

CHAPTER 9

INVENTORIES: ADDITIONAL VALUATION ISSUES

This IFRS Supplement provides expanded discussions of accounting guidance under International Financial Reporting Standards (IFRS) for the topics in Intermediate Accounting. The discussions are organized according to the chapters in *Intermediate Accounting* (13th or 14th Editions) and therefore can be used to supplement the U.S. GAAP requirements as presented in the textbook. Assignment material is provided for each supplement chapter, which can be used to assess and reinforce student understanding of IFRS.

LOWER-OF-COST-OR-NET REALIZABLE VALUE (LCNRV)

Inventories are recorded at their cost. However, if inventory declines in value below its original cost, a major departure from the historical cost principle occurs. Whatever the reason for a decline—obsolescence, price-level changes, or damaged goods—a company should write down the inventory to net realizable value to report this loss. **A company abandons the historical cost principle when the future utility (revenue-producing ability) of the asset drops below its original cost.**

Net Realizable Value

Recall that **cost** is the acquisition price of inventory computed using one of the historical cost-based methods—specific identification, average cost, or FIFO. The term **net realizable value (NRV)** refers to the net amount that a company expects to realize from the sale of inventory. Specifically, net realizable value is the estimated selling price in the normal course of business less estimated costs to complete and estimated costs to make a sale. [1]

To illustrate, assume that Mander Corp. has unfinished inventory with a cost of \$950, a sales value of \$1,000, estimated cost of completion of \$50, and estimated selling costs of \$200. Mander's net realizable value is computed as follows.

Inventory value—unfinished		\$1,000
Less: Estimated cost of completion	\$ 50	
Estimated cost to sell	200	250
Net realizable value		\$ 750

ILLUSTRATION 9-1
Computation of Net Realizable Value

Mander reports inventory on its statement of financial position at \$750. In its income statement, Mander reports a Loss on Inventory Write-Down of \$200 (\$950 – \$750). A departure from cost is justified because inventories should not be reported at amounts higher than their expected realization from sale or use. In addition, a company like Mander should charge the loss of utility against revenues in the period in which the loss occurs, not in the period of sale.

Companies therefore report their inventories at the **lower-of-cost-or-net realizable value (LCNRV)** at each reporting date. Illustration 9-2 shows how two companies indicate measurement at LCNRV.

Illustration of LCNRV

As indicated, a company values inventory at LCNRV. A company estimates net realizable value based on the most reliable evidence of the inventories' realizable

ILLUSTRATION 9-2
LCNRV Disclosures



Nokia (FIN)

Inventories are stated at the lower of cost or net realizable value. Cost is determined using standard cost, which approximates actual cost on a FIFO basis. Net realizable value is the amount that can be realized from the sale of the inventory in the normal course of business after allowing for the costs of realization. In addition to the cost of materials and direct labor, an appropriate proportion of production overhead is included in the inventory values. An allowance is recorded for excess inventory and obsolescence based on the lower-of-cost-or-net realizable value.

Kesa Electricals (GBR)

Inventories are stated at the lower-of-cost-and-net realisable value. Cost is determined using the weighted average method. Net realisable value represents the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

amounts (expected selling price, expected costs to completion, and expected costs to sell). [2] To illustrate, Regner Foods computes its inventory at LCNRV, as shown in Illustration 9-3.

ILLUSTRATION 9-3
Determining Final Inventory Value

U.S. GAAP PERSPECTIVE



U.S. GAAP uses a lower-of-cost-or-market test to value inventories. U.S. GAAP defines market as replacement cost subject to a constraint of net realizable value (the ceiling) and net realizable value less a normal profit margin (the floor). IFRS does not use a ceiling or floor constraint.

