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FINANCIAL ACCOUNTING 3e

IFRS EDITION

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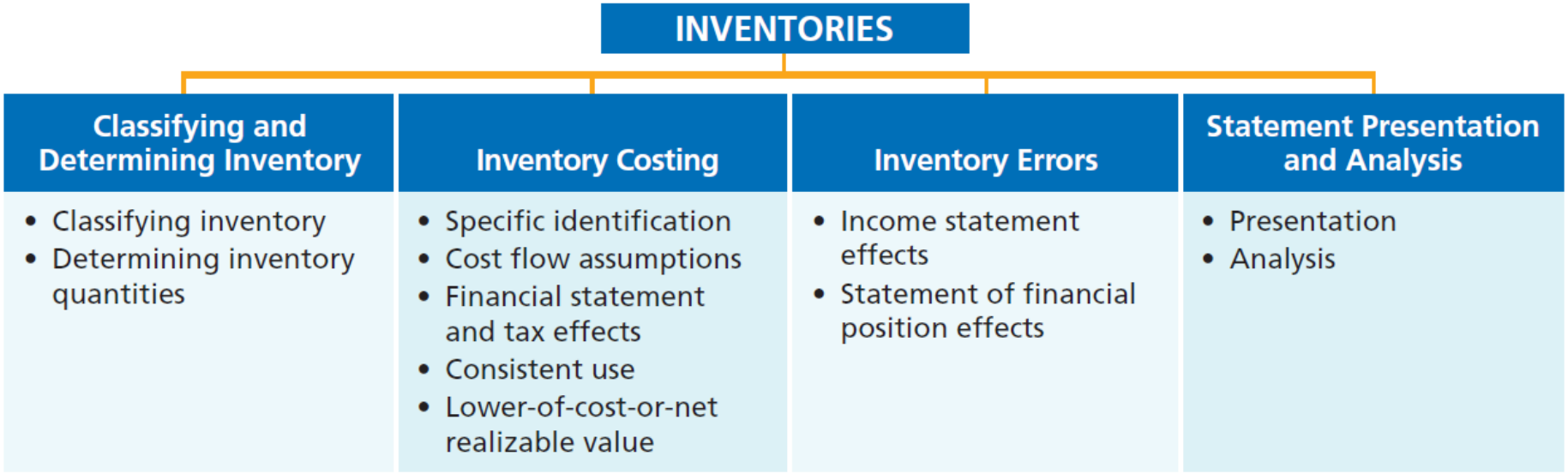
PREVIEW OF CHAPTER 6



Financial Accounting

IFRS 3rd Edition

Weygandt • Kimmel • Kieso

CHAPTER

6 Inventories

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1. Discuss how to classify and determine inventory.
2. Explain the accounting for inventories and apply the inventory cost flow methods.
3. Explain the financial effects of the inventory cost flow assumptions.
4. Explain the lower-of-cost-or-net realizable value basis of accounting for inventories.
5. Indicate the effects of inventory errors on the financial statements.
6. Discuss the presentation and analysis of inventory.

Classifying and Determining Inventory

Learning Objective 1
Discuss how to classify and determine inventory.

Classifying Inventory

Merchandising Company

One Classification:

- Inventory

Manufacturing Company

Three Classifications:

- Raw Materials
- Work in Process
- Finished Goods

• **HELPFUL HINT**
Regardless of the classification, companies report all inventories under Current Assets on the statement of financial position.

ACCOUNTING ACROSS THE ORGANIZATION

A Big Hiccup

JIT can save a company a lot of money, but it isn't without risk. An unexpected disruption in the supply chain can cost a company a lot of money. Japanese automakers experienced just such a disruption when a 6.8-magnitude earthquake caused major damage to the company that produces 50% of their piston rings. The rings themselves cost only $1.50, but you cannot make a car without them. No other supplier could quickly begin producing sufficient quantities of the rings to match the desired specifications. As a result, the automakers were forced to shut down production for a few days—a loss of tens of thousands of cars.

Source: Amy Chozick, "A Key Strategy of Japan's Car Makers Backfires," *Wall Street Journal* (July 20, 2007).

Determining Inventory Quantities

Physical Inventory taken for two reasons:

Perpetual System

1. Check accuracy of inventory records.
2. Determine amount of inventory lost due to wasted raw materials, shoplifting, or employee theft.

