CHAPTER 9

Budgetary Planning

Managerial Accounting, Fourth Edition
1. Indicate the benefits of budgeting.
2. State the essentials of effective budgeting.
3. Identify the budgets that comprise the master budget.
4. Describe the sources for preparing the budgeted income statement.
5. Explain the principal sections of a cash budget.
6. Indicate the applicability of budgeting in nonmanufacturing companies.
Budgeting is critical to financial well-being

Use budgets in planning and controlling operations

Specific focus is on how budgeting is used as a planning tool by management.
Budgetary Planning

- Budgeting Basics
  - Budgeting & accounting
  - Benefits
  - Essentials of effective budgeting
  - Length of budget period
  - Budgeting process
  - Budgeting and human behavior
  - Budgeting and long-range planning
  - The master budget

- Preparing the Operating Budgets
  - Sales
  - Production
  - Direct materials
  - Direct labor
  - Manufacturing overhead
  - Selling and administrative expense
  - Budgeted income statement

- Preparing the Financial Budgets
  - Cash
  - Budgeted balance sheet

- Budgeting in Non-manufacturing Companies
  - Merchandisers
  - Service
  - Not-for-profit

Chapter 9-5
Budgeting Basics

**Budget**

- A formal written statement of management’s plans for a specified future time period, expressed in financial terms.
- Primary way to communicate agreed-upon objectives to all parts of the company.
- Promotes efficiency.
- **Control device** - important basis for performance evaluation once adopted.
Budgeting Basics - Role of Accounting

- Historical accounting data on revenues, costs, and expenses help in formulating future budgets
- Accountants normally responsible for presenting management’s budgeting goals in financial terms
- The budget and its administration are, however, entirely management’s responsibility
Requires all levels of management to plan ahead and formalize goals on a recurring basis.

Provides definite objectives for evaluating performance at each level of responsibility.

Creates an early warning system for potential problems.

LO 1: Indicate the benefits of budgeting.
Facilitates **coordination of activities** within the business

Results in **greater management awareness** of the entity's overall operations and the impact of external factors

**Motivates personnel** throughout organization to meet planned objectives

LO 1: Indicate the benefits of budgeting.
A budget is an aid to management not a substitute for management.
Which of the following is not a benefit of budgeting?

a. Management can plan ahead.
b. An early warning system is provided for potential problems.
c. It enables disciplinary action to be taken at every level of responsibility.
d. The coordination of activities is facilitated.

LO 1: Indicate the benefits of budgeting.
Effective Budgeting

- Depends on a **sound organizational structure** with authority and responsibility for all phases of operations clearly defined

- Based on **research and analysis** with realistic goals

- Accepted by all levels of management

**LO 2:** State the essentials of effective budgeting.
The Budget Period

- May be prepared for any period of time
  Most common - one year
  Supplement with monthly and quarterly budgets
  Different budgets may cover different time periods

- Long enough to provide an attainable goal and minimize seasonal or cyclical fluctuations

- Short enough for reliable estimates

- Continuous twelve-month budget
  Drop the month just ended and add a future month
  Keeps management planning a full year ahead

LO 2: State the essentials of effective budgeting.
The Budgeting Process

- Base budget goals on past performance
  Collect data from organizational units
  Begin several months before end of current year

- Develop budget within the framework of a sales forecast
  Shows potential industry sales
  Shows company’s expected share

LO 2: State the essentials of effective budgeting.
Factors considered in Sales Forecasting:

1. General economic conditions
2. Industry trends
3. Market research studies
4. Anticipated advertising and promotion
5. Previous market share
6. Price changes
7. Technological developments

LO 2: State the essentials of effective budgeting.
Participative Budgeting

- May inspire higher levels of performance or discourage additional effort
- Depends on how budget developed and administered
- Invite each level of management to participate

This “bottom-to-top” approach is called Participative Budgeting

LO 2: State the essentials of effective budgeting.
Advantages:

More accurate budget estimates because lower level managers have more detailed knowledge of their area.

Tendency to perceive process as fair due to involvement of lower level management.

Overall goal - produce a budget considered fair and achievable by managers while still meeting corporate goals.

Risk of unreliable budgets greater when they are “top-down.”