Food	Cost	Net Realizable Value	Final Inventory Value
Spinach	\$ 80,000	\$120,000	\$ 80,000
Carrots	100,000	110,000	100,000
Cut beans	50,000	40,000	40,000
Peas	90,000	72,000	72,000
Mixed vegetables	95,000	92,000	92,000
			<u>\$384,000</u>

Final Inventory Value:

Spinach	Cost (\$80,000) is selected because it is lower than net realizable value.
Carrots	Cost (\$100,000) is selected because it is lower than net realizable value.
Cut beans	Net realizable value (\$40,000) is selected because it is lower than cost.
Peas	Net realizable value (\$72,000) is selected because it is lower than cost.
Mixed vegetables	Net realizable value (\$92,000) is selected because it is lower than cost.

As indicated, the final inventory value of \$384,000 equals the sum of the LCNRV for each of the inventory items. That is, Regner applies the LCNRV rule to each individual type of food.

Methods of Applying LCNRV

In the Regner Foods illustration, we assumed that the company applied the LCNRV rule to each individual type of food. However, companies may apply the LCNRV rule to a group of similar or related items, or to the total of the inventory. For example, in the textile industry, it may not be possible to determine selling price for each textile individually, and therefore it may be necessary to perform the net realizable value assessment on all textiles that will be used to produce clothing for a particular season.¹

If a company follows a group-of-similar-or-related-items or total-inventory approach in determining LCNRV, increases in market prices tend to offset decreases in market prices. To illustrate, assume that Regner Foods separates its food products into two major groups, frozen and canned, as shown in Illustration 9-4.

¹It may be necessary to write down an entire product line or a group of inventories in a given geographic area that cannot be practicably evaluated separately. However, it is not appropriate to write down an entire class of inventory, such as finished goods or all inventory of a particular industry. [3]

	Cost	LCNRV	LCNRV by:		
			Individual Items	Major Groups	Total Inventory
Frozen					
Spinach	\$ 80,000	\$120,000	\$ 80,000		
Carrots	100,000	110,000	100,000		
Cut beans	50,000	40,000	40,000		
Total frozen	<u>230,000</u>	<u>270,000</u>		\$230,000	
Canned					
Peas	90,000	72,000	72,000		
Mixed vegetables	95,000	92,000	92,000		
Total canned	<u>185,000</u>	<u>164,000</u>		164,000	
Total	<u>\$415,000</u>	<u>\$434,000</u>	<u>\$384,000</u>	<u>\$394,000</u>	<u>\$415,000</u>

ILLUSTRATION 9-4
Alternative Applications
of LCNRV

If Regner Foods applied the LCNRV rule to individual items, the amount of inventory is \$384,000. If applying the rule to major groups, it jumps to \$394,000. If applying LCNRV to the total inventory, it totals \$415,000. Why this difference? When a company uses a major group or total-inventory approach, net realizable values higher than cost offset net realizable values lower than cost. For Regner Foods, using the similar-or-related approach partially offsets the high net realizable value for spinach. Using the total-inventory approach totally offsets it.²

In most situations, companies price inventory on an item-by-item basis. In fact, tax rules in some countries require that companies use an individual-item basis barring practical difficulties. In addition, the individual-item approach gives the lowest valuation for statement of financial position purposes. In some cases, a company prices inventory on a total-inventory basis when it offers only one end product (comprised of many different raw materials). If it produces several end products, a company might use a similar-or-related approach instead. **Whichever method a company selects, it should apply the method consistently from one period to another.**³

Recording Net Realizable Value Instead of Cost

One of two methods may be used to record the income effect of valuing inventory at net realizable value. One method, referred to as the **cost-of-goods-sold method**, debits cost of goods sold for the write-down of the inventory to net realizable value. As a result, the company does not report a loss in the income statement because the cost of goods sold already includes the amount of the loss. The second method, referred to as the **loss method**, debits a loss account for the write-down of the inventory to net realizable value. We use the following inventory data for Ricardo Company to illustrate entries under both methods.