Periodic System

1. Determine the inventory on hand.
2. Determine the cost of goods sold for the period.

LO 1

Determining Inventory Quantities

TAKING A PHYSICAL INVENTORY

Involves counting, weighing, or measuring each kind of inventory on hand.

Companies often "take inventory"

- when the business is closed or business is slow.
- at the end of the accounting period.

ETHICS NOTE

In a famous fraud, a salad oil company filled its storage tanks mostly with water. The oil rose to the top, so auditors thought the tanks were full of oil. The company also said it had more tanks than it really did: It repainted numbers on the tanks to confuse auditors.

LO 1

ETHICS INSIGHT

Falsifying Inventory to Boost Income

Managers at a women's apparel maker were convicted of falsifying inventory records to boost net income—and consequently to boost management bonuses. In another case, executives at an electronics manufacturer were accused of defrauding lenders by manipulating inventory records. The indictment said the company classified "defective goods as new or refurbished" and claimed that it owned certain shipments "from overseas suppliers" when, in fact, the company either did not own the shipments or the shipments did not exist.

Determining Inventory Quantities

DETERMINING OWNERSHIP OF GOODS

GOODS IN TRANSIT

- Purchased goods not yet received.
- Sold goods not yet delivered.

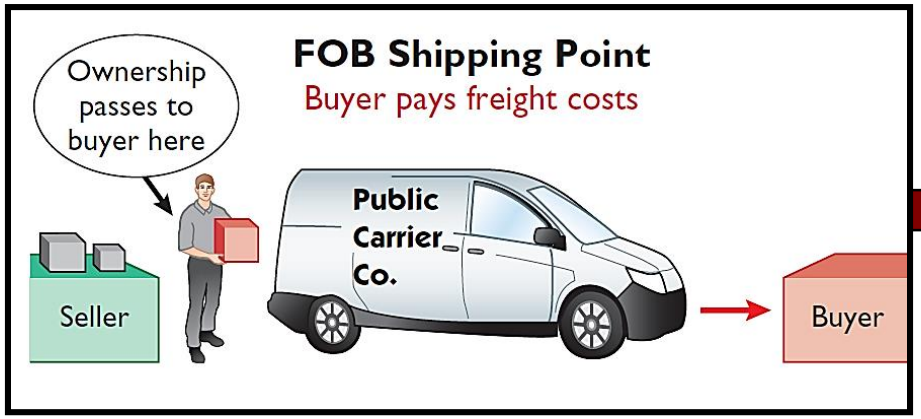
Goods in transit should be included in the inventory of the company that has **legal title** to the goods. Legal title is determined by the **terms of sale**.

LO 1

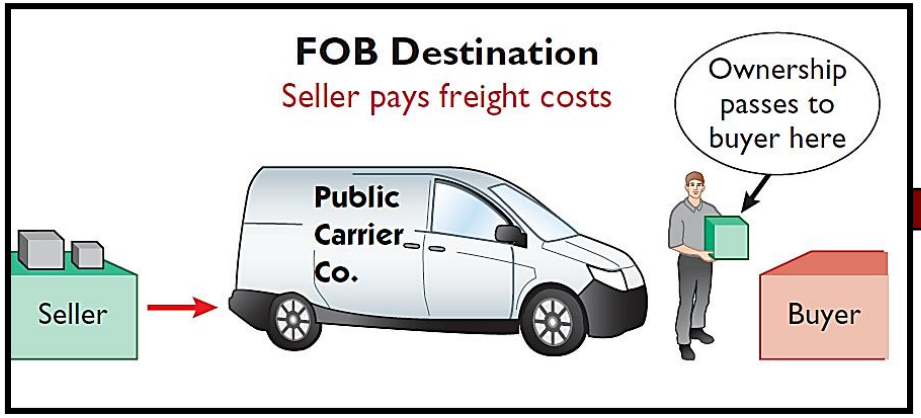
DETERMINING OWNERSHIP OF GOODS

GOODS IN TRANSIT

Illustration 6-2
Terms of sale



Ownership of the goods passes to the buyer when the public carrier accepts the goods from the seller.



Ownership of the goods remains with the seller until the goods reach the buyer.

