CHAPTER 5
Merchandising Operations

Study Objectives

Identify the differences between a service enterprise and a merchandising company.

Explain the recording of purchases under a perpetual inventory system.

Explain the recording of sales revenues under a perpetual inventory system.

Distinguish between a single-step and a multiple-step income statement.

Determine the cost of goods sold under a periodic inventory system.

Explain the factors affecting the profitability.

Chapter Outline

Typical Income Statement Layout (Periodic Inventory)
One of the few things I want students to memorize!

Sales			$5,000,000	
Less: Sales Returns & Allowances			250,000	
Net Sales				$ 4,500,000
Cost of Goods Sold:				
Beginning Inventory:		$1,500,000		
Add: Purchases	$2,000,000			
Freight-in	25,000	2,025,000		
Cost of Goods Available for Sale:		$3,525,000		
Less: Ending Inventory		1,250,000		
Cost of Goods Sold				2,275,000
Gross Profit on Sales				$ 2,225,000
Sales and Administrative Expenses:				
Sales Expenses:				
Sales Salaries Expenses		$1,250,000		
Freight-out		250,000		
Administrative Expenses:				
Rent Expense		250,000		
Utilities Expense		100,000		1,850,000
Net Income				$ 375,000

Study Objective 1 - Identify the Differences Between a Service Enterprise and a Merchandising Company

1. **Merchandising company:** the primary source of revenues is the sale of merchandise, referred to as **sales revenue** or **sales**.
   a. Unlike expenses for a service company, expenses for a merchandising company are divided into two categories:
      i. Cost of goods sold - the total cost of merchandise sold during the period.
      ii. Operating expenses - selling and administrative expenses.

Study Objective 2 - Explain the Recording of Purchases under a Perpetual Inventory System

1. **Inventory**: Merchandise purchased for resale is called Inventory.
   a. Inventory is recorded by the merchandiser when the goods are received from the seller.
   b. Purchases (of inventory) should be supported by **business documents** that provide written evidence of the transaction.
   - Every cash purchase should be supported by a canceled check or a cash register receipt indicating the items purchased and the amounts paid.
   - Each credit purchase should be supported by a **purchase invoice**, which indicates the total purchase price and other relevant information.
2. **Inventory Systems:** There are two commonly used inventory systems; the Periodic system (the number of inventory items is only known periodically when the inventory is counted) and the Perpetual system (an approximate number of inventory items is tracked by the computer and the quantity of inventory is more or less known at any given point in time.
   a. "shrinkage" (theft; misfiling etc) causes the perpetual system to be less than perfect.
   b. A physical inventory must be taken periodically (at least once a year) in either system in order to confirm the number of items in inventory.

Event	Periodic Inventory System	Perpetual Inventory System
Record Purchase on Account of inventory costing $10,000	Purchases 10,000 Accounts Payable 10,000	Inventory 10,000 Accounts Payable 10,000
Record sale of inventory costing $5,000 for $11,000 on account	Accounts Receivable 11,000 Sales 11,000	Accounts Receivable 11,000 Sales 11,000 Cost of Sales 5,000 Inventory 5,000

   c. Note that under the periodic system there is no adjustment to inventory when the sale takes place;
      i. Inventory will be adjusted only when the physical inventory is conducted.
3. **Adjustments to Inventory:**
   a. Goods which are damaged, defective, or of inferior quality may be returned to the seller for credit if the sale was made on credit, or for a cash refund if the purchase was for cash. The transaction described is a **purchase return** and is recorded by decreasing Accounts Payable and decreasing **Merchandise Inventory**.

Event	Periodic Inventory System	Perpetual Inventory System
Return damaged goods costing 2,500 to seller	Accounts Payable 2,500 Purchase ret & allow 2,500	Accounts Payable 2,500 Inventory 2,500

   b. The purchaser may choose to keep the goods which are damaged, defective, or of inferior quality provided the seller will grant a discount referred to as a **purchase allowance**.
      i. This is a credit that the purchaser uses to reduce the liability to the seller:

Event	Periodic Inventory System	Perpetual Inventory System
Seller is granted a purchase allowance of $2,500	Purchase Allowance 2,500 Account Payable 2,500	Purchase Allowance 2,500 Account Payable 2,500

   c. **Freight-in** represents the cost of transporting the goods to the buyer's place of business.
      i. Freight-in is an Inventoriable cost (that is to say that it is added to the cost of inventory.

ii. Freight-out is a sales and administrative cost and represents the freight costs paid by the seller
1. Note that only freight cost paid by the purchase are included in the cost of inventory.