Cost of goods sold (before adjustment to net realizable value)	\$108,000
Ending inventory (cost)	82,000
Ending inventory (at net realizable value)	70,000

²The rationale for use of the individual-item approach whenever practicable is to avoid realization of unrealized gains, which can arise when applying LCNRV on a similar-or-related-item approach (e.g., unrealized gains on some items offset unrealized losses on other items). In general, IFRS prohibits recognition of unrealized gains in income.

³Materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. However, a decline in the price of materials may indicate that the cost of the finished products exceeds net realizable value. In this situation, the materials are written down to net realizable value.

Illustration 9-5 shows the entries for both the cost-of-goods-sold and loss methods, assuming the use of a perpetual inventory system.

ILLUSTRATION 9-5
Accounting for the Reduction of Inventory to Net Realizable Value—Perpetual Inventory System

Cost-of-Goods-Sold Method		Loss Method	
To reduce inventory from cost to net realizable value			
Cost of Goods Sold	12,000	Loss Due to Decline of Inventory to Net Realizable Value	12,000
Inventory	12,000	Inventory	12,000

The cost-of-goods-sold method buries the loss in the Cost of Goods Sold account. The loss method, by identifying the loss due to the write-down, shows the loss separate from Cost of Goods Sold in the income statement.

Illustration 9-6 contrasts the differing amounts reported in the income statement under the two approaches, using data from the Ricardo example.

ILLUSTRATION 9-6
Income Statement Presentation—Cost-of-Goods-Sold and Loss Methods of Reducing Inventory to Net Realizable Value

Cost-of-Goods-Sold Method	
Sales revenue	\$200,000
Cost of goods sold (after adjustment to net realizable value*)	<u>120,000</u>
Gross profit on sales	<u>\$ 80,000</u>
Loss Method	
Sales revenue	\$200,000
Cost of goods sold	<u>108,000</u>
Gross profit on sales	92,000
Loss due to decline of inventory to net realizable value	<u>12,000</u>
	<u>\$ 80,000</u>

*Cost of goods sold (before adjustment to net realizable value)	\$108,000
Difference between inventory at cost and net realizable value (\$82,000 – \$70,000)	<u>12,000</u>
Cost of goods sold (after adjustment to net realizable value)	<u>\$120,000</u>

IFRS does not specify a particular account to debit for the write-down. We believe the loss method presentation is preferable because it clearly discloses the loss resulting from a decline in inventory net realizable values.

Use of an Allowance

Instead of crediting the Inventory account for net realizable value adjustments, companies generally use an allowance account, often referred to as the “Allowance to Reduce Inventory to Net Realizable Value.” For example, using an allowance account under the loss method, Ricardo Company makes the following entry to record the inventory write-down to net realizable value.

Loss Due to Decline of Inventory to Net Realizable Value	12,000	
Allowance to Reduce Inventory to Net Realizable Value		12,000

Use of the allowance account results in reporting both the cost and the net realizable value of the inventory. Ricardo reports inventory in the statement of financial position as follows.

ILLUSTRATION 9-7
Presentation of Inventory Using an Allowance Account

Inventory (at cost)	\$ 82,000
Allowance to reduce inventory to net realizable value	<u>(12,000)</u>
Inventory at net realizable value	<u>\$ 70,000</u>

The use of the allowance under the cost-of-goods-sold or loss method permits both the income statement and the statement of financial position to reflect inventory measured at \$82,000, although the statement of financial position shows a net amount of \$70,000. It also keeps subsidiary inventory ledgers and records in correspondence with the control account without changing prices. *For homework purposes, use an allowance account to record net realizable value adjustments, unless instructed otherwise.*

Recovery of Inventory Loss

In periods following the write-down, economic conditions may change such that the net realizable value of inventories previously written down may be *greater* than cost or there is clear evidence of an increase in the net realizable value. In this situation, the amount of the write-down is reversed, with the reversal limited to the amount of the original write-down. [4]

Continuing the Ricardo example, assume that in the subsequent period, market conditions change, such that the net realizable value increases to \$74,000 (an increase of \$4,000). As a result, only \$8,000 is needed in the allowance. Ricardo makes the following entry, using the loss method.

