

Financial Accounting:
Tools for Business Decision Making, 4th Ed.
Kimmel, Weygandt, Kieso

CHAPTER 5



5-1

7

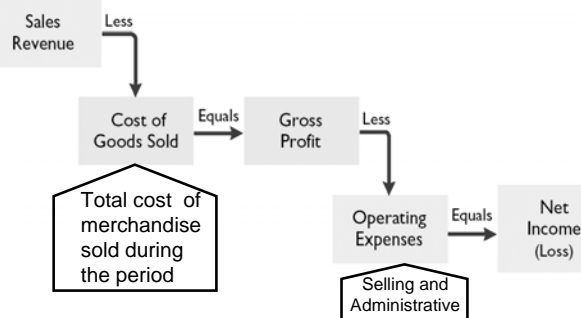
Differences Between a Service Company and a Merchandising Company

Primary Source of Revenue

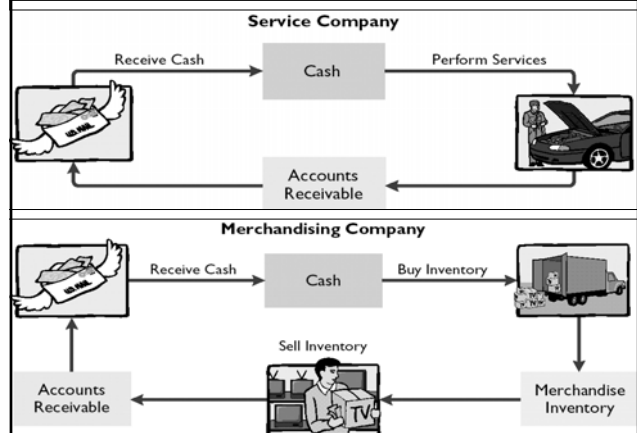
- **Service Company- performs services**
Barber, electrician, plumber, attorney, CPA
- **Merchandise Company- sale of merchandise**
Cars, clothing, food, office supplies



Income Measurement for Merchandise Companies



Operating Cycles



Inventory Systems - Perpetual



Computers and electronic scanning equipment make perpetual inventory cost effective!

PERPETUAL VS. PERIODIC

If your business is such that you can track your inventory in detail, then you can use a computer for a "perpetual" count... each time there is a sale, the computer knows.

What if your business does not allow for item by item tracking? You need to count what you have from time to time and this is called "Periodic" inventory.

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ALGEBRA= PERIODIC INVENTORY

+ Beginning inventory
 + Purchases
 - Sold (= cogs)
 = Ending

True?

$$B + P - S = E$$

We know what we started with, we know what we bought, and we can go count what we have left.... Can we solve for COGS?

$$B + P - E = \text{COGS!!!!}$$

5-7

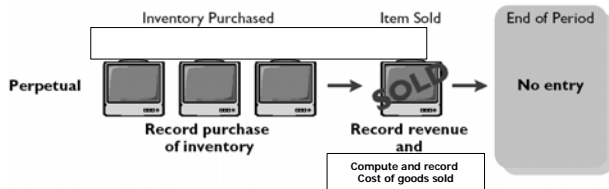
Review

If beginning inventory is \$60,000, cost of goods purchased is \$380,000, and ending inventory is \$50,000, what is cost of good sold under the periodic system?

- a. \$390,000 c. \$330,000
 b. \$370,000 d. \$420,000

$$\$60,000 + \$380,000 - \$50,000 = \$390,000$$

Inventory Systems - Perpetual



- Maintain detailed records of purchases and sales
- Cost of goods sold is determined with each sale

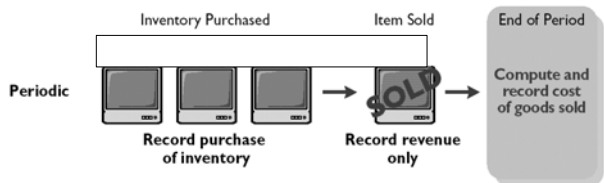
PERPETUAL- COUNT?

Is there any good reason to count inventory if you are using a perpetual system?

YES- Measure shrinkage, verify that system is working etc. We call them "Cycle Counts"

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Inventory Systems - Periodic



- No detailed records
- Cost of goods sold determined at end of the period by taking a physical count and pricing it.