LO 1

Determining Ownership of Goods

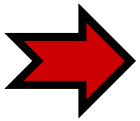
Question

Goods in transit should be included in the inventory of the buyer when the:

a. public carrier accepts the goods from the seller.

b. goods reach the buyer.

c. terms of sale are FOB destination.



d. terms of sale are FOB shipping point.

LO 1

Determining Ownership of Goods

CONSIGNED GOODS

To hold the goods of other parties and try to sell the goods for them for a fee, but without taking ownership of the goods.

Many car, boat, and antique dealers sell goods on consignment, why?

ANATOMY OF A FRAUD

Ted Nickerson, CEO of clock manufacturer Dally Industries, was feared by all of his employees. Ted also had expensive tastes. To support this habit, Ted took out large loans, which he collateralized with his ordinary shares of Dally Industries. If the price of Dally's shares fell, he was required to provide the bank with more ordinary shares. To achieve target net income figures and thus maintain the share price, Ted coerced employees in the company to alter inventory figures. Inventory quantities were manipulated by changing the amounts on inventory control tags after the year-end physical inventory count. For example, if a tag said there were 20 units of a particular item, the tag was changed to 220. Similarly, the unit costs that were used to determine the value of ending inventory were increased from, for example, $125 per unit to $1,250. Both of these fraudulent changes had the effect of increasing the amount of reported ending inventory. This reduced cost of goods sold and increased net income.

Total take: $245,000

The Missing Control

LO 1

> DO IT!

Deng Yaping Company completed its inventory count. It arrived at a total inventory value of ¥200,000. You have been given the information listed below. Discuss how this information affects the reported cost of inventory.

1. Deng Yaping included in the inventory goods held on consignment for Falls Co., costing ¥15,000.
2. The company did not include in the count purchased goods of ¥10,000, which were in transit (terms: FOB shipping point).
3. The company did not include in the count inventory that had been sold with a cost of ¥12,000, which was in transit (terms: FOB shipping point).

Solution

1. Goods of ¥15,000 held on consignment should be deducted from the inventory count.
2. The goods of ¥10,000 purchased FOB shipping point should be added to the inventory count.
3. Item 3 was treated correctly.

Inventory should be ¥195,000
(¥200,000 - ¥15,000 + ¥10,000).

LO 1

Classifying and Determining Inventory

Learning Objective 2
Explain the accounting for inventories and apply the inventory cost flow methods.

Inventory is accounted for at cost.

- Cost includes all expenditures necessary to acquire goods and place them in a condition ready for sale.
- Unit costs are applied to quantities to compute the total cost of the inventory and the cost of goods sold using the following costing methods:
  - Specific identification
  - First-in, first-out (FIFO)
  - Average-cost

} **Cost Flow Assumptions**

Inventory Costing

Illustration: Crivitz TV Company purchases three identical 50-inch TVs on different dates at costs of £700, £750, and £800. During the year Crivitz sold two sets at £1,200 each. These facts are summarized below.

Purchases			
February 3	1 TV	at	£700
March 5	1 TV	at	£750
May 22	1 TV	at	£800
Sales			
June 1	2 TVs	for	£2,400 (£1,200 × 2)

Illustration 6-3
Data for inventory costing example

LO 2

Specific Identification

If Crivitz sold the TVs it purchased on February 3 and May 22, then its cost of goods sold is £1,500 (£700 + £800), and its ending inventory is £750.