Allowance to Reduce Inventory to Net Realizable Value	4,000	
Recovery of Inventory Loss (\$74,000 – \$70,000)		4,000

The allowance account is then adjusted in subsequent periods, such that inventory is reported at the LCMRV. Illustration 9-8 shows the net realizable value evaluation for Margin Company and the effect of net realizable value adjustments on income.

Date	Inventory at Cost	Inventory at Net Realizable Value	Amount Required in Allowance Account	Adjustment of Allowance Account Balance	Effect on Net Income
Dec. 31, 2010	\$188,000	\$176,000	\$12,000	\$12,000 inc.	Decrease
Dec. 31, 2011	194,000	187,000	7,000	5,000 dec.	Increase
Dec. 31, 2012	173,000	174,000	0	7,000 dec.	Increase
Dec. 31, 2013	182,000	180,000	2,000	2,000 inc.	Decrease

Thus, if prices are falling, the company records an additional write-down. If prices are rising, the company records an increase in income. We can think of the net increase as a recovery of a previously recognized loss. Under no circumstances should the inventory be reported at a value above original cost.

Evaluation of the LCMRV Rule

The LCMRV rule suffers some conceptual deficiencies:

1. A company recognizes decreases in the value of the asset and the charge to expense in the period in which the loss in utility occurs—not in the period of sale. On the other hand, it recognizes increases in the value of the asset (in excess of original cost) only at the point of sale. This inconsistent treatment can distort income data.
2. Application of the rule results in inconsistency because a company may value the inventory at cost in one year and at net realizable value in the next year.
3. LCMRV values the inventory in the statement of financial position conservatively, but its effect on the income statement may or may not be conservative. Net income for the year in which a company takes the loss is definitely lower. Net income of the subsequent period may be higher than normal if the expected reductions in sales price do not materialize.

Many financial statement users appreciate the LCMRV rule because they at least know that it prevents overstatement of inventory. In addition, recognizing all losses but anticipating no gains generally avoids overstatement of income.

U.S. GAAP PERSPECTIVE



Under U.S. GAAP, if inventory is written down under lower-of-cost-or-market valuation, the new basis is then considered cost. As a result, the inventory may not be written up to its original cost in a subsequent period.

ILLUSTRATION 9-8

Effect on Net Income of Adjusting Inventory to Net Realizable Value

VALUATION BASES

Special Valuation Situations

For the most part, companies record inventory at LCNRV.⁴ However, there are some situations in which companies depart from the LCNRV rule. Such treatment may be justified in situations when cost is difficult to determine, the items are readily marketable at quoted market prices, and units of product are interchangeable. In this section, we discuss two common situations in which net realizable value is the general rule for valuing inventory:

- Agricultural assets (including biological assets and agricultural produce).
- Commodities held by broker-traders.

Agricultural Inventory

Under IFRS, net realizable value measurement is used for inventory when the inventory is related to agricultural activity. In general, agricultural activity results in two types of agricultural assets: (1) biological assets or (2) agricultural produce at the point of harvest. [6]

A **biological asset** (classified as a non-current asset) is a living animal or plant, such as sheep, cows, fruit trees, or cotton plants. **Agricultural produce** is the harvested product of a biological asset, such as wool from a sheep, milk from a dairy cow, picked fruit from a fruit tree, or cotton from a cotton plant. The accounting for these assets is as follows.

- Biological assets are measured on initial recognition and at the end of each reporting period at fair value less costs to sell (net realizable value). Companies record a gain or loss due to changes in the net realizable value of biological assets in income when it arises.⁵
- Agricultural produce (which are harvested from biological assets) are measured at fair value less costs to sell (net realizable value) at the point of harvest. Once harvested, the net realizable value of the agricultural produce becomes its cost, and this asset is accounted for similar to other inventories held for sale in the normal course of business.⁶

Illustration of Agricultural Accounting at Net Realizable Value

To illustrate the accounting at net realizable value for agricultural assets, assume that Bancroft Dairy produces milk for sale to local cheese-makers. Bancroft began operations on January 1, 2011, by purchasing 420 milking cows for €460,000. Bancroft provides the following information related to the milking cows.