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Recording Purchases of Merchandise

- Purchase of merchandise is recorded when goods are received from the seller– AND IS CALLED PURCHASES... UNTIL THE COUNT IS MADE AND THEN MOVED TO INVENTORY
 - IF PERPETUAL, IT IS "INVENTORY" WHEN PURCHASED!
- Every purchase should be supported by business documents
- Cash purchases have receipts or cancelled checks
- Credit purchases are supported by purchase invoices

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INVOICE NO. 731

PW AUDIO SUPPLY, INC.
27 CIRCLE DRIVE
HARDING, MICHIGAN 48281

S
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T
O

Firm Name Sauk Stereo ← Seller
 Attention of James Hoover, Purchasing Agent ← Buyer
 Address 125 Main Street
Chelsea Illinois 60915
 City State Zip

Date 5/4/05 ← Invoice date
 Salesperson Malone Terms 2/10, n/30 ← Credit terms
 Freight Paid by Buyer

Catalog No.	Description	Quantity	Price	Amount
X572Y9880	Printed Circuit Board-prototype	1	2,300	\$2,300
45547245	Production Model Circuits	5	300	1,500
TOTAL				\$3,800 ← Total

IMPORTANT: ALL RETURNS MUST BE MADE WITHIN 10 DAYS

Purchase of Merchandise

Sauk purchased \$ 3,800 of goods on account.

Merchandise Inventory	Accounts Payable
May 4 3,800	May 4 3,800
	Debit Credit
May 4 Merchandise Inventory	3,800
Accounts Payable	3,800
To record goods purchased on account	
<u>PERPETUAL JE- WOULD BE DEBIT TO</u> <u>"PURCHASES" IF IT WERE PERIODIC</u>	

Merchandise Inventory

- Includes all purchases of merchandise for re-sale to customers and costs to get it to the business AND make ready for sale.
- Does not include items purchased for use and not for resale
- If an entity sells cash registers, then the cash registers it buys to re-sell would be inventory- ones used to ring-up sales for the business would be recorded as equipment

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Purchase Returns and Allowances

Purchase Return – A return of the goods from the buyer or seller for cash or credit.

Purchase Allowance – A reduction ↓ made in the selling price of the merchandise, granted by the seller so that the buyer will keep the goods.

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Return of Merchandise

Sauk Stereo returned goods costing \$ 300 to PW Audio.

Merchandise Inventory		Accounts Payable			
May 4 3,800	May 8 300	May 8 300	May 4 3,800		
				Debit	Credit
May 8	Accounts Payable			300	
	Merchandise Inventory				300
To record return of goods purchased on account					

Freight Costs...

- On incoming goods you purchase are charged to inventory.



- On outgoing goods you sell are an operating expense to the seller.



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Freight Cost Incurred by Buyer

Merchandise Inventory		Cash			
May 4 3,800	May 8 300		May 9 150		
May 9 150				Debit	Credit
May 9	Merchandise Inventory			150	
	Cash				150
To record payment of freight on goods purchased					

Freight Cost Incurred by Seller

Freight-out		Cash			
May 4 150		May 4	150		
				Debit	Credit
May 9	Freight-Out (SELLING EXPENSE)			150	
	Cash				150
To record payment of freight on goods sold					

Purchase Discounts

- Credit terms may allow buyer to claim a cash discount if payment is made within a certain specified time
- Purchaser saves money and seller converts account receivable to cash faster

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Purchase Discounts

Credit terms may be written "2/10, net 30" which means 2% cash discount if paid within 10 days of invoice date, otherwise pay the full amount within 30 days

Guess what "1/10, EOM" means?

1% cash discount if paid within 10 days, otherwise pay by the end of the month

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INVOICE NO. 731

PW AUDIO SUPPLY, INC.
27 CIRCLE DRIVE

JOURNAL ENTRY???