For example, if upon delivery of goods on May 9, Sauk Stereo (the buyer pays Haul-It Freight Company $150 for freight charges, the entry on Sauk's books is:

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

- **Remember Freight costs** incurred by the seller on outgoing merchandise are an operating expense to the seller and labeled **freight-out**. Freight-out is recorded by increasing **Freight-out** and decreasing Cash.
- For example, if the freight terms require that the seller pay $150 freight charges, the entry would be:

Freight-out	150	
Cash		150
(To record payment of freight on goods sold)		

d. **Credit terms on inventory:** The credit terms of a purchase on account may allow the buyer to claim a discount if payment is made within a certain time. Credit terms are normally written 2/10, n/30 which means a 2 percent **purchase discount** may be taken if the invoice is paid within 10 days of the invoice date. Net amount of the invoice is due within 30 days. When payment is made within the discount period, the amount of Merchandise Inventory decreases. The entry to record a payment would require the purchaser to decrease Accounts Payable, Decrease Cash, and decrease Merchandise Inventory.

- For example, assume Salk Stereo pays the balance due of $3,500 on May 14, the last day of the discount period, and takes the $70 discount.

May 14	Accounts Payable	3,500	
	Merchandise Inventory		70
	Cash		3,430

- If Sauk Stereo failed to take the discount and instead made full payment of $3,500 on June 3, Salk would debit Accounts Payable and credit Cash for $3,500.

June 3	Accounts Payable	3,500	
	Cash		3,500

Study Objective 3 - Explain the Recording of Sales Revenues under a Perpetual Inventory System

1. **Sales revenues** are recorded when goods are transferred from the seller to the buyer. This practice is in accordance with the **revenue recognition principle**.
   a. Sales may be made on credit or for cash.
   b. Each sales transaction should be supported by a **business document** which provides written evidence of the sale.
   c. Cash register tapes provide evidence of cash sales.
   d. A **sales invoice** provides written evidence of a credit sale.
2. **Sales Returns and Allowances**, a **contra revenue account** to Sales, may be used to record credit for returned goods.
   a. Two entries are required to record the credit for **Sales Returns and Allowances**.
      i. The first entry is an increase in **Sales Returns and Allowances** and a decrease in Accounts

Receivable.

Sales returns and allowances 2,500
Accounts receivable 2,500
To record return of damaged merchandise

ii. The <u>second entry</u> is an increase in **Merchandise Inventory** and a decrease in **Cost of Goods Sold**.

Inventory 2,500
Cost of Goods Sold 2,500
To record return of damaged goods

3. **Sales Discounts**: The seller may offer the customer a **sales discount** for the prompt payment of the balance due.
   a. A **sales discount**, which is based on the invoice price less any returns and allowances, is recorded by increasing cash for the amount received from the customer, decreasing **Accounts Receivable** for the amount owed by the customer, and increasing **Sales Discounts** by the amount of the discount.

For example, the entry by PW Audio Supply (as shown in the text) to record the cash receipt on May 14 from Sauk Stereo within the discount period is:

May 14	Cash	3,430	
	Sales Discounts	70	
	Accounts Receivable		3,500
	(To record collection within 2/10,n/30 discount period from Sauk Stereo)		

♦ **Sales Discounts** is a **contra revenue account** to sales.

