Which Items be reported as inventory?

1. Goods out on consignment at another company's store
2. Goods sold on an instalment basis
3. Goods purchased f.o.b. shipping point that are in transit at December 31
4. Goods purchased f.o.b. destination that are in transit at December 31
5. Goods sold to another company, with Soukas having signed an agreement to repurchase the goods at a set price that covers all costs related to the inventory
6. Goods sold where large returns are predictable
7. Freight charges on goods purchased
8. Freight charges on goods sold
9. Factory labour costs incurred on goods that are still unsold
10. Interest costs incurred for inventories that are routinely manufactured in large quantities
11. Costs incurred to advertise goods held for sale
12. Materials on hand and not yet placed into production by a manufacturing firm

7 - 1

Which Items be reported as inventory?

13. Raw materials on which a manufacturing firm has started production, but which are not completely processed
14. Factory supplies
15. Office supplies in a manufacturing firm
16. Goods held on consignment from another company
17. Goods held on consignment by another company
18. Costs identified with units completed by a manufacturing firm, but not yet sold
19. Goods sold f.o.b. destination that are in transit at December 31
20. Temporary investments in shares and bonds that will be resold in the near future in an asset management company
21. Costs of uncleared land to be developed by a property development company
22. Cost of normal waste or spoilage of raw materials during production
23. Damaged goods with no resale value

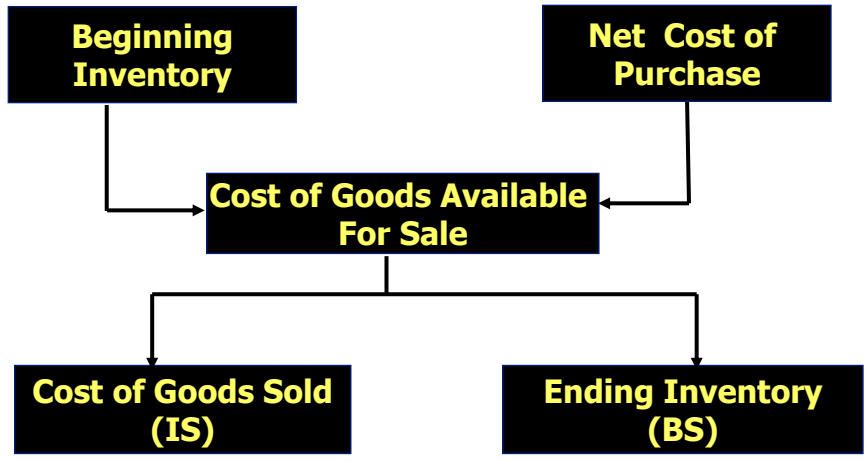
7 - 2

What's the effect if we record freight in costs as inventory / operating expense?
把存货运输费用记为存货/期间费用，对会计报表产生什么样的影响？

唯品会: 在线销售的产品可否作为存货确认?

7 - 3

The Allocation of Inventory Cost between COGS and Ending Inventory- Merchandising



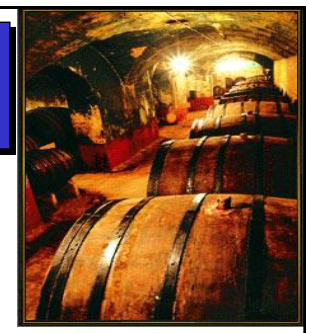
7 - 4

Class Discussion: Daniel Dobbins Distillery

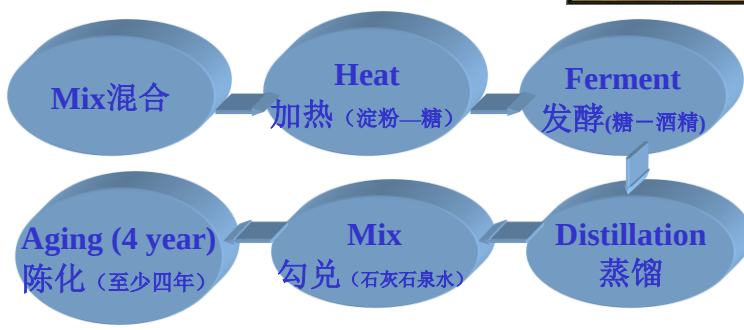
- Daniel Dobbins
  - High quality products: “Old Trailridge” Bourbon Whiskey(波本威士忌)
  - Iron-free spring water, fire-charred white oak barrel
- Volume
  - Usually, production volume ≈ sales volume
  - To increase market share, increase production level by 50% since 2018