Invoice date →

Credit terms →

C L D		Attention of James Hoover, Purchasing Agent			
T O		Address 125 Main Street			
		City	Chilsees	State	Illinois
		Zip	60918		
Date	5/4/05	Salesperson	Malone	Terms	2/10, n/30
Freight Paid by Buyer					
Catalog No.	Description	Quantity	Price	Amount	
X672Y9820	Printed Circuit Board-prototype	1	2,300	\$2,300	
A8847245	Production Model Circuits	5	300	1,500	
				TOTAL	\$5,800

IMPORTANT: ALL RETURNS MUST BE MADE WITHIN 10 DAYS

GROSS VS. NET

When purchases are made with discount terms, we must assume that either ALL or NONE of the discounts will be taken and deal with the ultimate outcome as it comes. Therefore, the methods are:

- GROSS: Assume we pay full price on all items, no discounts taken (In our example \$3,800)
- NET: Assume we pay the discounted price on all items (pay all of the balance within the discount period). (in our example \$3,724... 98% of \$3,800)

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GROSS JOURNAL ENTRY

Inventory \$3,800
 Accounts payable \$3,800

NET JOURNAL ENTRY

Inventory \$3,724
 Accounts payable \$3,724

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Sales Discounts

- Credit terms may allow buyer to claim a cash discount for prompt payment
 - Sales Discount is a contra-revenue account of sales. Normal debit balance.
 - Only occurs if you recorded using the "Gross" method described in previous slide AND customer paid within the discount period!
- Credit terms 2/10,n/30- Seller's Books, \$3,800 recorded gross, but paid w/in disc. Pd.

Cash	3,724	
A/R		3,800
Sales disc.	76	

5-25

Review

Which of the following statements about a periodic inventory system is true?

- Cost of goods sold is determined only at the end of the accounting period.**
- Detailed records of the cost of each inventory purchase and sale are maintained continuously.**
- The periodic system provides better control over inventories than a perpetual system.**
- The increased use of computerized systems has increased the use of the periodic system.**

5-26

Review

Which of the following statements about a periodic inventory system is true?

- Cost of goods sold is determined only at the end of the accounting period.**
- Detailed records of the cost of each inventory purchase and sale are maintained continuously.**
- The periodic system provides better control over inventories than a perpetual system.**
- The increased use of computerized systems has increased the use of the periodic system.**

5-27

Review

Which of the following items does not result in an adjustment in the merchandise inventory account under a perpetual system?

- A purchase of merchandise.
- A return of merchandise inventory to the supplier.
- Payment of freight costs for goods shipped to a customer.
- Payment of freight costs for goods received from a supplier.

Review

Which of the following items does not result in an adjustment in the merchandise inventory account under a perpetual system?

- a. A purchase of merchandise.
- b. A return of merchandise inventory to the supplier.
- c. Payment of freight costs for goods shipped to a customer.
- d. Payment of freight costs for goods received from a supplier.

Review

A purchase of \$1,200 is made on March 2, terms 2/10, n/30, on which a return of \$200 is granted on March 5. What amount should be paid on March 12?

- a. \$1,176
- b. \$1,200
- c. \$1,000
- d. \$ 980

$$\$1,200 - \$200 = \$1,000 - \$20 (\$1,000 \times .02) = \$ 980$$

Recording Sales Under Perpetual Inventory System

- Sales revenues recorded when goods are transferred from the seller to the buyer
- Follows revenue recognition principle
- Every purchase should be supported by business documents, i.e., cash register tape or sales invoice



STB 1904 074 0005207 TER 10 TRS 04087
 GUMS BUN B 00190000224 F 1.88 J
 SKITTLES FR 0040000160 F 1.66 J
 ER CANDY 0040000160 F 2.50 J
 ERS CANDY 00190000801 F 1.66 J
 ERS CANDY 0040000161 F 1.66 J
 ERS CANDY 00400001326 F 1.66 J
 ERS CANDY 00400001326 F 1.66 J
 ERS CANDY 00400001326 F 1.66 J
 ERS CANDY 00400001326 F 1.66 J
 ERS CANDY 00400001326 F 1.66 J
 CREAM EGGS 00400001129 F 2.88 J
 CROWN SSS 00400001129 F 2.88 J
 COOKIES 005274281 F 1.67 D
 MR NERNUT C 00704428000 F 1.67 D
 PLE 00112828939 F 0.50 H
 BUNNY BAG 007328939 F 0.50 H
 LOPY FUNDUS 007328939 F 1.00 J
 J&B DRUMS 00727467872 F 4.46 H
 BRICK CRAMS 00000000000 F 0.97 H
 0.68 lb 8 1 lb 7 1/2 40.88
 TRK 1 7.000 L 42.52
 DEBIT TEND 42.90
 CHANGE DUE 0.00

