Inventories: Additional Valuation Issues

Chapter 9

Lower of Cost or Market (LCM)

REMEMBER CONSERVATISM!

The general rule is that -

The historical cost principle is abandoned when the future *utility* (revenue-producing ability) of the asset is no longer as great as its original cost.

Note "abandoned" is not the word I would choose. Good rule of thumb is that historical cost should be adjusted for impairments.

New Term: Net Realizable Value (NRV)= normal selling price less costs to sell

HOW IT WORKS-

Inventory is recorded at the LOWER of cost or market where:

- Cost (easy, what you have on the balance sheet if you don't do anything)
- Market= replacement cost, but can not be:
  - » Greater than NRV (ceiling)
  - » Less than NRV minus normal profit margin (floor)

Market Value Stated another way: market value is the middle value of replacement cost, NRV and NRV less normal profit margin.

Market

Cost

Market =

Ceiling = NRV

Not >

Replacement Cost

Not <

Floor = NRV less Normal Profit Margin

LCM

What is the rationale for these two limitations?

Lower of Cost or Market Example

Grant Wood Company manufactures desks. Most of the company's desks are standard models and are sold on the basis of catalog prices. At December 31, 2002, the following finished desks appear in the company's inventory:

Finished Desks	A	B	C	D
2002 catalog selling price	$450	$480	$900	$1,050
FIFO cost per inventory (12/31/02)	470	450	830	960
Est. cost to manufacture (12/31/02)	460	440	610	1,000
Sale commissions and disposal costs	45	60	90	130
2003 catalog selling price	500	540	900	1,200

The 2002 catalog was in effect through November 2002, and the 2003 catalog is effective as of December 1, 2002. All catalog prices are net of the usual discounts. Generally, the company attempts to obtain a 20% gross margin on selling price and has usually been successful in doing so.

Previous Slide Computation

Finished Desks	A	B	C	D
2002 Catalog selling price	450	480	900	1,050
FIFO cost per inventory (12/31/02)	470	450	830	960
Est Cost to Manufacture (12/31/02)	460	440	610	1,000
Sales commissions and disposal costs	45	60	90	130
2003 catalog selling price	500	540	900	1,200
Replacement cost	460	440	610	1,000
NRV				
Estimated sales price	500	540	900	1,200
Less: Costs to sell	(45)	(60)	(90)	(130)
	455	480	810	1,070
Less: Normal profit margin f 20%	(100)	(108)	(180)	(240)
NRV less normal profit margin	355	372	630	830
Middle Value= designated mkt value	455	440	630	1,000
Cost	470	450	830	960
LCM= Ending inventory	455	440	630	960
Inventory adjustment necessary	(15)	(10)	(200)	-

FINANCIAL STATEMENT PRESENTATION

Can use allowance or direct method:

ALLOWANCE:

- **Separate line on balance sheet to show "inventory allowance"**
- **Separate line on income statement to show "loss on inventory"**

DIRECT:

- **Charge directly to inventory, no allowance on balance sheet**
- **Charge directly to COS, no line for "loss on inventory" in the income statement.**

ABC Company
Income Statement

	Allowance	Direct
Sales	$ 200,000	$ 200,000
Cost of goods sold	120,000	132,000
Gross profit	80,000	68,000
Operating expenses:		
Selling	45,000	45,000
General and administrative	20,000	20,000
Total operating expenses	65,000	65,000
Other revenue and expense:		
Loss on inventory	12,000	-
Interest income	5,000	5,000
Total other	(7,000)	5,000
Income from operations	8,000	8,000
Income tax expense	2,400	2,400
Net income	$ 5,600	$ 5,600

ABC Company
Balance Sheet

	Allowance	Direct
Current assets:		
Cash	$ 100,000	$ 100,000
Accounts receivable	350,000	350,000
Inventory	770,000	758,000
Less: inventory allowance	(12,000)	
Prepaids	20,000	20,000
Total current assets	1,228,000	1,228,000

GROSS PROFIT METHOD

Backs into inventory using a rollforward and estimating the cost of goods sold by reducing sales by the profit.

- Company has sales of $100,000 and normal profit margin of 10%, so they make the following entry:

A/R	$100,000	
	Sales	$100,000
COS	$90,000	
	Inventory	$ 90,000

- Not normally acceptable for financial reporting purposes, but sometimes practical for interim reporting.

Retail Inventory Method

- Provides an estimate of ending inventory without a physical count.
- Produces estimates that may be acceptable for financial statement (reporting) purposes.

Retail Inventory Variations

Textbook Illustrates:
- LCM Method (conventional retail)
  - Computes cost ratio after markups (and markup cancellations) only
    - » More conservative, excluding markdowns from ratio results in greater COS
- Cost Method (average cost)
  - Computes cost ratio after both markups AND markdowns (and cancellations to both)
    - » LESS conservative, including markdowns in ratio results in lower COS

Appendix 9A:
- LIFO retail at cost with stable prices (LIFO retail) COVERED- computes ratio after BOTH M-ups and M-downs

NOT COVERED AND STUDENTS NOT RESPONSIBLE FOR IN THIS CLASS:
- LIFO at cost with fluctuating prices (dollar-value LIFO retail)

Retail Inventory Example

Jared Jones Inc. uses the retail inventory method to estimate ending inventory for its monthly financial statements. The following data pertain to a single department for the month of October 2002:

	Cost	Retail
Inventory, October 1, 2002	$52,000	$78,000
Purchases, net	273,000	415,000
Additional markups		9,000
Markup cancellations		2,000
Markdowns, net		3,600
Sales		380,000

Prepare a schedule computing ending inventory using the (1) cost, (2) conventional (LCM), and (3) LIFO retail methods.