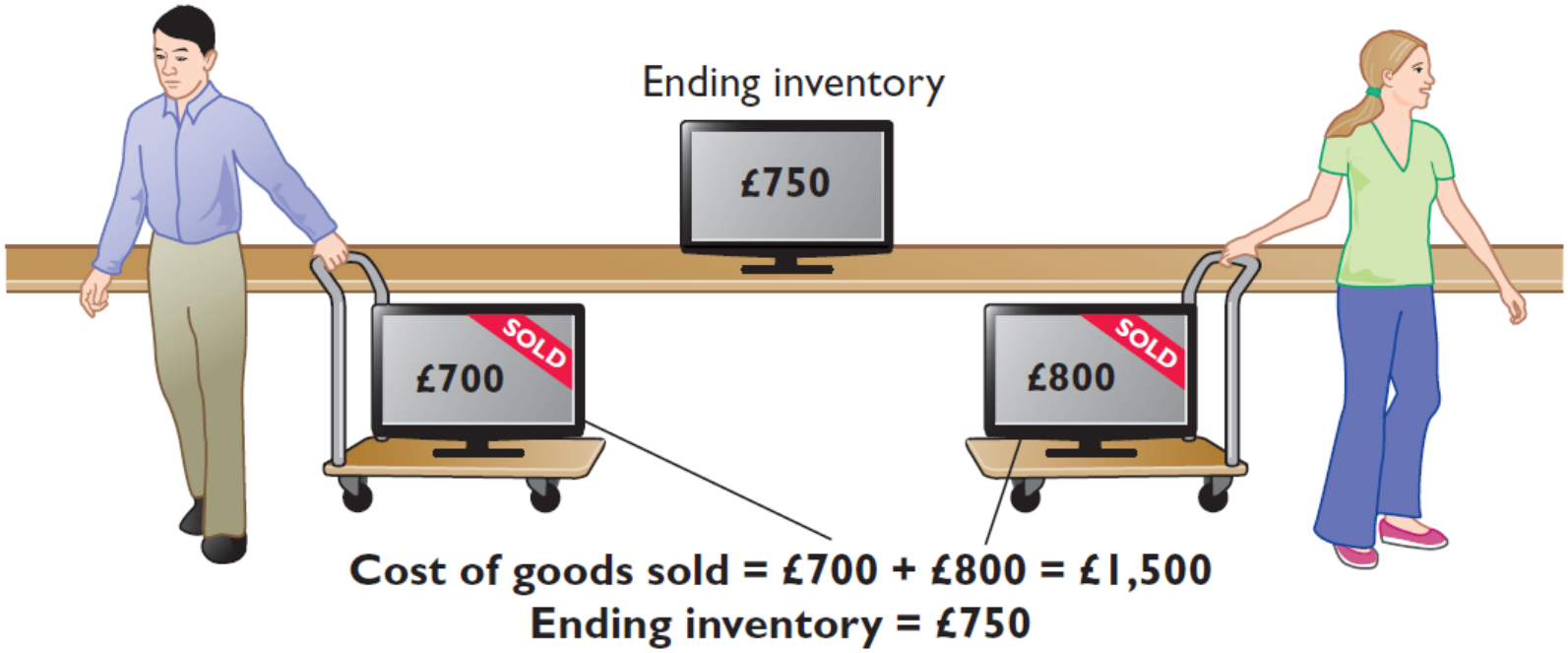


Illustration 6-4
Specific identification method

LO 2

Specific Identification

Actual physical flow costing method in which items still in inventory are specifically costed to arrive at the total cost of the ending inventory.

- Practice is relatively rare.
- Most companies make assumptions (**cost flow assumptions**) about which units were sold.

ETHICS NOTE

A major disadvantage of the specific identification method is that management may be able to manipulate net income. For example, it can boost net income by selling units purchased at a low cost, or reduce net income by selling units purchased at a high cost.

LO 2

Cost Flow Assumptions

There are **two** assumed cost flow methods:

1. First-in, first-out (FIFO)
2. Average-cost

Cost flow does not need be consistent with the **physical movement** of the goods.

Cost Flow Assumptions

Data for Lin Electronics' Astro condensers.

Illustration 6-5

LIN ELECTRONICS
Astro Condensers

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK$ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total units available for sale	100		HK$12,000
	Units in ending inventory	(45)		
	Units sold	55		

(Beginning Inventory + Purchases) - Ending Inventory = Cost of Goods Sold

LO 2

Cost Flow Assumptions

FIRST-IN, FIRST-OUT (FIFO)

- **Costs of the earliest goods purchased** are the first to be recognized in determining cost of goods sold.
- Often parallels actual physical flow of merchandise.
- Companies obtain the cost of the ending inventory by taking the unit cost of the most recent purchase and working backward until all units of inventory have been costed.

