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

**CHAPTER 5**

**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**

- **Sales Revenue**
- **Cost of Goods Sold**
- **Total cost of merchandise sold during the period**
- **Operating Expenses**
- **Gross Profit**
- **Selling and Administrative**
- **Operating Cycles**

**Operating Cycles**

<table>
<thead>
<tr>
<th>Service Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive Cash</td>
</tr>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>Perform Services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Merchandising Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive Cash</td>
</tr>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>Buy Inventory</td>
</tr>
<tr>
<td>Sell Inventory</td>
</tr>
<tr>
<td>Merchandise Inventory</td>
</tr>
</tbody>
</table>
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.

ALGEBRA = PERIODIC INVENTORY

\[
\begin{align*}
\text{Beginning inventory} & \quad + \quad \text{Purchases} \\
- \quad \text{Sold} \quad (= \text{cogs}) & \quad = \quad \text{Ending}
\end{align*}
\]

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?

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

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?

\[
\begin{align*}
a. & \quad $390,000 & \quad c. & \quad $330,000 \\
b. & \quad $370,000 & \quad d. & \quad $420,000
\end{align*}
\]

\[\$60,000 + \$380,000 - \$50,000 = \$390,000\]
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 the system is working etc. We call them “Cycle Counts”

Inventory Systems - Periodic

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

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
Purchase of Merchandise

Sauk purchased $3,800 of goods on account.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4</td>
<td>Merchandise Inventory</td>
<td>3,800</td>
<td></td>
</tr>
<tr>
<td>May 4</td>
<td>Accounts Payable</td>
<td></td>
<td>3,800</td>
</tr>
</tbody>
</table>

To record goods purchased on account

PERPETUAL JE- WOULD BE DEBIT TO “PURCHASES” IF IT WERE PERIODIC

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

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.
Return of Merchandise

Sauk Stereo returned goods costing $300 to PW Audio.

<table>
<thead>
<tr>
<th>Merchandise Inventory</th>
<th>Accounts Payable</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4 3,800</td>
<td>May 8 300</td>
</tr>
<tr>
<td>May 8 300</td>
<td>May 4 3,800</td>
</tr>
</tbody>
</table>

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.

Freight Cost Incurred by Buyer

<table>
<thead>
<tr>
<th>Merchandise Inventory</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4 3,800</td>
<td>May 9 150</td>
</tr>
<tr>
<td>May 9 150</td>
<td>Debit Credit</td>
</tr>
</tbody>
</table>

May 9 Merchandise Inventory 150
Cash 150
To record payment of freight on goods purchased

Freight Cost Incurred by Seller

<table>
<thead>
<tr>
<th>Freight-Out (SELLING EXPENSE)</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 4 150</td>
<td>May 4 150</td>
</tr>
</tbody>
</table>

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
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.

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)

GROSS JOURNAL ENTRY

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>$3,800</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$3,800</td>
</tr>
</tbody>
</table>

NET JOURNAL ENTRY

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>$3,724</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$3,724</td>
</tr>
</tbody>
</table>
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

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

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

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
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?

- $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

<table>
<thead>
<tr>
<th>May</th>
<th>Accounts Receivable Sales (To record credit sale to Sank Stereo per invoice #731)</th>
<th>3,800</th>
<th>3,800</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Cost of Goods Sold Merchandise Inventory (To record cost of merchandise sold on invoice #731 to Sank Stereo)</td>
<td>2,400</td>
<td>2,400</td>
</tr>
</tbody>
</table>
Sales Returns and Allowances

$300 sales returned which cost us $140.

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 25,000
Net Sales $ 2,475,000

Sales Returns and Allowances

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

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
**Single-step Income Statement**

WAL-MART STORES, INC.  
Income Statements  
For the years ended January 31

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net sales</td>
<td>$217,799</td>
<td>$191,329</td>
</tr>
<tr>
<td>Other revenues, net</td>
<td>2,013</td>
<td>1,966</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>171,562</td>
<td>150,255</td>
</tr>
<tr>
<td>Selling, general, and administrative expenses</td>
<td>36,173</td>
<td>31,550</td>
</tr>
<tr>
<td>Interest expense</td>
<td>1,326</td>
<td>1,374</td>
</tr>
<tr>
<td>Other expense</td>
<td>183</td>
<td>129</td>
</tr>
<tr>
<td>Income taxes</td>
<td>3,897</td>
<td>3,692</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>$ 6,671</td>
<td>$ 6,295</td>
</tr>
</tbody>
</table>

**Multi-step Income Statement**

WAL-MART STORES, INC.  
Income Statements  
For the years ended January 31

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net sales</strong></td>
<td>$217,799</td>
<td>$191,329</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>171,562</td>
<td>150,255</td>
</tr>
<tr>
<td>Gross profit</td>
<td>46,237</td>
<td>41,074</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selling, general, and administrative expenses</td>
<td>36,173</td>
<td>31,550</td>
</tr>
<tr>
<td>Income from operations</td>
<td>10,064</td>
<td>9,524</td>
</tr>
<tr>
<td>Other revenues and gains</td>
<td>2,013</td>
<td>1,966</td>
</tr>
<tr>
<td>Other expenses and losses</td>
<td>1,326</td>
<td>1,374</td>
</tr>
<tr>
<td>Other expense</td>
<td>183</td>
<td>129</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>10,568</td>
<td>9,987</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>3,897</td>
<td>3,692</td>
</tr>
<tr>
<td>Net income</td>
<td>$ 6,671</td>
<td>$ 6,295</td>
</tr>
</tbody>
</table>

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**Evaluating Profitability**

- Gross Profit Rate
- Profit Margin Ratio
Gross Profit Rate

\[
\text{Gross Profit Rate} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100\%
\]

Reasons Gross Profits Rates Change

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

Profit Margin Ratio

\[
\text{Profit Margin Ratio} = \frac{\text{Net Income}}{\text{Net Sales}} \times 100\%
\]

Percentage of “mark-up” on merchandise sold alters this percentage

Evaluate Profits Margins

<table>
<thead>
<tr>
<th></th>
<th>Profit Margin Ratio = \frac{\text{Net Income}}{\text{Net Sales}} × 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
</tr>
<tr>
<td>Wal-Mart ($ in millions)</td>
<td>$6.671</td>
</tr>
<tr>
<td></td>
<td>$217,799</td>
</tr>
<tr>
<td>Target</td>
<td>3.5%</td>
</tr>
<tr>
<td>Industry average</td>
<td>3.47%</td>
</tr>
</tbody>
</table>

What Economic Principle Did We Just See in Action by Looking at Wal-Mart vs. Target?

“Economies of Scale”
In addition to computing the company’s gross profit and profit margin rates, you should compare to industry averages.

**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  
 c. $340,000  
 b. $90,000  
 d. $400,000

$400,000 - $310,000 = $90,000

**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.
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.

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.

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.