SOLUTION- CONVENTIONAL & COST

		Cost	Retail
Beginning Inventory		52,000	78,000
Purchases, net		273,000	415,000
Merchandise available for sale		325,000	493,000
Additional markups			9,000
Markup cancellations			(2,000)
		325,000	500,000
Conventional/ LCM method Ratio	65.0%		
Markdowns, net			(3,600)
Total before sales		325,000	496,400
Cost method Ratio	65.5%		
DEDUCT SALES			(380,000)
ENDING INVENTORY AT RETAIL			116,400
ENDING inventory using conventional/ LCM method		75,660	
Ending inventory using cost method		76,209	

SOLUTION- CONVENTIONAL RETAIL LIFO

	Cost	Retail
Beginning Inventory	52,000	78,000
LIFO OPENING POOL RATIO		67%
Purchases	273,000	415,000
Markups		9,000
Markup cancellations		(2,000)
Markdowns, net		(3,600)
New inventory	273,000	418,400
LIFO current layer ratio		65%
Total including Beg. Inventory	not necessary	496,400
Net sales		(380,000)
Ending inventory at retail		116,400

Ending at Retail	Layers at retail		Ratio	Ending at LIFO Cost
116,400	October 1	78,000	67%	52,000
	October 31	38,400	65%	25,055
		ENDING INVENTORY AT LIFO COST		77,055

Appraisal of Retail Inventory Method

Method permits:

- the computation of net income without a physical count of inventory
- a control measure in determining inventory shortages.
- regulation of quantities of merchandise on hand.
- information needed for insurance purposes.

Inventory Disclosure

- Composition of manufactured inventory ....
  (raw materials, WIP, and finished goods)
- Unusual or significant financing arrangement (related party transactions, firm purchase commitments, etc.)
- Inventory costing methods used.
- Consistency of costing methods from one period to another.

OTHER INVENTORY CONCEPTS

Relative Sales Value Method:

- **Multiple items purchased together, cost is assigned by allocating cost using relative proportion of estimated selling price.**

Purchase Commitments:

- **Because it is "executory" in nature (both parties have yet to fulfill contractual obligation) no recordation.**
  - **Disclosure required for all commitments;**
  - **If commitment is different than cost, then a liability should be recorded.**

SPECIAL ITEMS

The following chart will help you remember how to treat certain items when applying the various retail inventory methods:

	COST	RETAIL
Freight costs	Add	-
Purchase returns	Deduct	Deduct
Purchase discounts and allowances	Deduct	Deduct*
++Sales returns and allowances	-	Reduce sales
Sales discounts		
Using gross method	-	-
Using net method	-	Deduct
++Normal shortages (breakage, shrinkage, etc.)	-	Deduct
Abnormal shortages	Deduct	Deduct
++Employee discounts	-	Deduct

* Allowances Not included in retail component if they are not reflected as a reduction to the sales price.

++ NOT included in the ratio computation– only in arriving at ending retail inventory.

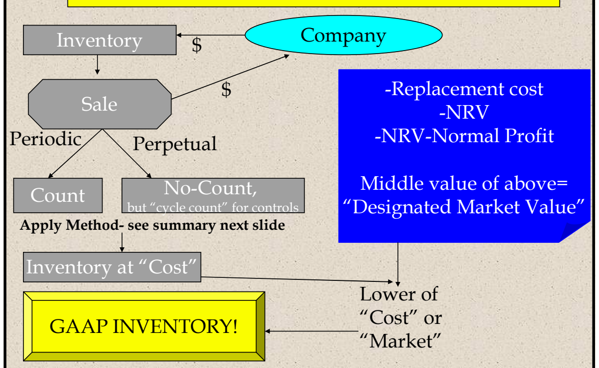
SPECIAL ITEMS ILLUSTRATION

Illustration 9-22 in chapter 9.
Based on the below facts, compute Conventional retail inventory:
- **Beginning inventory $1,000 at cost $1,800 at retail;**
- **Purchases at $30k and $60k at cost and retail, respectively;**
- **Freight in $600;**
- **Purchase returns of $1,500 and $3,000 at cost and retail, respectively;**
- **Markups $9,000;**
- **Abnormal shortage $1,200 and $2,000 at cost and retail, respectively;**
- **Net markdowns $1,400**
- **Sales $36,000**
- **Sales returns $900**
- **Employee discounts $800**
- **Normal shortage $1,300**

Special items solution

	Cost	Retail
Beginning inventory	1,000	1,800
Purchases	30,000	60,000
Freight in	600	
Purchase returns	(1,500)	(3,000)
Markups		9,000
Abnormal shortage	(1,200)	(2,000)
	28,900	65,800
RATIO	43.92%	
Markdowns		(1,400)
Sales, net of returns		(35,100)
Employee discounts		(800)
Normal shortage		(1,300)
		27,200
Ratio		43.92%
Ending inventory		11,947

INVENTORY SUMMARY



METHODS COVERED

- **FIFO=LISH**
- **LIFO=FISH**
- **SPEC. IDENTIFICATION- COMPUTER TRACKING**
- **AVERAGE COST**
- **DOLLAR VALUE LIFO=D.S.M.A (Strips out effects of increasing costs in applying LIFO)**
- **RETAIL METHODS (Relies on Retail Tracking and cost:retail ratio to "back into" ending inventory)**
  - **Conventional/ LCM= M-Ups only**
  - **Cost/ Average Cost= M-ups and M-downs, less conservative than "conventional retail**
  - **LIFO Retail= Use retail method but determine ratios in "Layers" hence LIFO method. Uses M-ups AND M-downs**
- **Gross Profit= NOT GAAP, but sufficient for internal management reporting.**