FIRST-IN, FIRST-OUT (FIFO)

Cost of Goods Available for Sale

Date	Explanation	Units	Unit Cost	Total Cost
Jan. 1	Beginning inventory	10	HK$100	HK $ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total	100		HK$12,000

Step 1: Ending Inventory

Date	Units	Unit Cost	Total Cost

Step 2: Cost of Goods Sold

Illustration 6-6
Allocation of costs–FIFO method

LO 2

FIRST-IN, FIRST-OUT (FIFO)

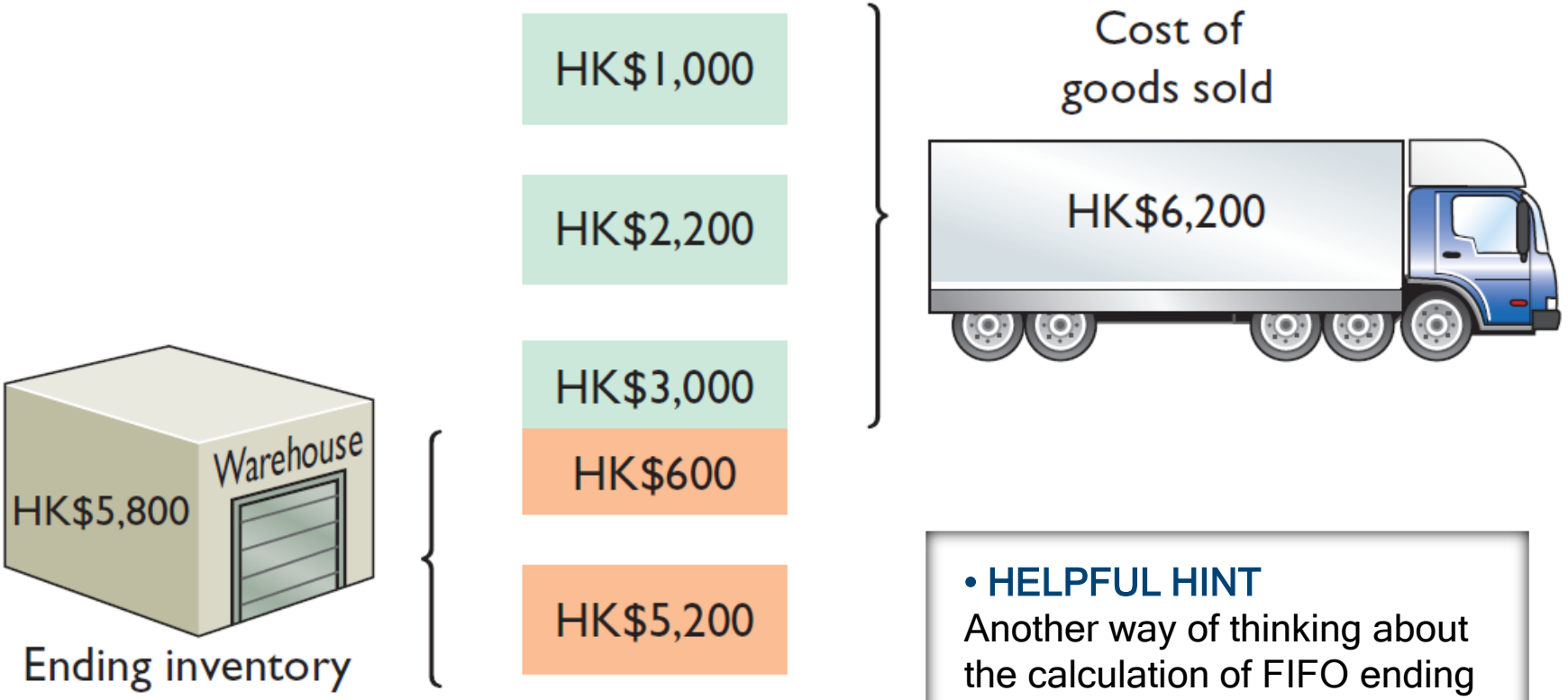


Illustration 6-6
Allocation of costs–FIFO method

- **HELPFUL HINT**

Another way of thinking about the calculation of FIFO ending inventory is the ***LISH assumption***–last in still here.

LO 2

Cost Flow Assumptions

AVERAGE-COST

- Allocates cost of goods available for sale on the basis of **weighted-average unit cost** incurred.
- Applies weighted-average unit cost to the **units on hand** to determine cost of the ending inventory.