EFT DEBIT PAY FROM PRIMARY
 ACCOUNT 2410
 \$2.90 TOTAL PURCHASE
 NET 8 468028935
 NETWORK ID 0282 APPR CODE 015265
 03/08/04 16:57:36
ITEMS SOLD 22
 TCR 6494 0480 0919 9082 0132
 Credit report to the TrustCredit.com website
 at www.trustcredit.com - order yours today!
 03/08/04 16:57:41

Recording Sales Under Perpetual Inventory System

Two entries required:

- One for Sales- may be on credit or cash
- One to record Cost of Goods Sold

Same invoice as before, but now we are the seller and goods cost us \$2,400

May	4	Accounts Receivable	3,800	
		Sales		3,800
		(To record credit sale to Sauk Stereo per invoice #731)		
	4	Cost of Goods Sold	2,400	
		Merchandise Inventory		2,400
		(To record cost of merchandise sold on invoice #731 to Sauk Stereo)		

Sales Returns and Allowances- flip side of Purchase Returns and Allowances

\$300 sales returned which cost us \$140.

May	8	Sales Returns and Allowances Accounts Receivable (To record credit granted to Sauk Stereo for returned goods)	300	300
	8	Merchandise Inventory Cost of Goods Sold (To record cost of goods returned)	140	140

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Sales Returns and Allowances

- Is a contra-revenue account, normal balance is debit
- Are kept in this separate account so you know exactly how much you allowed in returns and allowances

Sales	\$ 2,500,000
Returns and Allowances	<u>25,000</u>
Net Sales	\$ 2,475,000

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Sales Returns and Allowances

What do excessive returns and allowances suggest?

- Inferior merchandise
- Inefficiencies in filling orders
- Errors in billing customers
- Mistakes in delivery or shipment of goods
- Overly aggressive sales clerks

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4

Single-step and Multiple-step Income Statements

- Single-step – total revenues minus total expenses; simple, easy to read
- Multi-step – highlights components and distinguishes activities

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Single-step Income Statement

WAL-MART STORES, INC. Income Statements		For the years ended January 31	
	2002	2001	
Revenues			
Net sales	\$217,799	\$191,329	
Other revenues, net	2,013	1,966	
	<u>219,812</u>	<u>193,295</u>	
Expenses			
Cost of goods sold	171,562	150,255	
Selling, general, and administrative expenses	36,173	31,550	
Interest expense	1,326	1,374	
Other expense	183	129	
Income taxes	3,897	3,692	
	<u>213,141</u>	<u>187,000</u>	
Net income	<u>\$ 6,671</u>	<u>\$ 6,295</u>	

Multi-step Income Statement

WAL-MART STORES, INC. Income Statements		For the years ended January 31	
	2002	2001	
Net sales	\$217,799	\$191,329	
Cost of goods sold	171,562	150,255	
Gross profit	46,237	41,074	
Operating expenses			
Selling, general, and administrative expenses	36,173	31,550	
Income from operations	10,064	9,524	
Other revenues and gains			
Other revenues, net	2,013	1,966	
Other expenses and losses			
Interest expense	1,326	1,374	
Other expense	183	129	
Income before income taxes	10,568	9,987	
Income tax expense	3,897	3,692	
Net income	<u>\$ 6,671</u>	<u>\$ 6,295</u>	

PW AUDIO SUPPLY, INC. Income Statement For the Year Ended December 31, 2005			
Sales revenues		\$480,000	
Sales			
Less: Sales returns and allowances	\$12,000		
Sales discounts	8,000	20,000	
Net sales		460,000	Calculation of gross profit
Cost of goods sold		316,000	
Gross profit		144,000	
Operating expenses			
Store salaries expense	45,000		
Administrative salaries expense	19,000		
Utilities expense	17,000		
Advertising expense	16,000		
Depreciation expense—store equipment	8,000		
Freight-out	7,000		
Insurance expense	2,000		
Total operating expenses		114,000	Calculation of income from operations
Income from operations		30,000	
Other revenues and gains			
Interest revenue	3,000		
Gain on sale of equipment	600		
Other expenses and losses		3,600	Results of activities not related to operations
Interest expense	1,800		
Casualty loss from vandalism	200		
		2,000	
Income before income taxes		1,600	
Income tax expense		31,600	
		10,100	
Net income		<u>\$ 21,500</u>	

