Learning Objectives


2. Describe and illustrate the following costs:
   - direct and indirect costs
   - direct materials, direct labor, and factory overhead costs
   - product and period costs

3. Describe and illustrate the following statements for a manufacturing business:
   - balance sheet
   - statement of cost of goods manufactured
   - income statement

4. Describe the uses of managerial accounting information.
Learning Objective

Describe managerial accounting and the role of managerial accounting in a business.
EXHIBIT 1

Financial Accounting and Managerial Accounting

<table>
<thead>
<tr>
<th>Nature of Information</th>
<th>Objective</th>
<th>Objective and subjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines for Preparation</td>
<td>Prepared according to GAAP</td>
<td>Prepared according to management needs</td>
</tr>
<tr>
<td>Timeliness of Reporting</td>
<td>Prepared at fixed intervals</td>
<td>Prepared at fixed intervals and on an as-needed basis</td>
</tr>
<tr>
<td>Focus of Reporting</td>
<td>Company as a whole</td>
<td>Company as a whole or segment</td>
</tr>
</tbody>
</table>
Financial accounting information is reported at fixed intervals in general-purpose financial statements. These financial statements are prepared according to GAAP.
Financial accounting statements are used by external users such as the following:

- Shareholders
- Creditors
- Government agencies
- The general public
Managerial accounting information is designed to meet the specific needs of a company's management and includes historical data, which provide objective measures of past operations, and estimated data, which provide subjective estimates about future decisions.
Managerial accounting reports do not always have to be:

- Prepared according to GAAP.
- Prepared at fixed intervals.
- Prepared for the business as a whole.
In most companies, departments or similar organizational units are assigned responsibilities for specific functions or activities.

The operating structure of a company can be shown in an organization chart. A partial organization chart is shown in Exhibit 2 (next slide).
EXHIBIT 2
Partial Organization Chart for Callaway Golf Company
Line and Staff Departments

- A **line department** is directly involved in providing goods or services to the customers of the company.

- Line department positions:
  - Senior Vice President—Equipment
  - Plant Manager—Chicopee, MA Plant
  - Senior Vice President—Callaway Brand
  - Managing Director, Callaway Golf Europe
Line and Staff Departments

A staff department provides services, assistance, and advice to the departments with line or other staff responsibilities.

Staff department positions:

- Senior VP—Chief Administrative Officer
- Vice President, Human Resources
- Chief Financial Officer
- Controller
The chief financial officer (CFO) and the controller occupy staff positions. In most companies, the controller is the chief management accountant.
The controller’s staff consists of a variety of other accountants who are responsible for specialized accounting functions such as the following:

- Systems and procedures
- General accounting
- Budgets and budget analysis
- Special reports and analysis
- Taxes
- Cost accounting
The management process has five basic phases as shown in Exhibit 3.
Planning

- Management uses **planning** in developing the company’s **objectives (goals)** and translating these objectives into courses of action.
Planning may be classified as follows:

- **Strategic planning** is developing long-term actions to achieve the company's objectives. Long-term courses of action, called **strategies**, often involve periods of five to ten years.

- **Operational planning** develops short-term actions for managing the day-to-day operations of the company.
Directing

- The process by which managers run day-to-day operations is called **directing**. Examples:
  - A production supervisor’s efforts to keep the production line moving without interruptions.
  - A credit manager’s development of guidelines for assessing the ability of potential customers to pay their bills.
Controlling

- Monitoring operating results and comparing actual results with the expected results is controlling.
- This feedback allows management to isolate areas for further investigation and possible remedial action.
- The philosophy of controlling by comparing actual and expected results is called management by exception.
Continuous process improvement is the philosophy of continually improving employees, business processes, and products.

The objective of continuous process improvement is to eliminate the source of problems in a process.
Decision Making

- Inherent in each of the preceding management processes is decision making. Management must continually decide among alternative actions.
Learning Objective 2

Describe and illustrate the following costs:
1. direct labor costs
2. factory overhead costs
3. direct materials costs
4. product costs
5. period costs
EXHIBIT 4
Guitar-Making Operations of Legend Guitars
Direct and Indirect Costs

- A **cost** is a payment of cash or the commitment to pay cash in the future for the purpose of generating revenues.
Direct and Indirect Costs

- Costs are often classified in terms of how they relate to an object or segment of operations, called a **cost object**.