⁴Manufacturing companies frequently employ a standardized cost system that predetermines the unit costs for material, labor, and manufacturing overhead, and that values raw materials, work in process, and finished goods inventories at their standard costs. Standard costs take into account normal levels of materials and supplies, labor, efficiency, and capacity utilization, and are regularly reviewed and, if necessary, revised in the light of current conditions. For financial reporting purposes, the standard cost method may be used for convenience if the results approximate cost. [5] **Nokia** (FIN) and **Hewlett-Packard** (USA) use standard costs for valuing at least a portion of their inventories.

⁵A gain may arise on initial recognition of a biological asset, such as when a calf is born. A gain or loss may arise on initial recognition of agricultural produce as a result of harvesting. Losses may arise on initial recognition for agricultural assets because costs to sell are deducted in determining fair value less costs to sell.

⁶Measurement at fair value or selling price less point of sale costs corresponds to the net realizable value measure in the LCNRV test (selling price less estimated costs to complete and sell) since at harvest, the agricultural product is complete and is ready for sale. [7]

U.S. GAAP PERSPECTIVE



U.S. GAAP does not require companies to account for all biological assets in the same way. In general, these assets are not reported at net realizable value.

Milking cows		
Carrying value, January 1, 2011*		€460,000
Change in fair value due to growth and price changes	€35,000	
Decrease in fair value due to harvest	<u>(1,200)</u>	
Change in carrying value		<u>33,800</u>
Carrying value, January 31, 2011		<u>€493,800</u>
Milk harvested during January**		<u>€ 36,000</u>

ILLUSTRATION 9-9
Agricultural Assets—
Bancroft Dairy

*The carrying value is measured at fair value less costs to sell (net realizable value). The fair value of milking cows is determined based on market prices of livestock of similar age, breed, and genetic merit.

**Milk is initially measured at its fair value less costs to sell (net realizable value) at the time of milking. The fair value of milk is determined based on market prices in the local area.

As indicated, the carrying value of the milking cows increased during the month. Part of the change is due to changes in market prices (less costs to sell) for milking cows. The change in market price may also be affected by growth—the increase in value as the cows mature and develop increased milking capacity. At the same time, as mature cows are milked, their milking capacity declines (fair value decrease due to harvest).⁷

Bancroft makes the following entry to record the change in carrying value of the milking cows.

Biological Asset—Milking Cows (€493,800 – €460,000)	33,800	
Unrealized Holding Gain or Loss—Income		33,800

As a result of this entry, Bancroft's statement of financial position reports the Biological Asset—Milking Cows as a non-current asset at fair value less costs to sell (net realizable value). In addition, the unrealized gains and losses are reported as other income and expense on the income statement. In subsequent periods at each reporting date, Bancroft continues to report the Biological Asset—Milking Cows at net realizable value and records any related unrealized gains or losses in income. Because there is a ready market for the biological assets (milking cows), valuation at net realizable value provides more relevant information about these assets.

In addition to recording the change in the biological asset, Bancroft makes the following summary entry to record the milk harvested for the month of January.

Milk Inventory	36,000	
Unrealized Holding Gain or Loss—Income		36,000

The milk inventory is recorded at net realizable value at the time it is harvested and an Unrealized Holding Gain or Loss—Income is recognized in income. As with the biological assets, net realizable value is considered the most relevant for purposes of valuation at harvest. What happens to the Milk Inventory that Bancroft recorded upon harvesting the milk from the cows? Assuming the milk harvested in January was sold to a local cheese-maker for €38,500, Bancroft records the sale as follows.

Cash	38,500	
Cost of Goods Sold	36,000	
Milk Inventory		36,000
Sales		38,500

Thus, once harvested, the net realizable value of the harvested milk becomes its cost, and the milk is accounted for similar to other inventories held for sale in the normal course of business.