7 - 5

Daniel Dobbins Distillery



- Production Process



7 - 6

Daniel Dobbins Distillery

- Production costs
  - Cost of oak barrel: average $60/barrel
    - Oak barrel will be disposed after 4 years' production
    - Other production costs: average cost $50/barrel
- Year 2017 and before, production and sales level=**40,000barrels**
  - Price $1000/barrel, Sales revenue $ 40 mill
  - Federal excise tax $ 30 mill
  - COGS (= $50×40,000) 2 mill
  - Oak barrel (= $60×40,000) 2.4 mill
  - Other expenses 4.6 mill
  - NI $ 1 mill

7 - 7

Daniel Dobbins Distillery

- Year 2018,increase oak barrel by 50%
  - **Sales 40,000 barrels**, Sales revenue (= $1000×40,000) $ 40 mill
  - Federal excise tax $ 30 mill
  - COGS (= $50×40,000) 2 mill
  - **Production 60,000 barrels**, oak barrel (= $60×60,000) 3.6 mill
  - Other expenses 4.6 mill
  - NI -$ 0.2 mill

7 - 8

Daniel Dobbins Distillery

- Should the cost of oak barrel be charged to the current accounting period?
- If oak barrel is added to inventory cost, how about the NI in 2017 and 2018?
  - NI for 2017 is the same
  - 2018, COGS=$4.4mill[= $(50+60)×40,000]; NI $1mill

Where is the cost of the newly added oak barrel? When the cost of oak barrel impact NI?

7 - 9

Cost of Merchandise Acquired_Detailed Gross Profit Calculation

Gross sales				$1,740
Deduct: Sales returns and allowances			$ 70	
Cash discounts on sales			100	170
Net sales				$1,570
Deduct: Cost of goods sold				
Merchandise inventory, December 31, 20X1			$ 100	
Purchases (gross)		$960		
Deduct: Purchase returns and allowances	$75			
Cash discounts on purchases	5	80		
Net purchases		$880		
Add: Freight in		30		
Total cost of merchandise acquired			910	
Cost of goods available for sale			$1,010	
Deduct: Merchandise inventory, December 31, 20X2			140	
Cost of goods sold				870
Gross profit				$ 700

7 - 10

Detailed Income Statement

- Following are accounts taken from the adjusted trial balance of the Morlan Bathroom Supply Company, December 31, 20X5. The company uses the periodic inventory system. All amounts are in thousands.
- Prepare a detailed multiple-step income statement for 20X5

7 - 11

MORLAN BATHROOM SUPPLY COMPANY
Income Statement
For the Year Ended December 31, 20X5
(In Thousands)

Revenues:			
Gross sales			$1,066
Deduct: Sales returns and allowances		$ 50	
Cash discounts on sales		16	66
Net sales			$1,000
Cost of goods sold:			
Inventory, December 31, 20X4			$200
Add purchases		$700	
Less: Purchase returns and allowances	$40		
Cash discounts on purchases	15	55	
Net purchases		$645	
Add Freight in		55	
Cost of merchandise acquired			700
Cost of goods available for sale			$900
Deduct: Inventory, December 31, 20X5			300
Cost of goods sold			600
Gross profit from sales			$ 400
Operating expenses:			
Selling expenses:			
Sales salaries and commissions		$160	
Rent expense, selling space		50	
Advertising expense		45	
Depreciation expense, trucks and store fixtures		29	

7 - 12

Net purchases	$645	
Add Freight in	55	
Cost of merchandise acquired		700
Cost of goods available for sale		$900
Deduct: Inventory, December 31, 20X5		300
Cost of goods sold		600
Gross profit from sales		$ 400
Operating expenses:		
Selling expenses:		
Sales salaries and commissions	$160	
Rent expense, selling space	50	
Advertising expense	45	
Depreciation expense, trucks and store fixtures	29	
Bad debts expense	8	
Delivery expense	20	
Total selling expenses		$312
General and administrative expenses:		
Office salaries	46	
Rent expense, office space	10	
Depreciation expense, office equipment	3	
Office supplies used	6	
Miscellaneous expenses	13	
Total general and administrative expenses		78
Total operating expenses		390
Income before income tax		$ 10
Income tax expense		4
Net income		$ 6

7 - 13

LCM

- Inventory **write-down** under U.S. GAAP: Reduces historical cost of an item in response to its decline in value
  - Needed only when replacement cost and net realizable value fall
  - As historical cost cannot be recovered in the future
- Journal entry example: Ending inventory cost ($45) vs. market value ($43)