Note that Sales Returns and Allowances account is used rather than decreasing sales directly because the Seller wants to know amount of merchandise being returned.
Likewise, a Sales Discounts account is used in order disclose the amount of cash discounts taken by customers.
Note that Sales Returns and Allowances account and the Sales Discounts accounts are **contra revenue accounts** to the Sales account. Because they are contra revenue accounts, they will have normal debit balances

Study Objective 4 - Distinguish Between a Single-Step and a Multiple-Step Income Statement

1. There are two forms of income statements used by companies:
   a. **Single-step income statement** - one step is required in determining net income--subtract total **expenses** from total **revenues**.
      i. **Revenues--**includes both operating revenues and other revenues and gains.
      ii. **Expenses--**includes cost of goods sold, operating expenses, as well as other expenses and losses.

   b. **Multiple-step income statement**
      i. Highlights the components of net income.
      ii. Distinguishes between operating and non-operating activities.

2. Components of the Income Statement:
   a. **Sales revenues**--The income statement for a merchandising concern typically presents gross **sales revenues** for the period and deducts the **contra revenue accounts (sales returns and allowances** and **sales discounts)** to arrive at net sales.
   b. **Cost of goods sold** is the amount paid for the merchandise sold during the period.
   c. **Gross profit**--**Cost of goods sold** is deducted from **net sales** to determine **gross profit. Gross profit** is the **merchandising profit** of the company.

d. **Sales and Administrative (Operating) expenses -** are subtracted from **gross profit** in order to determine **income from operations**
   i. **Operating expenses** include-
      1. **Selling expenses**--all of the expenses associated with selling the merchandise from the solicitation of the sale until the product is in the hands of the buyer.
      2. **Administrative expenses**--general expenses relating to general operating activities, human resources, accounting, clerical, security, etc.

e. **Non-operating activities**--unrelated to the company's primary line of operations.
   i. **Other revenues and gains**--Interest, dividend, rent revenue, and gain from sale of property.
   ii. **Other expenses and losses**--Interest expense; casualty losses; loss from sale or abandonment of property, plant, and equipment; and loss from strikes by employees and suppliers.

Study Objective 5 – Determining the Cost of Goods Sold under a Periodic Inventory System

1 To determine cost of goods sold:
   a. Find balance in merchandise inventory at beginning of period. (The beginning inventory figure is usually on the balance sheet of the previous period.)
   b. Add the amount of purchases of merchandise inventory for the period to find cost of goods available.
   c. Subtract ending balance in merchandise inventory to get find cost of goods sold.
   d. The amount of the ending inventory must be determined by a physical count.

Study Objective 6 - Describe the Steps in Determining Inventory Quantities

1. Determining inventory quantities involves two steps:
   A. taking a physical inventory of goods on hand.
      1. Involves actually counting, weighing, or measuring each kind of inventory on hand.
      2. Quantity of each kind of inventory is listed on **inventory summary sheets** where unit costs will be applied to the quantities to determine total cost of the inventory.

   B. Determining ownership of goods.
      1. Goods in transit should be included in the inventory of the company that has legal title to the goods.
         a. Ownership of goods shipped **FOB (free on board) shipping point** passes to the buyer when the public carrier accepts the goods from the seller. Therefore, goods should be counted in inventory of buyer.
         b. Ownership of goods shipped **FOB (free on board) destination** remains with the seller until the goods reach the buyer and should be included in the inventory of the seller.

         c. **Consigned goods** are counted in the inventory of the owner rather than the consignor.

Study Objective 7 - Explain the Factors Affecting Profitability

1. **Profit margin ratio**, calculated by dividing net income by net sales, is one measure of profitability.
   - **Profit margin ratio** may be altered by changing the percentage of "markup" on the merchandise sold.

2. **Operating Expenses to Sales Ratio,** calculated by dividing operating expenses by sales revenue, is a measure of a company's ability to control operating expenses.
   - In recent years companies have improved the efficiency of their operations by using computers and by changing their organizational structures.

Study Objective Appendix – Explain the recording of purchases and sales of inventory under a periodic inventory system.

1. To record purchases, entries are required for:
   (a) cash and credit purchases,
   (b) purchase returns and allowances,
   (c) purchase discounts and (d) freight costs.

2. To record sales, entries are required for (a) cash and credit sales, (b) sales returns and allowances, and (c) sales discounts.

Chapter 5 Review

✓ What are the differences between a service enterprise and a merchandising company?

