is expected to be incurred in the future, the total expected cost is \$1,500,000 ( $\$900,000 + \$600,000$ ). The change in the total cost of the contract must be accounted for prospectively. By the end of Year 2, 60% ( $\$900,000 \div \$1,500,000$ ) of expected costs have been incurred. Thus, \$1,200,000 ( $\$2,000,000 \times 60%$ ) of cumulative revenue should be recognized for Years 1 and 2. Because \$500,000 of revenue was recognized in Year 1, revenue of \$700,000 ( $\$1,200,000$  cumulative revenue  $-$  \$500,000) is recognized in Year 2.

Revenue	\$700,000
Construction costs	(600,000)
<b>Gross profit -- Year 2</b>	<b><u>\$100,000*</u></b>

\* The gross profit in Year 2 of \$100,000 also may be calculated as the cumulative gross profit for Years 1 and 2 of \$300,000 [ $(\$2,000,000 - \$1,500,000) \times 60%$ ] minus the gross profit recognized in Year 1 of \$200,000.

#### Year 3:

At the end of Year 3, the project is completed, and the total costs incurred for the contract are \$1,450,000 ( $\$300,000 + \$600,000 + \$550,000$ ). Given \$1,200,000 of cumulative revenue for Years 1 and 2, \$800,000 ( $\$2,000,000$  contract price  $-$   $\$1,200,000$ ) of revenue is recognized in Year 3.

Revenue	\$800,000
Construction costs	(550,000)
<b>Gross profit -- Year 3</b>	<b><u>\$250,000</u></b>

NOTE: The total gross profit from the project of \$550,000 ( $\$200,000 + \$100,000 + \$250,000$ ) equals the contract price of \$2,000,000 minus the total costs incurred of \$1,450,000.

- When an entity's inputs are incurred evenly over time, recognition of revenue on a straight-line basis may be appropriate.

The **output method** recognizes revenue based on direct measurement of (1) the value of goods or services transferred to the customer to date relative to (2) the remaining goods or services promised under the contract.

- Examples of output methods include (1) appraisals of results achieved, (2) milestones reached, (3) units produced, and (4) units delivered.
- An entity may have a right to consideration from a customer in an amount corresponding directly with the value to the customer of performance to date. Using a practical expedient, revenue may be recognized at the amounts to which the entity has a **right to invoice the customer**.

#### Example 2-17 Output Method -- Practical Expedient

A law firm enters into a contract to provide consulting services to a customer for a 1-year period for a fixed amount per hour of service provided. Because the customer simultaneously receives and consumes the benefits provided by the law firm's performance as it performs, revenue is recognized over time. Under the practical expedient, the law firm may recognize revenue that it has a right to bill to the customer.

An entity recognizes revenue for a performance obligation satisfied over time only if progress toward complete satisfaction of the performance obligation can be reasonably measured.

- However, revenue can be recognized to the **extent of the cost incurred** (zero profit margin) when an entity
  - Is not able to reasonably measure the outcome of a performance obligation or its progress toward satisfaction of that obligation but
  - Expects to recover the costs incurred in satisfying the performance obligation.

#### Example 2-18 Revenue Recognition to the Extent of the Costs Incurred

On January 1, Year 1, Sadik Co. agrees to build on the customer's land a bridge that is expected to be completed at the end of Year 3. The contract price is \$2 million. The promised bridge is a single performance obligation to be satisfied over time. Because Sadik has no experience with this type of contract, it cannot reasonably determine the total expected costs of the project. Accordingly, by the end of Year 1, progress toward completion of the bridge is not reasonably determinable. In Year 1, \$300,000 of costs were incurred and paid by Sadik. However, the contract specified that Sadik has an enforceable right to payment of the costs incurred. Sadik therefore expects to recover these costs.

In Year 1, revenue is recognized at the amount of costs incurred of \$300,000, and no gross profit is recognized. The following entries are recorded by Sadik in Year 1:

Accounts receivable	\$300,000		Construction costs	\$300,000	
Revenue		\$300,000	Cash		\$300,000

As soon as an **estimated loss** on any project becomes apparent, it must be recognized in full, regardless of the methods used.