LO 2: State the essentials of effective budgeting.
Participative Budgeting

Disadvantages:

- Can be time consuming and costly

- Can foster budgetary “gaming” through budgetary slack:

  situation where managers intentionally underestimate budgeted revenues or overestimate budgeted expenses so that budget goals are easier to meet

LO 2: State the essentials of effective budgeting.
Participative Budgeting

Flow of budget data from lower management to top levels

LO 2: State the essentials of effective budgeting.
Budgeting Versus Long Range Planning

Three basic differences between Budgeting and Long Range Planning:

- Time period involved
- Emphasis
- Detail presented

Budgeting is short-term - usually one year
Long range planning - at least five years

LO 2: State the essentials of effective budgeting.
The essentials of effective budgeting do **not** include:

a. Top-down budgeting.
   
b. Management acceptance.
   
c. Research and analysis.
   
d. Sound organizational structure.

**Review Question**

LO 2: State the essentials of effective budgeting.
The Master Budget

- A set of interrelated budgets that constitutes a plan of action for a specified time period
- Contains two classes of budgets:
  - **Operating budgets:**
    Individual budgets that result in the preparation of the budgeted income statement - establish goals for sales and production personnel
  - **Financial budgets:**
    The capital expenditures budget, the cash budget, and the budgeted balance sheet - focus primarily on cash needs to fund operations and capital expenditures

LO 3: Identify the budgets that comprise the master budget.
LO 3: Identify the budgets that comprise the master budget.
First budget prepared

Derived from the sales forecast

Management’s **best estimate** of sales revenue for the budget period

Every other budget depends on the sales budget

Prepared by multiplying

**expected unit sales volume for each product**

*times*

**anticipated unit selling price**

**LO 3:** Identify the budgets that comprise the master budget.
Example - Hayes Company

- Expected sales volume: 3,000 units in the first quarter with 500-unit increments for each following quarter
- Sales price: $60 per unit

LO 3: Identify the budgets that comprise the master budget.
Operating Budgets: Production Budget

- Shows the **units that must be produced** to meet anticipated sales

- Derived from sales budget plus the desired change in ending finished goods (ending finished goods less the beginning finished goods units)

- Required production in units formula:

  \[
  \text{Budgeted Sales Units} + \frac{\text{Desired Ending Finished Goods Units}}{} - \frac{\text{Beginning Finished Goods Units}}{} = \frac{\text{Required Production Units}}{}
  \]

- Essential to have a realistic estimate of ending inventory

LO 3: Identify the budgets that comprise the master budget.
Example – Hayes Company

Hayes Co. believes it can meet future sales needs with an ending inventory of 20% of next quarter’s sales.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected unit sales</td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
<td></td>
</tr>
<tr>
<td>(Illustration 9-3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add: Desired ending finished goods units*</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Total required units</td>
<td>3,700</td>
<td>4,300</td>
<td>4,900</td>
<td>5,500</td>
<td></td>
</tr>
<tr>
<td>Less: Beginning finished goods units</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>Required production units</td>
<td>3,100</td>
<td>3,600</td>
<td>4,100</td>
<td>4,600</td>
<td></td>
</tr>
</tbody>
</table>

*20% of next quarter’s sales
b Expected 2009 first-quarter sales, 5,000 units x 20% 

LO 3: Identify the budgets that comprise the master budget.
Operating Budgets: Direct Materials Budget

- Shows both the **quantity** and **cost** of direct materials to be purchased.

- Derived from the direct materials units required for production (from the production budget) plus the desired change in ending direct materials units.

\[
\text{Required Direct Materials Units to be Purchased} = \text{Direct Materials Units Required for Production} + \text{Desired Ending Direct Materials Units} - \text{Beginning Direct Materials Units}
\]

- **Budgeted cost of direct materials to be purchased** = required units of direct materials \( \times \) anticipated cost per unit.