✓ Give a detailed explanation of the recording of purchases under a perpetual inventory system. Use hypothetical figures to illustrate the perpetual inventory system.

✓ How are sales revenues recorded under a perpetual inventory system?

✓ What are the differences between a single-step and a multiple-step income statement?

[Calculate cost of goods sold under a periodic inventory system.

✓ What are the factors affecting profitability? Again, use hypothetical figures to illustrate your point.

Reading Comprehension Check I **Name ________________**

Chapter 5

The ____ ______ ____ ___________ __________ measures the percentage of each dollar of sales that results in net income. The profit margin ratio is computed by dividing net income by _________ _________(__________) for the period. How do the gross profit rate and profit margin ratio differ? The gross profit rate measures the ________________ by which selling price exceeds _______________ ______. **The ________________________ _____ measures the extent by which selling price covers all expenses (including cost of goods sold).** A company can improve its profit margin ratio by either increasing its ____________________ _____ and/or by controlling its ______________________ and other ___ __________.

Solutions to Reading Comprehension Check I

Chapter 5

The ____**profit** ______ _____ ______**margin**______ ______**ratio**_____ measures the percentage of each dollar of sales that results in net income. The profit margin ratio is computed by dividing net income by **net sales (revenue)** for the period. How do the gross profit rate and profit margin ratio differ? The gross profit rate measures the ____**margin**_______ by which selling price exceeds ____**cost of goods sold**______. **The _____profit margin ratio______ measures the extent by which selling price covers all expenses (including cost of goods sold).** A company can improve its profit margin ratio by either increasing its ___**gross profit rate**_____ and/or by controlling its ______**operating expenses**_____ and other ______**costs**___.

The income statement for a merchandising company typically presents gross sales revenues for the period and provides details about deductions from that total amount. As contra revenue accounts, _______ ________________ ________________ and __________________ ______________ are deducted from sales in the income statement to arrive at ________________ _____________. Cost of goods sold is deducted from sales revenue to determine _________________________ _________________. Sales revenue used for this computation is __ _______________, which takes into account sales returns and allowances and sales discounts.

It is important to understand what gross profit is--and what it is not. Gross profit represent the ____ __________________ of a company. It is *not* a measure of the overall profit of a company because __ ___________________ have not been deducted.

Solutions to Reading Comprehension Check II

Chapter 5

The income statement for a merchandising company typically presents gross sales revenues for the period and provides details about deductions from that total amount. As contra revenue accounts, **Sales Returns and allowances** and **sales discounts** are deducted from sales in the income statement to arrive at **net sales**. Cost of goods sold is deducted from sales revenue to determine **gross profit**. Sales revenue used for this computation is **net sales**, which takes into account sales returns and allowances and sales discounts.

It is important to understand what gross profit is--and what it is not. Gross profit represent the **merchandising profit** of a company. It is not a measure of the overall profit of a company because **operating expenses** have not been deducted.

Vocabulary Quiz **Name ________________**

Chapter 5

____________ 1. A detailed inventory system in which the cost of each inventory item is maintained and the records continuously show the inventory that should be on hand.

____________ 2. A reduction given by a seller for prompt payment of a credit sale.

____________ 3. Measures the percentage of each dollar of sales that results in net income, computed by dividing net income by net sales.

____________ 4. The total cost of merchandise sold during the period.

____________ 5. An inventory system in which detailed records are not maintained and the cost of goods sold is determined only at the end of an accounting period.

____________ 6. Sales less sales returns and allowances and sales discounts.

____________ 7. Primary source of revenue for a merchandising company.

____________ 8. The excess of net sales over the cost of goods sold.

____________ 9. A cash discount claimed by a buyer for prompt payment of a balance due.

____________ 10. An account that is offset against a revenue account on the income statement.

Solutions to Vocabulary Quiz

Chapter 5

1. Perpetual inventory system
2. Sales discount
3. Profit margin ratio
4. Cost of goods sold
5. Periodic inventory system
6. Net sales
7. Sales revenue
8. Gross profit
9. Purchase discount
10. Contra revenue account

Multiple Choice Quiz **Name ________________**

Chapter 5

1. Wal-Mart is a prime example of which type organization:
   a. Merchandising concern.
   b. Manufacturing concern.
   c. Service organization.
   d. Limited partnership.