Loss on write-down of inventory(or COGS)	**2**	
Merchandise Inventory		**2**

7 - 14

Effects of Inventory Errors

- Undiscovered inventory errors affect two consecutive reporting periods
- Ending inventory of first period becomes beginning inventory of second period
- If ending inventory is understated; retained earnings is understated
- If ending inventory is overstated; retained earnings is overstated

7 - 15

Inventory Errors

PANEL A

20X7	Correct Reporting		Incorrect Reporting*		Effects of Errors
Sales		$980		$980	
Deduct: Cost of goods sold					
Beginning inventory	$100		$100		
Purchases	500		500		
Cost of goods available for sale	$600		$600		
Deduct: Ending inventory	70		60		Understated by $10
Cost of goods sold		530		540	Overstated by $10
Gross profit		$450		$440	Understated by $10
Other expenses		250		250	
Income before income taxes		$200		$190	Understated by $10
Income tax expense at 40%		80		76	Understated by $4
Net income		$120		$114	**Understated by $6**
Ending balance sheet items					
Inventory		$ 70		$ 60	Understated by $10
Retained earnings includes current net income		120		114	Understated by $6
Income tax liability†		80		76	Understated by $4

*Because of error in ending inventory.
†For simplicity, assume that the entire income tax expense for the year will not be paid until the succeeding year. Therefore, the ending liability will equal the income tax expense.

7 - 16

Inventory Errors

20X8	Correct Reporting	Incorrect Reporting*	Effects of Errors
Sales	$980	$980	
Deduct: Cost of goods sold			
Beginning inventory	$ 70	$ 60	Understated by $10
Purchases	500	500	
Cost of goods available for sale	$570	$560	Understated by $10
Deduct: Ending inventory	40	40	
Cost of goods sold	530	520	Understated by $10
Gross profit	$450	$460	Overstated by $10
Other expenses	250	250	
Income before income taxes	$200	$210	Overstated by $10
Income tax expense at 40%	80	84	Overstated by $4
Net income	$120	$126	**Overstated by $6**
Ending balance sheet items			
Inventory	$ 40	$ 40	**Correct**
Retained earnings includes			
Net income of previous year	120	114	Counterbalanced and thus
Net income of current year	120	126	now correct in total
Two-year total	$240	$240	
Income tax liability			
End of previous year	80	76	Counterbalanced and thus
End of current year	80	84	now correct in total†
Two-year total	$160	$160	

*Because of error in beginning inventory.
†The $84 really consists of the $4 that pertains to income of the previous year plus $80 that pertains to income of the current year.

7 - 17

Effects of Inventory Errors on Current Year's Income

	Understate end inventory	Overstate end inventory	Understate begin inventory	Overstate begin inventory
Sales	- -	- -	- -	- -
(–) COGS:				
Begin Inventory	- -	- -	**Low**	**High**
(+) Purchase	- -	- -	- -	- -
(–) End Inventory	**Low**	**High**	- -	- -
= COGS	**High**	**Low**	**Low**	**High**
Gross Margin	**Low**	**High**	**High**	**Low**
Other Operating Expense	- -	- -	- -	- -
Net Income	**Low**	**High**	**High**	**Low**

7 - 18

Inventory Error Example: Cutoff Error

- **Cutoff error**: Failure to record a purchase or sale in the correct time period
  - Auditors routinely review purchase and sale activity at the beginning and end of the year
  - Omitting an item from inventory
    - ↑ Cost of goods sold
  - Not recording a purchase
    - ↓ Cost of goods sold

7 - 19

Accounting Frauds with Inventory

- Overstate Inventory :
  1. Fictitious inventory.
  2. Manipulation of inventory counts.
  3. Improper valuation.
  4. Fraudulent or improper inventory capitalization.

7 - 20

How to detect?

- **Growth of inventory > growth of sales? Growth of inventory > growth of assets? Compared with competitors?**
- **Trend of inventory turnover?**
- **Freight cost/Inventory?**
- **Trend of COGS/Sales?**
- **The valuation of inventory under LCM?**
- **Specific types of inventory?**