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Evaluating Profitability

- Gross Profit Rate
- Profit Margin Ratio



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Gross Profit Rate

$$\frac{\text{Gross Profit}}{\text{Net Sales}} = \%$$

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Reasons Gross Profits Rates Change

Gross Profit Rate = $\frac{\text{Gross Profit}}{\text{Net Sales}}$		
(\$ in millions)	2002	2001
Wal-Mart	$\frac{\$46,237}{\$217,799} = 21.2\%$	$\frac{\$41,074}{\$191,329} = 21.5\%$
Target	30.5%	30.4%
Industry average	25.0%	

- Selling products with a lower "mark-up"
- Increased competition can lower sale prices
- Paying higher prices to suppliers
- Sales Mix

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Profit Margin Ratio

$$\frac{\text{Net Income}}{\text{Net Sales}} = \%$$



Percentage of "mark-up" on merchandise sold alters this percentage

5-43

Evaluate Profits Margins

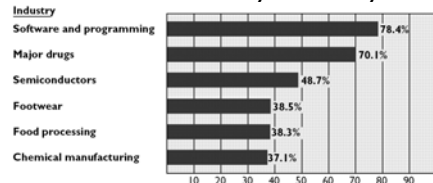
Profit Margin Ratio = $\frac{\text{Net Income}}{\text{Net Sales}}$		
	2002	2001
Wal-Mart (\$ in millions)	$\frac{\$6,671}{\$217,799} = 3.1\%$	$\frac{\$6,295}{\$191,329} = 3.3\%$
Target	3.5%	3.5%
Industry average	3.47%	

WHAT ECONOMIC PRINCIPLE DID WE JUST SEE IN ACTION BY LOOKING AT WAL MART VS. TARGET?

"ECONOMIES OF SCALE"

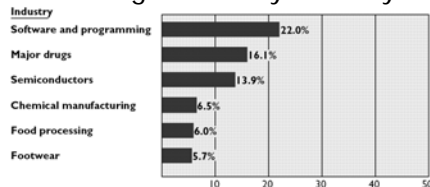
5-44

Gross Profit Rates by Industry



In addition to computing the company's gross profit and profit margin rates, you should compare to industry averages

Profit Margin Rates by Industry



Review

If sales revenues are \$400,000, cost of goods sold is \$310,000, and the operating expenses are \$60,000, what is the gross profit?

- a. \$ 30,000
- b. \$ 90,000
- c. \$340,000
- d. \$400,000

5-46

Review

If sales revenues are \$400,000, cost of goods sold is \$310,000, and the operating expenses are \$60,000, what is the gross profit?

- a. \$ 30,000
- b. \$ 90,000
- c. \$340,000
- d. \$400,000

$$\text{\$ } 400,000 - \text{\$ } 310,000 = \text{\$ } 90,000$$

5-47

Review

Which of the following would affect the gross profit rate (assuming sales are constant)?

- a. An increase in advertising expense.
- b. A decrease in depreciation expense.
- c. An increase in cost of goods sold.
- d. A decrease in insurance expense.

5-48

Review

Which of the following would affect the gross profit rate (assuming sales are constant)?

- a. An increase in advertising expense.
- b. A decrease in depreciation expense.
- c. An increase in cost of goods sold.
- d. A decrease in insurance expense.

5-49

Review

Which of the following would NOT affect the gross profit rate?

- a. An increase in the cost of heating the store.
- b. An increase in the sale of luxury items.
- c. An increase in the use of “discount pricing” to sell merchandise.
- d. An increase in the price of inventory items.

5-50

Review

Which of the following would NOT affect the gross profit rate?

- a. An increase in the cost of heating the store.
- b. An increase in the sale of luxury items.
- c. An increase in the use of “discount pricing” to sell merchandise.
- d. An increase in the price of inventory items.

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