**LO 3:** Identify the budgets that comprise the master budget.
Example - Hayes Company

- Key component in budgeting process - desired ending inventory

- An ending inventory of 10% of next quarter's production requirements is sufficient

- The manufacturing of each unit requires 2 pounds of raw materials at an expected price of $4 per pound

LO 3: Identify the budgets that comprise the master budget.
### Operating Budgets: Direct Materials Budget

#### Example - Hayes Company

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Units to produced (Illustration 9-5)</td>
<td>3,100</td>
<td>3,600</td>
<td>4,100</td>
<td>4,600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct materials per unit</td>
<td>× 2</td>
<td>× 2</td>
<td>× 2</td>
<td>× 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total pounds needed for production</td>
<td>6,200</td>
<td>7,200</td>
<td>8,200</td>
<td>9,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add: Desired ending direct materials (pounds)</td>
<td>720</td>
<td>820</td>
<td>920</td>
<td>1,020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total materials required</td>
<td>6,920</td>
<td>8,020</td>
<td>9,120</td>
<td>10,220</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less: Beginning direct materials (pounds)</td>
<td>620 b</td>
<td>720</td>
<td>820</td>
<td>920</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct materials purchases</td>
<td>6,300</td>
<td>7,300</td>
<td>8,300</td>
<td>9,300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cost per pound</td>
<td>× $4</td>
<td>× $4</td>
<td>× $4</td>
<td>× $4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total cost of direct materials purchases</td>
<td>$25,200</td>
<td>$29,200</td>
<td>$33,200</td>
<td>$37,200</td>
<td>$124,800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- a10% of next quarter’s production requirements
- b10% of estimated first-quarter pounds needed for production

**LO 3:** Identify the budgets that comprise the master budget.
**Operating Budgets: Direct Labor Budget**

- Shows both the **quantity of hours and cost of direct labor** necessary to meet production requirements.
- Critical in maintaining a labor force that can **meet expected production**.
- Total direct labor cost formula:

<table>
<thead>
<tr>
<th>Units to be Produced</th>
<th>Direct Labor Time per Unit</th>
<th>Direct Labor Cost per Hour</th>
<th>Total Direct Labor Cost</th>
</tr>
</thead>
</table>

**LO 3**: Identify the budgets that comprise the master budget.
Example - Hayes Company

- Direct labor hours from the production budget
- Two hours of direct labor required for each unit
- Anticipated hourly wage rate $10

LO 3: Identify the budgets that comprise the master budget.
Operating Budgets: Manufacturing Overhead

- Shows the expected manufacturing overhead costs for the budget period
- Distinguishes between fixed and variable overhead costs

**Example - Hayes Company**

Fixed cost amounts are assumed

Expected variable costs per direct labor hour:

- indirect materials: $1.00
- indirect labor: $1.40
- utilities: $0.40
- maintenance: $0.20

LO 3: Identify the budgets that comprise the master budget.
**Operating Budgets: Manufacturing Overhead**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect materials ($1.00/hour)</td>
<td>6,200</td>
<td>7,200</td>
<td>8,200</td>
<td>9,200</td>
<td>30,800</td>
</tr>
<tr>
<td>Indirect labor ($1.40/hour)</td>
<td>8,680</td>
<td>10,800</td>
<td>11,480</td>
<td>12,880</td>
<td>43,120</td>
</tr>
<tr>
<td>Utilities ($0.40/hour)</td>
<td>2,480</td>
<td>2,880</td>
<td>3,280</td>
<td>3,680</td>
<td>12,320</td>
</tr>
<tr>
<td>Maintenance ($0.20/hour)</td>
<td>1,240</td>
<td>1,440</td>
<td>1,640</td>
<td>1,840</td>
<td>6,160</td>
</tr>
<tr>
<td><strong>Total variable costs</strong></td>
<td>18,600</td>
<td>21,600</td>
<td>24,600</td>
<td>27,600</td>
<td>92,400</td>
</tr>
<tr>
<td><strong>Fixed costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisory salaries</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>3,800</td>
<td>3,800</td>
<td>3,800</td>
<td>3,800</td>
<td>15,200</td>
</tr>
<tr>
<td>Property taxes and insurance</td>
<td>9,000</td>
<td>9,000</td>
<td>9,000</td>
<td>9,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Maintenance</td>
<td>5,700</td>
<td>5,700</td>
<td>5,700</td>
<td>5,700</td>
<td>22,800</td>
</tr>
<tr>
<td><strong>Total fixed costs</strong></td>
<td>38,500</td>
<td>38,500</td>
<td>38,500</td>
<td>38,500</td>
<td>154,000</td>
</tr>
<tr>
<td><strong>Total manufacturing overhead</strong></td>
<td>57,100</td>
<td>60,100</td>
<td>63,100</td>
<td>66,100</td>
<td>246,400</td>
</tr>
<tr>
<td><strong>Direct labor hours</strong></td>
<td>6,200</td>
<td>7,200</td>
<td>8,200</td>
<td>9,200</td>
<td>30,800</td>
</tr>
<tr>
<td>(Illustration 9.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Manufacturing overhead rate per direct labor hour ($246,400 ÷ 30,800)</strong></td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LO 3:** Identify the budgets that comprise the master budget.
Operating Budgets: Selling and Administrative