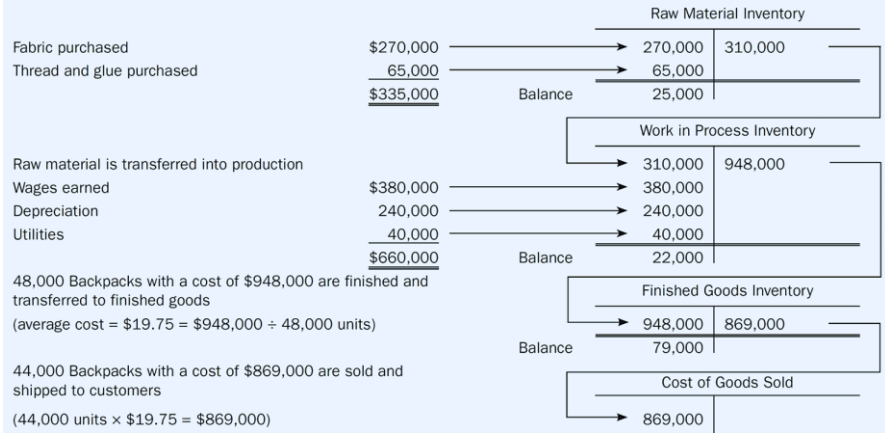
7 - 21

Inventory in a Manufacturing Environment

- **Raw material inventory**: Items held for use in manufacturing a product
- **Work in process inventory**: Material, labor, and other costs accumulated for partially completed items
- **Finished goods inventory**: Cost of completed manufactured goods that are ready to be delivered

7 - 22

Inventory in a Manufacturing Environment



7 - 23

Class Problem

Stocks, Inc. inventory records			
	unit	cost	Total costs
Beg. Bal.	460	30	$13,800
Purchase 16/01	110	32	3,520
Sale, Jan. 25 ($45 per set)	216		
Purchase 16/02	105	36	3,780
Sale, Feb. 27 ($40 per set)	307		
Purchase 10/03	350	28	9,800
Sale, Mar. 30 ($50 per set)	190		

Assuming Stocks, Inc. use periodic inventory system, calculate the COGS under LIFO and FIFO inventory cost flow assumption.

7 - 24

Class Problem

Total sales are 216 + 307 + 190 = 713 units						
			FIFO		LIFO	
	unit	cost	unit	cost	unit	cost
Beg. Bal.	460	30	460	30	148	30
Purchase 16/01	110	32	110	32	110	32
Purchase 16/02	105	36	105	36	105	36
Purchase 10/03	350	28	38	28	350	28
Total COGS			713	22,164	713	21,540

7 - 25

Class Problem (alternative approach)

Inv. (beg.) + Purchase – COGS = Inv. (end.)
COGS = Inv.(beg.) – Inv.(end.) + Purchase
Inv. (beg.) = 460 × $30 = $13,800
Total purchase in dollar: 110 × $32 + 105 × $36 + 350 × $28 = $17,100
How much is the ending inventory?
How many units of inventories left.
460 + 110 + 105 +350 – (216 + 307 +150) = 312 units

When FIFO is used.

Inv (end.) is the inventories most recently purchased, the 312 units are assumed to be from the inventories from purchase on Mar 10.

Inv. (end.) = 312 × $28 =$8,736

COGS = $13,800 – $ 8,736 + 17,100 = $22,164

When LIFO is used.

Inv (end.) is the inventories least recently purchased, the 312 units are assumed to be from the beginning inventories on Jan 1.

Inv. (end.) = 312 × $30 =$9,360

COGS = $13,800 – $ 9,360 + 17,100 = $21,540

7 - 26

Class Problem
(what if perpetual inventory is used?)

The COGS for the 1st sale on Jan. 25.

	Before sale balance		Inventory sold		After sale balance	
	unit	cost	unit	cost	unit	cost
Jan. 1	460	30	106	30	354	30
Purchase Jan. 16	110	32	110	32	0	
			216		354	
The COSG for Jan. 25 sale is 106×30 + 110×32 = $6,720						

7 - 27

Class Problem
(what if perpetual inventory is used?)

The COGS for the 2nd sale on Feb. 27.

	Before sale balance		Inventory sold		After sale balance	
	unit	cost	unit	cost	unit	cost
Jan. 1	354	30	202	30	152	30
Purchase Feb. 16	105	36	105	36	0	
			307		152	
The COSG for Feb. 27 sale is 105×36 + 202×30 = $9,840						

7 - 28

Class Problem
(what if perpetual inventory is used?)

The COGS for the 3rd sale on Mar. 30.

	Before sale balance		Inventory sold		After sale balance	
	unit	cost	unit	cost	unit	cost
Jan. 1	152	30	0		152	30
Purchase Mar.10	350	28	190	28	160	28
			190		312	
The COSG for Mar. 30 sale is 190×28 = $5,320						

Thus, the total COGS is

$6,720 + 9,840 +5,320 =$21,880