2. Under the perpetual inventory system, purchases of merchandise for sale are recorded in an account called:
   a. Purchases.
   b. Cost of goods sold.
   c. Merchandise inventory.
   d. Finished goods.

3. A purchaser, dissatisfied with merchandise received, may return the goods to the seller for credit. This transaction is known as a:
   a. Sales return.
   b. Purchase return.
   c. Sales allowance.
   d. Purchase allowance.

4. All of the following are examples of business documents **EXCEPT:**
   a. Memorandum describing merchandise.
   b. Cash register tapes.
   c. Sales invoice.
   d. Canceled check.

5. In a periodic inventory system, the cost of goods sold is determined:
   a. At the end of the accounting period.
   b. Each time a sale occurs.
   c. Each time a purchase occurs.
   d. None of the above.

6. Freight costs incurred by the seller on outgoing merchandise are considered:
   a. Operating expenses to the seller.
   b. Part of merchandise inventory.
   c. Part of purchases.
   d. Part of cost of goods sold.

7. If a sales invoice shows credit terms of 2/10,n/30, the discount period is:
   a. 10 days.
   b. 2 days.
   c. 30 days.
   d. cannot be determined from the information given.

8. The revenue recognition principle requires that sales revenues be recognized:
    a. When cash is received.
    b. when the merchandise is ordered.
    c. When the goods are transferred from the seller to the buyer.
    d. None of the above.

9. Sales returns and allowances and sales discounts are:
    a. Sales accounts.
    b. Liability accounts.
    c. Expense accounts.
    d. Contra revenue accounts.

10. The income statement of a merchandising company contain the following unique features:
    a. Sales revenue, work in process, and operating expenses.
    b. Sales revenue, work in process and gross profit.
    c. Sales revenue, finished goods, and net income.
    d. Sales revenue, cost of goods sold, and gross profit.

Solution Multiple Choice Quiz

Chapter 5

1. a
2. c
3. c
4. a
5. a
6. a
7. a
8. c
9. d
10. d

Exercise 1 - Creative Activity

Chapter 5

1. Make a list of the retail establishments you frequently patronize.

2. Determine which of the establishments listed above would be would be classified as a merchandising concerns.

3. Make a list of the types of items the retailers listed in part 1 hold in merchandise inventory.

4. Which of these businesses would have a high margin? Which businesses would have a high turnover?

The yellow pages of the local phone book is a good reference for this activity.

Exercise - World Wide Web Research, Accrual Accounting, and Financial Statements Activity

Chapter 2

Johnson & Johnson, with $23.7 billion in sales in 1998, is the world's largest and most comprehensive manufacturer of health care products serving the consumer, pharmaceutical and professional markets. Obtain an Annual Report for Johnson & Johnson from your school library or on the World Wide Web. If you are researching the web go to **www.johnsonjohnson.com**, **Investor Relations**, and finally **Annual Report**. Depending on which account(s) you are closing, you will want to click on **Consolidated Statement of Earnings**, **Consolidated Balance Sheet**, or **Consolidated Statement of Cash Flows**.

Using information found in the financial statements of the Annual Report, make the following closing entries:

1. Make journal entries to close the revenue and expense accounts.

2. Make journal entries to delete the beginning balance in the merchandise inventory account and add the ending balance in the merchandise inventory account.