- Projection of anticipated operating expenses
- Distinguishes between fixed and variable costs

Example - Hayes Company
Fixed cost amounts are assumed
Expected variable costs per unit sold (from sales budget):
  - sales commissions: $3.00
  - freight-out: $1.00

LO 3: Identify the budgets that comprise the master budget.
## Operating Budgets: Selling and Administrative

**HAYES COMPANY**

Selling and Administrative Expense Budget
For the Year Ending December 31, 2008

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quarter</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Budgeted sales in units</strong></td>
<td>3,000</td>
<td>3,500</td>
<td>4,000</td>
<td>4,500</td>
<td>15,000</td>
<td></td>
</tr>
<tr>
<td><strong>Variable expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales commissions ($3 per unit)</td>
<td>$9,000</td>
<td>$10,500</td>
<td>$12,000</td>
<td>$13,500</td>
<td>$45,000</td>
<td></td>
</tr>
<tr>
<td>Freight-out ($1 per unit)</td>
<td>$3,000</td>
<td>$3,500</td>
<td>$4,000</td>
<td>$4,500</td>
<td>$15,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total variable expenses</strong></td>
<td>12,000</td>
<td>14,000</td>
<td>16,000</td>
<td>18,000</td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td><strong>Fixed expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Sales salaries</td>
<td>$15,000</td>
<td>$15,000</td>
<td>$15,000</td>
<td>$15,000</td>
<td>$60,000</td>
<td></td>
</tr>
<tr>
<td>Office salaries</td>
<td>$7,500</td>
<td>$7,500</td>
<td>$7,500</td>
<td>$7,500</td>
<td>$30,000</td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$4,000</td>
<td></td>
</tr>
<tr>
<td>Property taxes and insurance</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$6,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total fixed expenses</strong></td>
<td>$30,000</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$30,000</td>
<td>$120,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total selling and administrative expenses</strong></td>
<td>$42,000</td>
<td>$44,000</td>
<td>$46,000</td>
<td>$48,000</td>
<td>$180,000</td>
<td></td>
</tr>
</tbody>
</table>

**LO 3:** Identify the budgets that comprise the master budget.
A sales budget is:

a. Derived from the production budget.

b. Management’s best estimate of sales revenue for the year.

c. Not the starting point for the master budget.

d. Prepared only for credit sales.

Review Question

LO 3: Identify the budgets that comprise the master budget.
Operating Budgets: Budgeted Income Statement

- Important end-product of the operating budgets
- Indicates expected profitability of operations
- Provides a basis for evaluating company performance
- Prepared from the operating budgets
  - Sales Budget
  - Production Budget
  - Direct Materials Budget
  - Direct Labor Budget
  - Manufacturing Overhead Budget
  - Selling and Administrative Expense Budget

LO 4: Describe the sources for preparing the budgeted income statement.
Example – Hayes Company

To find cost of goods sold:

First, determine the unit cost of one Kitchen-mate

<table>
<thead>
<tr>
<th>Cost Element</th>
<th>Illustration</th>
<th>Quantity</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>23-7</td>
<td>2 pounds</td>
<td>$4.00</td>
<td>$8.00</td>
</tr>
<tr>
<td>Direct labor</td>
<td>23-9</td>
<td>2 hours</td>
<td>$10.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>23-10</td>
<td>2 hours</td>
<td>$8.00</td>
<td>16.00</td>
</tr>
<tr>
<td><strong>Total unit cost</strong></td>
<td><strong>-</strong></td>
<td></td>
<td><strong>$44.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

Second, determine Cost of Goods Sold by multiplying units sold times unit cost:

15,000 units X $44 = $660,000

LO 4: Describe the sources for preparing the budgeted income statement.
### Operating Budgets: Budgeted Income Statement