A final note: Some animals or plants may not be considered biological assets but would be classified and accounted for as other types of assets (not at net realizable value). For

⁷Changes in fair value arising from growth and harvesting from mature cows can be estimated based on changes in market prices of different age cows in the herd.

example, a pet shop may hold an inventory of dogs purchased from breeders that it then sells. Because the pet shop is not breeding the dogs, these dogs are not considered biological assets. As a result, the dogs are accounted for as inventory held for sale (at LCNRV).

Commodity Broker-Traders

Commodity broker-traders also generally measure their inventories at fair value less costs to sell (net realizable value), with changes in net realizable value recognized in income in the period of the change. Broker-traders buy or sell commodities (such as harvested corn, wheat, precious metals, heating oil) for others or on their own account. The primary purpose for holding these inventories is to sell the commodities in the near term and generate a profit from fluctuations in price. Thus, net realizable value is the most relevant measure in this industry because it indicates the amount that the broker-trader will receive from this inventory in the future.

Assessing whether a company is acting in the role of a broker-trader requires judgment. Companies should consider the length of time they are likely to hold the inventory and the extent of additional services related to the commodity. If there are significant additional services, such as distribution, storage, or repackaging, the company is likely not acting as a broker-dealer; thus, measurement of the commodity inventory at net realizable value is not appropriate. For example, Carl's Coffee Wholesalers buys coffee beans and resells the commodity in the same condition after a short period of time. Accounting for the coffee inventory at net realizable value appears appropriate. However, if Carl expands the business to roast the beans and repackage them for resale to local coffee shops, the coffee inventory should be accounted for at LCNRV, similar to other inventory held for sale.⁸

AUTHORITATIVE LITERATURE

Authoritative Literature References

- [1] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 6.
- [2] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), paras. 28–29.
- [3] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 29.
- [4] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 33.
- [5] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), par. 21.
- [6] International Accounting Standard 41, *Agriculture* (London, U.K.: International Accounting Standards Committee Foundation, 2001).
- [7] International Accounting Standard 2, *Inventories* (London, U.K.: International Accounting Standards Committee Foundation, 2003), paras. 3–4.

⁸Minerals and mineral products, such as coal or iron ore, may also be measured at net realizable value, in accordance with well-established industry practices. In the mining industry, when minerals have been extracted, there is often an assured sale under a forward contract, a government guarantee, or in an active market. Because there is negligible risk of failure to sell, measurement at net realizable value is justified. In these contexts, and similar to the accounting for agricultural assets, minerals and mineral products are recorded at net realizable value at the point of extraction, with a gain recorded in the period of extraction. In subsequent periods, changes in value of minerals and mineral products inventory are recognized in profit or loss in the period of the change.

QUESTIONS

- | | | Cases | | | | |
|--|----------------------------|---------|---------|---------|---------|---------|
| | | 1 | 2 | 3 | 4 | 5 |
| | Cost | \$15.90 | \$16.10 | \$15.90 | \$15.90 | \$15.90 |
| | Sales value | 14.80 | 19.20 | 15.20 | 10.40 | 17.80 |
| | Estimated cost to complete | 1.50 | 1.90 | 1.65 | .80 | 1.00 |
| | Estimated cost to sell | .50 | .70 | .55 | .40 | .60 |
1. Where there is evidence that the utility of inventory goods, as part of their disposal in the ordinary course of business, will be less than cost, what is the proper accounting treatment?
 2. Why are inventories valued at the lower-of-cost-or-net-realizable value (LCNRV)? What are the arguments against the use of the LCNRV method of valuing inventories?
 3. What approaches may be employed in applying the LCNRV procedure? Which approach is normally used and why?
 4. In some instances accounting principles require a departure from valuing inventories at cost alone. Determine the proper unit inventory price in the following cases.
 5. What method(s) might be used in the accounts to record a loss due to a price decline in the inventories? Discuss.
 6. What factors might call for inventory valuation at net realizable value?
 7. Briefly describe the valuation of (a) biological assets and (b) agricultural produce.