3. Make a journal entry to close the income summary account.

4. Make a journal entry to close the dividend account.

5. What is the date of the closing entries?

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 3 - World Wide Web Financial Statement Analysis Activity

Chapter 5

Target Corporation is a growth company focused exclusively on general merchandise retailing. Target's principal strategy is to provide exceptional value to American consumers through multiple retail formats ranging from upscale discount and moderate-priced, to full-scale department stores. The retailer's operations include Target, Marshall Field's and Mervyn's and each has its own distinct brand. Founded in 1850, American Express Company is a global travel, financial and network services provider. How do the financial statements of a giant retail firm differ from the financial statements of a large service organization? Compare the financial statements of Target with those of American Express. Obtain the financial statements from your school library or on the World Wide Web. If researching the Web, Target Corporation is located at **www.target.com**. You can find American Express at **www.americanexpress.com.**

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 4 - Communication and Financial Statement Analysis Activity
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Chapter 5

Assume Jayne Stoll, the Controller of Fast Bucks, a large retail company, has just gotten a call from the Vice President of Marketing, Eddie Shifty. Eddie asked Jayne why the Sales Returns and Allowances account is needed. Eddie suggests the account be done away with and the returns simply be deducted from Sales Revenue.

1. Jayne has asked you to write a memo to Eddie Shifty explaining why the Sales Return and Allowances account is needed.

2. What was Eddie Shifty's motivation in wanting to decrease sales directly?

Solutions:

1. TO: Eddie Shifty
Vice President of Marketing

FROM: Jayne Stoll
Controller

SUBJECT: Sales Returns and Allowances Account

Having a separate Sales Returns and Allowance account provides information Fast Bucks would not have if returns and allowances were simply netted against Sales Revenue. A very high balance in Sales Returns and Allowances could indicate a number of things. First, the large balance could be the result of a large number of defective or inferior products. Second, sales personnel may be a bit too pushy, encouraging customers to buy merchandise they do not want or need. When this happens the customer usually returns the merchandise for credit.

2. Eddy Shifty may be concerned that his sales professionals are in fact pushing merchandise on customers.

Exercise 5 - Mechanics of Accounting Activity

Chapter 5

Assume you are the owner of Vicious Cycle Bike Shop and just received an order of bikes from Cannondale. You notice that the invoice dated October 22 has terms of 2/10, n/30.

1. What do the terms 2/10, n/30 mean?

2. Will you pay the invoice within the discount period?

3. What is your motivation to pay within the discount period, assuming the current interest rate is 8%?

4. What is Cannondale's motivation for offering the sales discount?

Solutions:

1. **The terms 2/10, n/30 mean that if Vicious Cycle pays the invoice within 10 days, Cannondale will allow them to deduct 2 percent off of the selling price. However, the invoice must be paid in full with 30 days.**

2. **Yes, Vicious Cycle will save money paying the invoice within the discount period.**

3. **Assuming the invoice totals $1,000, if Vicious Cycle pays within the discount period, they will be required to pay only $980 [$1000 - ($1000 x .02)], thus saving $20. Even if Vicious Cycle has to borrow the money they would come out ahead. Remember the account is supposed to be paid within 30 days. Therefore, if Vicious does not pay within the discount period, they can wait only more days before paying. The interest on $980 for 20 days is computed as follows:**

   $980 x .08 x 20/360 days = $4.36.

   Thus Vicious will be better off by $15.64 ($20 - $4.36) if they borrow the money to pay within the discount period.

4. **Cannondale wants to collect the money owed to them and offering a sales discount is one of the best ways to encourage customers to pay more rapidly.**

Exercise 6 - World Wide Web Accounting Careers Research Activity

Chapter 5

Your younger brother has just told you that he is interested in becoming a forensic accountant. However, he does not understand exactly what a forensic accountant does and has come to you for help. You have never heard of forensic accounting and decide to search the Internet for help. Go to **www.forensicaccounting.com** to find answers to the following questions.

1. What is forensic accounting?

2. What does a forensic accountant do?

3. What qualities should a forensic accountant possess?

4. How does one become a forensic accountant?

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.

Exercise 7 - World Wide Web Financial Statement Analysis Activity

Chapter 5

Locate the financial statements of Gap for consecutive years in your school library or on the World Wide Web. If researching the Web go to **www.gap.com** use the information found there to answer the following questions:

1. Did the balance in the Merchandise Inventory account increase or decrease?

2. Did the accounts payable for the same period increase or decrease?

3. What is the correlation between merchandise inventory and accounts payable?

Solutions: Information available on website.

Note: The website is constantly being updated. Please check to see that the information requested in this exercise is available.