**Hayes Company**

**Budgeted Income Statement**

For the Year Ending December 31, 2008

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (Illustration 9-3)</td>
<td>$900,000</td>
</tr>
<tr>
<td>Cost of goods sold (15,000 × $44)</td>
<td>660,000</td>
</tr>
<tr>
<td>Gross profit</td>
<td>240,000</td>
</tr>
<tr>
<td>Selling and administrative expenses (Illustration 9-11)</td>
<td>180,000</td>
</tr>
<tr>
<td>Income from operations</td>
<td>60,000</td>
</tr>
<tr>
<td>Interest expense</td>
<td>100</td>
</tr>
<tr>
<td>Income before income taxes</td>
<td>59,900</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>12,000</td>
</tr>
<tr>
<td>Net income</td>
<td>$47,900</td>
</tr>
</tbody>
</table>

Additional estimated data for budgeted income statement:
- Interest Expense - $100
- Income Taxes - $12,000

**LO 4:** Describe the sources for preparing the budgeted income statement.
Each of the following budgets is used in preparing the budgeted income statement except the:

a. Sales budget.

b. Selling and administrative budget.

c. Capital expenditure budget.  // This is the correct choice.

d. Direct labor budget.
Financial Budgets: Cash Budget

- Shows anticipated cash flows
- Often considered to be the most important output in preparing financial budgets
- Contains three sections:
  1. Cash Receipts
  2. Cash Disbursements
  3. Financing
- Shows beginning and ending cash balances

LO 5: Explain the principal sections of a cash budget.
### Operating Budgets: Budgeted Income Statement

#### Basic Format

<table>
<thead>
<tr>
<th>ANY COMPANY</th>
<th>Cash Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Beginning cash balance</strong></td>
<td>$X,XXX</td>
</tr>
<tr>
<td><strong>Add: Cash receipts (Itemized)</strong></td>
<td>X,XXX</td>
</tr>
<tr>
<td><strong>Total available cash</strong></td>
<td>X,XXX</td>
</tr>
<tr>
<td><strong>Less: Cash disbursements (Itemized)</strong></td>
<td>X,XXX</td>
</tr>
<tr>
<td><strong>Excess (deficiency) of available cash over cash disbursements</strong></td>
<td>X,XXX</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>X,XXX</td>
</tr>
<tr>
<td><strong>Ending cash balance</strong></td>
<td>$X,XXX</td>
</tr>
</tbody>
</table>

**LO 5:** Explain the principal sections of a cash budget.
Financial Budgets: Cash Budget

**Cash Receipts Section**
- Includes expected receipts from the *principal sources* of revenue – usually cash sales and collections on credit sales.
- Shows expected interest and dividends receipts as well as proceeds from planned sales of investments, plant assets, and capital stock.

**Cash Disbursements Section**
- Includes *expected cash payments* for direct materials and labor, taxes, dividends, plant assets, etc.

**Financing Section**
- Shows *expected borrowings and repayments* of borrowed funds plus interest.

LO 5: Explain the principal sections of a cash budget.
Financial Budgets: Cash Budget

- Must prepare in sequence
- Ending cash balance of one period is the beginning cash balance for the next
- Data obtained from other budgets and from management
- Often prepared for the year on a monthly basis

LO 5: Explain the principal sections of a cash budget.
Example - Hayes Company Assumptions

January 1, 2008 cash balance: $38,000

Sales: collect 60% in quarter sold; 40% in next quarter;
    collect December 31, 2007 Accounts Receivable in Quarter 1

Expected sale of short term investments: $2,000 in Quarter 1

Direct Materials: pay 50% in quarter purchased; 50% in next
    pay December 31, 2007 Accounts Payable in Quarter 1

Direct Labor: pay 100% in quarter incurred

Manufacturing Overhead and Selling/Administrative Expenses:
    pay (except depreciation) in quarter incurred

Expected purchase of truck: $10,000 cash in Quarter 2

Estimated annual income taxes: Equal payment each quarter

Loans: Pay in earliest quarter with sufficient cash (i.e., cash on hand
    exceeds the $15,000 minimum required balance)

LO 5: Explain the principal sections of a cash budget.
Financial Budgets: Cash Budget