BRIEF EXERCISES

BE9-1 Presented below is information related to Rembrandt Inc.'s inventory.

(per unit)	Skis	Boots	Parkas
Historical cost	\$190.00	\$106.00	\$53.00
Selling price	212.00	145.00	73.75
Cost to sell	19.00	8.00	2.50
Cost to complete	32.00	29.00	21.25

Determine the following: (a) the net realizable value for each item, and (b) the carrying value of each item under LCNRV.

BE9-2 Floyd Corporation has the following four items in its ending inventory.

Item	Cost	Net Realizable Value (NRV)
Jokers	€2,000	€2,100
Penguins	5,000	4,950
Riddlers	4,400	4,625
Scarecrows	3,200	3,830

Determine (a) the LCNRV for each item, and (b) the amount of write-down, if any, using (1) an item-by-item LCNRV evaluation and (2) a total-group LCNRV evaluation.

BE9-3 Kumar Inc. uses a perpetual inventory system. At January 1, 2011, inventory was Rs214,000,000 at both cost and net realizable value. At December 31, 2011, the inventory was Rs286,000,000 at cost and Rs265,000,000 at net realizable value. Prepare the necessary December 31 entry under (a) the cost-of-goods-sold method and (b) the loss method.

BE9-4 Keyser's Fleece Inc. holds a drove of sheep. Keyser shears the sheep on a semiannual basis and then sells the harvested wool into the specialty knitting market. Keyser has the following information related to the shearing sheep at January 1, 2010, and during the first six months of 2010.

Shearing sheep	
Carrying value (equal to net realizable value), January 1, 2010	€74,000
Change in fair value due to growth and price changes	4,700
Change in fair value due to harvest	(575)
Wool harvested during the first 6 months (at NRV)	9,000

Prepare the journal entry(ies) for Keyser's biological asset (shearing sheep) for the first six months of 2010.

BE9-5 Refer to the data in BE9-4 for Keyser's Fleece Inc. Prepare the journal entries for (a) the wool harvested in the first six months of 2010, and (b) the wool harvested is sold for €10,500 in July 2010.

EXERCISES

E9-1 (LCNRV) Sedato Company follows the practice of pricing its inventory at LCNRV, on an individual-item basis.

Item No.	Quantity	Cost per Unit	Estimated Selling Price	Cost to Complete and Sell
1320	1,200	\$3.20	\$4.50	\$1.60
1333	900	2.70	3.40	1.00
1426	800	4.50	5.00	1.40
1437	1,000	3.60	3.20	1.35
1510	700	2.25	3.25	1.40
1522	500	3.00	3.90	0.80
1573	3,000	1.80	2.50	1.20
1626	1,000	4.70	6.00	1.50

Instructions

From the information above, determine the amount of Sedato Company inventory.

E9-2 (LCNRV—Journal Entries) Dover Company began operations in 2010 and determined its ending inventory at cost and at LCNRV at December 31, 2010, and December 31, 2011. This information is presented below.

	Cost	Net Realizable Value
12/31/10	£346,000	£322,000
12/31/11	410,000	390,000

Instructions

- Prepare the journal entries required at December 31, 2010, and December 31, 2011, assuming that the inventory is recorded at LCNRV, and a perpetual inventory system using the cost-of-goods-sold method.
- Prepare journal entries required at December 31, 2010, and December 31, 2011, assuming that the inventory is recorded at cost, and a perpetual system using the loss method.
- Which of the two methods above provides the higher net income in each year?

E9-3 (Valuation at Net Realizable Value) Matsumura Dairy began operations on April 1, 2010, with purchase of 200 milking cows for ¥6,700,000. It has completed the first month of operations and has the following information for its milking cows at the end of April 2010 (000 omitted).