- The cost object may be a product, a sales territory, a department, or some activity.
Direct and Indirect Costs

Direct costs are identified with and can be traced to a cost object. Wood used to make guitars is a direct cost.
Direct and Indirect Costs

- **Indirect costs** cannot be identified with or traced to a cost object. A production supervisor’s salary is an indirect cost because it cannot be traced to any individual guitar.
Direct and Indirect Costs

- The process of classifying a cost as direct or indirect is illustrated in Exhibit 5 below.
Manufacturing Costs

Direct Materials
Manufacturing Costs

- To be classified as a direct materials cost, the cost must be both of the following:
  - An integral part of the finished product
  - A significant portion of the total cost of the product
The cost of employee wages that is an integral part of the finished product is classified as \textbf{direct labor cost}. A direct labor cost must be both of the following:

- An integral part of the finished product
- A significant portion of the total cost of the product
Manufacturing Costs

- Costs other than direct materials cost and direct labor cost that are incurred in the manufacturing process are combined and classified as **factory overhead cost** (sometimes called **manufacturing overhead** or **factory burden**).
Manufacturing Costs

- Some examples of factory overhead costs include the following:
  - Heating and lighting the factory
  - Repairing and maintaining factory equipment
  - Property taxes
  - Insurance
  - Depreciation of factory plant and equipment
Manufacturing Costs

- Costs that do not enter directly into the finished product, such as oil used to lubricate the machinery and janitorial and supervisory wages, are considered factory overhead.

- Some costs that are part of the product, but are considered insignificant, are treated as factory overhead, such as glue and string.
Prime Costs and Conversion Costs

- **Prime costs** consist of direct materials and direct labor costs.

- **Conversion costs** consist of direct labor and factory overhead costs. Conversion costs are the costs of converting the materials into a finished product.
Prime Costs and Conversion Costs

EXHIBIT 6
Prime Costs and Conversion Costs
Product Costs and Period Costs

- **Product costs** consist of the three elements of manufacturing costs: direct materials, direct labor, and factory overhead.
Product Costs and Period Costs

- **Period costs** are generally classified as:
  - *Selling expenses, which* are incurred in marketing the product and delivering the sold product to the customer, or
  - *Administrative expenses, which* are incurred in managing the company and are not directly related to the manufacturing or selling functions.
Product Costs and Period Costs

**Product (Manufacturing) Costs**

**Direct Materials Cost**
Wood used in neck and body

**Direct Labor Cost**
Wages of saw operator
Wages of employees who assemble the guitar

**Factory Overhead**
- Guitar strings
- Wages of janitor
- Power to run the machines
- Depreciation expense—factory building
- Sandpaper and buffing materials
- Glue used in assembly of the guitar
- Salary of production supervisors

(continued)
**Product Costs and Period Costs**

**EXHIBIT 7**
Examples of Product Costs and Period Costs—Legend Guitars

### Period (Nonmanufacturing) Costs

- **Selling Expenses**
  - Advertising expenses
  - Sales salaries expenses
  - Commissions expenses

- **Administrative Expenses**
  - Office salaries expense
  - Office supplies expense
  - Depreciation expense—office building and equipment
Product Costs and Period Costs

Costs (Payments) for the Purpose of Generating Revenues

Product Costs
- Inventory (Balance Sheet)
  - Cost of Goods Sold (Income Statement)

Period Costs
- Selling and Administrative Expenses (Income Statement)
Describe and illustrate the following business statements: balance sheet, manufacturing statement, income statement of goods manufactured.
Balance Sheet for a Manufacturing Business

- **Materials inventory** (sometimes called raw materials inventory) consists of the costs of the direct and indirect materials that have not yet entered the manufacturing process.
Balance Sheet for a Manufacturing Business

- **Work in process inventory** consists of direct materials costs, direct labor costs, and factory overhead costs for products that have entered the manufacturing process, but are not yet completed (in process).
Balance Sheet for a Manufacturing Business

- **Finished goods inventory** consists of completed (or finished) products that have not been sold.
### MusicLand Stores, Inc.
**Balance Sheet**
**December 31, 2014**

**Current assets:**
- Cash: $25,000
- Accounts receivable (net): $85,000
- **Merchandise inventory**: $142,000
- Supplies: $10,000
- Total current assets: **$262,000**