Cost of Goods Available for Sale	÷	Total Units Available for Sale	=	Weighted-Average Unit Cost
HK$12,000	÷	100	=	HK$120

Illustration 6-8
Formula for weighted-average unit cost

AVERAGE-COST

Cost of Goods Available for Sale				
Date	**Explanation**	**Units**	**Unit Cost**	**Total Cost**
Jan. 1	Beginning inventory	10	HK$100	HK$ 1,000
Apr. 15	Purchase	20	110	2,200
Aug. 24	Purchase	30	120	3,600
Nov. 27	Purchase	40	130	5,200
	Total	100		HK$12,000

Step 1: Ending Inventory				Step 2: Cost of Goods Sold	
HK$12,000	÷ 100	=	HK$120	Cost of goods available for sale	HK$12,000

Illustration 6-9
Allocation of costs—average-cost method

LO 2

AVERAGE-COST

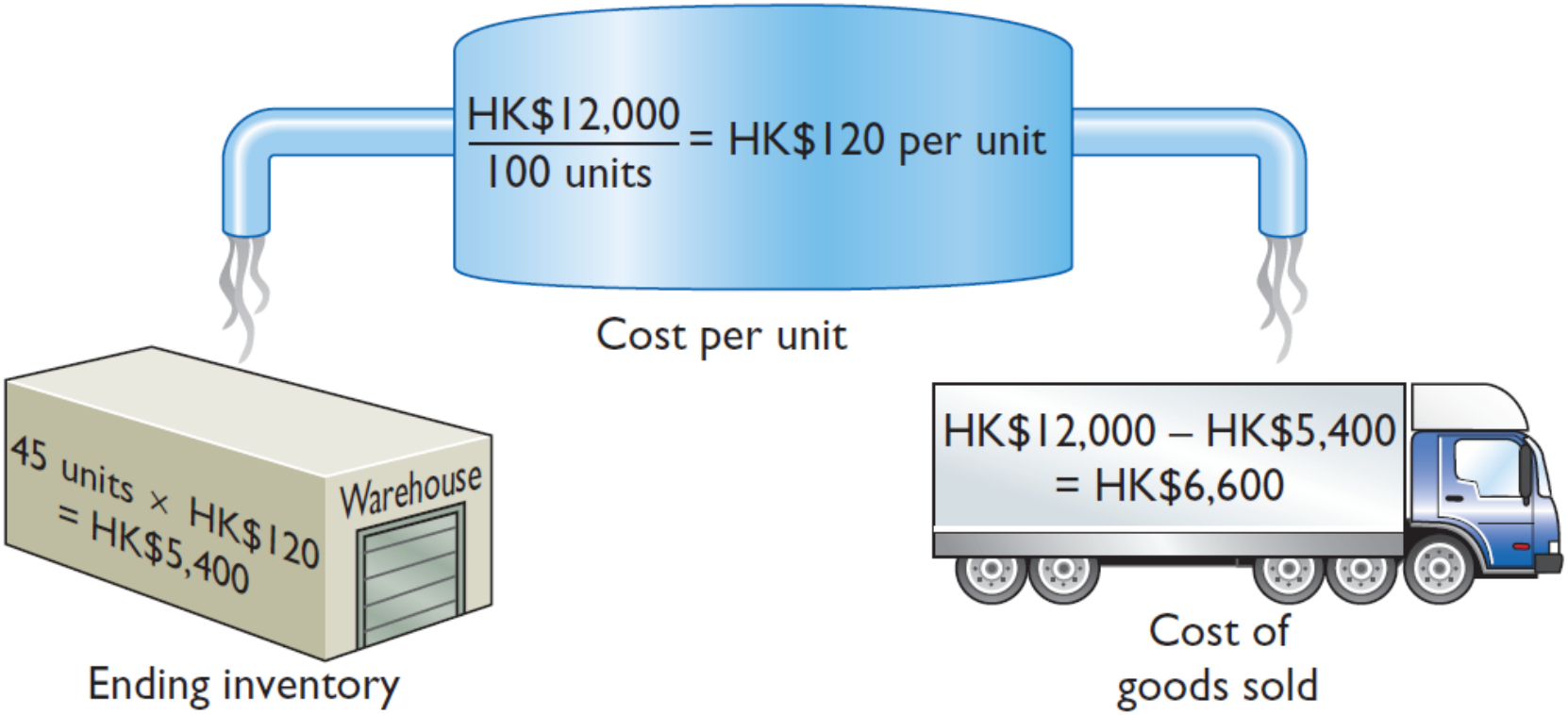


Illustration 6-9
Allocation of costs–average-cost method

LO 2

> DO IT!

The accounting records of Shumway Ag Implement show the following.