Milking cows	
Change in fair value due to growth and price changes*	¥(200,000)
Decrease in fair value due to harvest	(12,000)
Milk harvested during April 2010 (at net realizable value)	72,000

*Due to a very high rate of calving in the past month, there is a glut of milking cows on the market.

Instructions

- Prepare the journal entries for Matsumura's biological asset (milking cows) for the month of April 2010.
- Prepare the journal entry for the milk harvested by Matsumura during April 2010.
- Matsumura sells the milk harvested in April on the local milk exchange and receives ¥74,000. Prepare the summary journal entry to record the sale of the milk.

E9-4 (Valuation at Net Realizable Value) Mt. Horeb Alpaca Co. has a herd of 150 alpaca. The alpaca are sheared once a quarter to harvest very valuable alpaca wool that is used in designer sweaters. Mt. Horeb has the following information related to the alpaca herd at July 1, 2010, and during the first quarter of the fiscal year.

Alpaca	
Carrying value (equal to net realizable value), July 1, 2010	\$120,000
Change in fair value due to growth and price changes	7,700
Decrease in fair value due to harvest	(975)
Alpaca wool harvested during the first quarter (at net realizable value)	13,000

Instructions

- (a) Prepare the journal entries for Mt. Horeb's biological asset (Alpaca herd) for the first quarter.
- (b) Prepare the journal entries for the Alpaca wool harvested in the first quarter.
- (c) Prepare the journal entry when the Alpaca wool is sold for \$14,500.
- (d) Briefly discuss the impact on income of the following events related to the alpaca biological asset: (1) a female alpaca gives birth to a baby alpaca, and (2) an older alpaca can only be sheared once every other quarter due to irritation caused by repeated shearing over its life.

CONCEPTS FOR ANALYSIS



CA9-1 (LCNRV) You have been asked by the financial vice president to develop a short presentation on the LCNRV method for inventory purposes. The financial VP needs to explain this method to the president because it appears that a portion of the company's inventory has declined in value.

Instructions

The financial vice president asks you to answer the following questions.

- (a) What is the purpose of the LCNRV method?
- (b) What is meant by "net realizable value"?
- (c) Do you apply the LCNRV method to each individual item, to a category, or to the total of the inventory? Explain.
- (d) What are the potential disadvantages of the LCNRV method?

USING YOUR JUDGMENT

FINANCIAL REPORTING

Financial Reporting Problem

Marks and Spencer plc (M&S)

The financial statements of M&S can be accessed at the book's companion website, www.wiley.com/college/kiesoifrs.

Instructions

Refer to M&S's financial statements and the accompanying notes to answer the following questions.

- (a) How does M&S value its inventories? Which inventory costing method does M&S use as a basis for reporting its inventories?
- (b) How does M&S report its inventories in the statement of financial position? In the notes to its financial statements, what three descriptions are used to classify its inventories?
- (c) What costs does M&S include in Inventory and Cost of Sales?
- (d) What was M&S inventory turnover ratio in 2008? What is its gross profit percentage? Evaluate M&S's inventory turnover ratio and its gross profit percentage.



BRIDGE TO THE PROFESSION

Professional Research

Jones Co. is in a technology-intensive industry. Recently, one of its competitors introduced a new product with technology that might render obsolete some of Jones's inventory. The accounting staff wants to follow the appropriate authoritative literature in determining the accounting for this significant market event.

Instructions

Access the IFRS authoritative literature at the IASB website (<http://eifrs.iasb.org/>). When you have accessed the documents, you can use the search tool in your Internet browser to respond to the following questions. (Provide paragraph citations.)

- (a) Identify the authoritative literature addressing inventory pricing.
- (b) List three types of goods that are classified as inventory. What characteristic will automatically exclude an item from being classified as inventory?
- (c) Define "net realizable value" as used in the phrase "lower-of-cost-or-net realizable value."
- (d) Explain when it is acceptable to state inventory above cost and which industries allow this practice.