### Legend Guitars
**Balance Sheet**
**December 31, 2014**

**Current assets:**
- Cash: $21,000
- Accounts receivable (net): $120,000
- **Inventories:**
  - Finished goods: $62,500
  - Work in process: $24,000
  - Materials: $35,000
  - Supplies: $2,000
- Total current assets: **$264,500**
Income Statement for a Manufacturing Company

- Income statements for merchandising and manufacturing businesses differ primarily in the reporting of the cost of merchandise (goods) *available for sale* and *sold* during the period (as shown in the next slide).
### Income Statement for a Manufacturing Company

#### Merchandising Business

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$XXX</td>
</tr>
<tr>
<td>Beginning merchandise inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Plus net purchases</td>
<td>$XXX</td>
</tr>
<tr>
<td>Merchandise available for sale</td>
<td>$XXX</td>
</tr>
<tr>
<td>Less ending merchandise inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Cost of merchandise sold</td>
<td>$XXX</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$XXX</td>
</tr>
</tbody>
</table>

#### Manufacturing Business

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$XXX</td>
</tr>
<tr>
<td>Beginning finished goods inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Plus cost of goods manufactured</td>
<td>$XXX</td>
</tr>
<tr>
<td>Cost of finished goods available for sale</td>
<td>$XXX</td>
</tr>
<tr>
<td>Less ending finished goods inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$XXX</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$XXX</td>
</tr>
</tbody>
</table>
Income Statement for a Manufacturing Company

- The total cost of making products that are available for sale during the period is called the **cost of goods manufactured**.

- The cost of goods manufactured is often determined by preparing a **statement of cost of goods manufactured** (shown on the next slide).
# Income Statement for a Manufacturing Company

## Statement of Cost of Goods Manufactured

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning work in process inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Direct materials:</td>
<td></td>
</tr>
<tr>
<td>Beginning materials inventory</td>
<td>$XXX</td>
</tr>
<tr>
<td>Purchases</td>
<td>XXX</td>
</tr>
<tr>
<td>Cost of materials available for use</td>
<td>$XXX</td>
</tr>
<tr>
<td>Less ending materials inventory</td>
<td>XXX</td>
</tr>
<tr>
<td>Cost of direct materials used</td>
<td>$XXX</td>
</tr>
<tr>
<td>Direct labor</td>
<td>XXX</td>
</tr>
<tr>
<td>Factory overhead</td>
<td>XXX</td>
</tr>
<tr>
<td>Total manufacturing costs incurred</td>
<td>XXX</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$XXX</td>
</tr>
<tr>
<td>Less ending work in process inventory</td>
<td>XXX</td>
</tr>
<tr>
<td><strong>Cost of goods manufactured</strong></td>
<td>$XXX</td>
</tr>
</tbody>
</table>
INCOME STATEMENT FOR A MANUFACTURING COMPANY

MANUFACTURING COSTS

- Direct Materials
- Direct Labor
- Factory Overhead

UNUSED

USED

Manufacturing Process

UNFINISHED

FINISHED

BALANCE SHEET

- Materials Inventory
- Work in Process Inventory
- Finished Goods Inventory

INCOME STATEMENT

- Cost of Goods Sold

EXHIBIT 10
Flow of Manufacturing Costs
Legend’s Cost of Goods Manufactured

**STEP 1:** Determine the cost of materials used

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials inventory, January 1, 2014</td>
<td>$ 65,000</td>
</tr>
<tr>
<td>Add: Materials purchased</td>
<td>100,000</td>
</tr>
<tr>
<td>Cost of materials available for use</td>
<td>$165,000</td>
</tr>
<tr>
<td>Less: Materials inventory, Dec. 31, 2014</td>
<td>35,000</td>
</tr>
<tr>
<td>Cost of direct materials used</td>
<td>$130,000</td>
</tr>
</tbody>
</table>

(continued)
Legend’s Cost of Goods Manufactured

**STEP 2:** Determine the total manufacturing costs incurred.

Cost of direct materials used

$130,000 from Step 1

(continued)
Legend’s Cost of Goods Manufactured

**STEP 2:** Determine the total manufacturing cost incurred.

| Cost of direct materials used | $130,000 |
| Direct labor                  | 110,000  |
| Factory overhead              | 44,000   |
| Total manufacturing costs incurred | $284,000 |

to cost of goods manufactured section (continued)
STEP 3: Determine the cost of goods manufactured.