Beginning inventory	4,000 units at £ 3
Purchases	6,000 units at £ 4
Sales	7,000 units at £12

Determine the cost of goods sold during the period under a periodic inventory system using (a) the FIFO method and (b) the average-cost method.

Solution

Cost of goods available for sale =

Ending inventory =

(a) FIFO:

(b) Average cost per unit:
Average-cost:

Financial Statement and Tax Effects of Cost Flow Methods

Learning Objective 3
Explain the financial effects of the inventory cost flow assumptions.

Either of the **two cost flow assumptions** is acceptable for use. For example,

- **adidas** (DEU) and **Lenovo** (CHN) use the average-cost method, whereas
- **Syngenta Group** (CHE) and **Nokia** (FIN) use FIFO.

A recent survey of IFRS companies, approximately

- 60% use the average-cost method,
- 40% use FIFO, and
- 23% use both for different parts of their inventory.

INCOME STATEMENT EFFECTS

LIN ELECTRONICS
Condensed Income Statements

	FIFO	Average-Cost
Sales revenue	HK$11,500	HK$11,500
Beginning inventory	1,000	1,000
Purchases	11,000	11,000
Cost of goods available for sale	12,000	12,000
Ending inventory	**5,800**	**5,400**
Cost of goods sold	6,200	6,600
Gross profit	5,300	4,900
Operating expenses	2,000	2,000
Income before income taxes*	3,300	2,900
Income tax expense (30%)	990	870
Net income	**HK$ 2,310**	**HK$ 2,030**

*We are assuming that Lin Electronics is a corporation, and corporations are required to pay income taxes.

Illustration 6-10
Comparative effects of cost flow methods

LO 3

STATEMENT OF FINANCIAL POSITION EFFECTS

- A major **advantage** of the **FIFO method** is that in a period of inflation, the costs allocated to ending inventory will **approximate their current cost**.
- A major **shortcoming** of the **average-cost method** is that in a period of inflation, the costs allocated to ending inventory may be **understated** in terms of current cost.

LO 3

TAX EFFECTS

- Both inventory and net income are higher when companies use **FIFO** in a period of inflation.
- **Average-cost** results in the lower income taxes (because of lower net income) during times of rising prices.

LO 3

Using Cost Flow Methods Consistently

- Method should be used consistently, enhances comparability.
- Although consistency is preferred, a company may change its inventory costing method.

LO 3

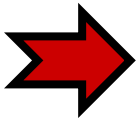
Cost Flow Assumptions

Question

In periods of rising prices, average-cost will produce:

a. higher net income than FIFO.

b. the same net income as FIFO.



c. lower net income than FIFO.

d. net income equal to the specific identification method.

LO 3

Cost Flow Assumptions

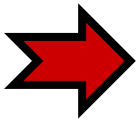
Question

Factors that affect the selection of an inventory costing method do not include:

a. tax effects.

b. statement of financial position effects.

c. income statement effects.



d. perpetual vs. periodic inventory system.

LO 3

GLOBAL INSIGHT

Is LIFO Fair?

ExxonMobil Corporation (USA), like many U.S. companies, uses a cost flow assumption called last-in, first-out (LIFO) to value its inventory for financial reporting and tax purposes. In one recent year, this resulted in a cost of goods sold figure that was $5.6 billion higher than under FIFO. By increasing cost of goods sold, ExxonMobil reduces net income, which reduces taxes. Critics say that LIFO provides an unfair "tax dodge." As the U.S. Congress looks for more sources of tax revenue, some lawmakers favor the elimination of LIFO. Supporters of LIFO argue that the method is conceptually sound because it matches current costs with current revenues. In addition, they point out that this matching provides protection against inflation. International accounting standards do not allow the use of LIFO. As a result, the net income of foreign oil companies, such as BP (GBR) and Royal Dutch Shell (GBR and NLD), are not directly comparable to U.S. companies, which makes analysis difficult.

Source: David Reilly, "Big Oil's Accounting Methods Fuel Criticism," *Wall Street Journal* (August 8, 2006), p. C1.

A Look at U.S. GAAP

GAAP Self-Test Questions

Specific identification:

a) must be used under IFRS if the inventory items are not interchangeable.

b) cannot be used under IFRS.

c) cannot be used under GAAP.

d) must be used under IFRS if it would result in the most conservative net income.

LO 10

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