Work in process inventory, Jan. 1, 2014  $ 30,000
Add: Total manufacturing costs incurred  284,000

Legend’s Cost of Goods Manufactured
Legend’s Cost of Goods Manufactured

**STEP 3:** Determine the cost of goods manufactured.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in process inventory, Jan. 1, 2014</td>
<td>$30,000</td>
</tr>
<tr>
<td>Add: Total manufacturing costs incurred</td>
<td>$284,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$314,000</td>
</tr>
<tr>
<td>Less: Work in process inventory, Dec. 31, 2014</td>
<td>$24,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$290,000</td>
</tr>
</tbody>
</table>

Total manufacturing costs $314,000
Less: Work in process inventory, Dec. 31, 2014     24,000
Cost of goods manufactured $290,000
### Legend Guitars' Financial Statements

#### Legend Guitars

**Income Statement**

For the Year Ended December 31, 2014

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$366,000</td>
</tr>
<tr>
<td>Cost of goods sold:</td>
<td></td>
</tr>
<tr>
<td>Finished goods inventory, January 1, 2014</td>
<td>$ 60,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$290,000</td>
</tr>
<tr>
<td>Cost of finished goods available for sale</td>
<td>$350,000</td>
</tr>
<tr>
<td>Less finished goods inventory, December 31, 2014</td>
<td>$62,500</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>$287,500</td>
</tr>
<tr>
<td>Gross profit</td>
<td>$ 78,500</td>
</tr>
<tr>
<td>Operating expenses:</td>
<td></td>
</tr>
<tr>
<td>Selling expenses</td>
<td>$ 20,000</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>$ 15,000</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>$ 35,000</td>
</tr>
<tr>
<td>Net income</td>
<td>$ 43,500</td>
</tr>
</tbody>
</table>

(continued)
## Legend Guitars' Financial Statements

### EXHIBIT 11

**Manufacturing Company—Income Statement with Statement of Cost of Goods Manufactured**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in process inventory, January 1, 2014</td>
<td>$30,000</td>
</tr>
<tr>
<td><strong>Direct materials:</strong></td>
<td></td>
</tr>
<tr>
<td>Materials inventory, January 1, 2014</td>
<td>$65,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>100,000</td>
</tr>
<tr>
<td>Cost of materials available for use</td>
<td>$165,000</td>
</tr>
<tr>
<td>Less materials inventory, December 31, 2014</td>
<td>35,000</td>
</tr>
<tr>
<td>Cost of direct materials used</td>
<td>90,000</td>
</tr>
<tr>
<td><strong>Direct labor</strong></td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Factory overhead:</strong></td>
<td></td>
</tr>
<tr>
<td>Indirect labor</td>
<td>$24,000</td>
</tr>
<tr>
<td>Depreciation on factory equipment</td>
<td>10,000</td>
</tr>
<tr>
<td>Factory supplies and utility costs</td>
<td>10,000</td>
</tr>
<tr>
<td>Total factory overhead</td>
<td>44,000</td>
</tr>
<tr>
<td><strong>Total manufacturing costs incurred</strong></td>
<td>284,000</td>
</tr>
<tr>
<td>Total manufacturing costs</td>
<td>$314,000</td>
</tr>
<tr>
<td>Less work in process inventory, December 31, 2014</td>
<td>24,000</td>
</tr>
<tr>
<td>Cost of goods manufactured</td>
<td>$290,000</td>
</tr>
</tbody>
</table>
Learning Objective 4

Describe the uses of managerial accounting information.
Uses of Managerial Accounting

- Managerial accounting provides the cost of manufacturing a product, which can be used to determine its selling price.
Uses of Managerial Accounting

- Managerial accounting allows for comparing the costs of manufacturing and can be used to monitor and control the cost of direct materials, direct labor, and factory overhead.
Uses of Managerial Accounting

- Performance reports allow management to identify any large amounts of scrap materials or employee downtime.
Uses of Managerial Accounting

- A report could analyze the potential efficiencies and dollar savings of purchasing computerized equipment to speed up the production process.
Uses of Managerial Accounting

- A report could analyze how many units need to be sold to cover operating costs and expenses.

- Such information could be used to set monthly selling targets and bonuses for sales personnel.
Managerial Accounting

Concepts and Principles

The End