Example - Hayes Company

Usually prepare schedule of collections from customers

HAYES COMPANY
Schedule of Expected Collections from Customers

<table>
<thead>
<tr>
<th>Accounts receivable, 12/31/07</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>First quarter ($180,000)</td>
<td>108,000</td>
<td>$72,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second quarter ($210,000)</td>
<td></td>
<td>126,000</td>
<td>$84,000</td>
<td></td>
</tr>
<tr>
<td>Third quarter ($240,000)</td>
<td></td>
<td></td>
<td>144,000</td>
<td>$96,000</td>
</tr>
<tr>
<td>Fourth quarter ($270,000)</td>
<td></td>
<td></td>
<td></td>
<td>162,000</td>
</tr>
<tr>
<td>Total collections</td>
<td>$168,000</td>
<td>$198,000</td>
<td>$228,000</td>
<td>$258,000</td>
</tr>
</tbody>
</table>

LO 5: Explain the principal sections of a cash budget.
Example – Hayes Company

Prepare schedule of cash payments for direct materials

<table>
<thead>
<tr>
<th>HAYES COMPANY</th>
<th>Schedule of Expected Payments for Direct Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quarter</td>
</tr>
<tr>
<td>Accounts payable, 12/31/07</td>
<td>$10,600</td>
</tr>
<tr>
<td>First quarter ($25,200)</td>
<td>12,600</td>
</tr>
<tr>
<td>Second quarter ($29,200)</td>
<td></td>
</tr>
<tr>
<td>Third quarter ($33,200)</td>
<td></td>
</tr>
<tr>
<td>Fourth quarter ($37,200)</td>
<td></td>
</tr>
<tr>
<td>Total payments</td>
<td>$23,200</td>
</tr>
</tbody>
</table>

Now prepare the Cash Budget based on the assumptions and preceding schedules

LO 5: Explain the principal sections of a cash budget.
## Financial Budgets: Cash Budget

### HAYES COMPANY
Cash Budget
For the Year Ending December 31, 2008

<table>
<thead>
<tr>
<th>Assumption</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning cash balance</td>
<td>$38,000</td>
<td>$25,500</td>
<td>$15,000</td>
<td>$19,400</td>
</tr>
<tr>
<td><strong>Add: Receipts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collections from customers</td>
<td>168,000</td>
<td>198,000</td>
<td>228,000</td>
<td>258,000</td>
</tr>
<tr>
<td>Sale of securities</td>
<td>2,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total receipts</td>
<td>170,000</td>
<td>198,000</td>
<td>228,000</td>
<td>258,000</td>
</tr>
<tr>
<td>Total available cash</td>
<td>208,000</td>
<td>223,500</td>
<td>243,000</td>
<td>277,400</td>
</tr>
<tr>
<td><strong>Less: Disbursements</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct materials</td>
<td>23,200</td>
<td>27,200</td>
<td>31,200</td>
<td>35,200</td>
</tr>
<tr>
<td>Direct labor</td>
<td>62,000</td>
<td>72,000</td>
<td>82,000</td>
<td>92,000</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>53,300</td>
<td>56,300</td>
<td>59,300</td>
<td>62,300</td>
</tr>
<tr>
<td>Selling and administrative expenses</td>
<td>41,000</td>
<td>43,000</td>
<td>45,000</td>
<td>47,000</td>
</tr>
<tr>
<td>Purchase of truck</td>
<td>0</td>
<td>10,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Total disbursements</td>
<td>182,300</td>
<td>211,300</td>
<td>220,300</td>
<td>239,500</td>
</tr>
<tr>
<td>Excess (deficiency) of available cash over cash disbursements</td>
<td>25,500</td>
<td>12,000</td>
<td>22,500</td>
<td>37,900</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrowings</td>
<td>0</td>
<td>3,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Repayments plus $100 interest</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3,100</td>
</tr>
<tr>
<td>Ending cash balance</td>
<td>$25,500</td>
<td>$15,000</td>
<td>$19,400</td>
<td>$37,900</td>
</tr>
</tbody>
</table>

---

*a*$57,100-$3,800 depreciation
*b*$42,000-$1,000 depreciation

**LO 5:** Explain the principal sections of a cash budget.
Financial Budgets: Cash Budget

- Contributes to more effective cash management
- Shows managers the need for additional financing before actual need arises
- Indicates when excess cash will be available

LO 5: Explain the principal sections of a cash budget.
Financial Budgets: Budgeted Balance Sheet

- A projection of financial position at the end of the budgeted period
- Developed from the budgeted balance sheet for the preceding year and the budgets for the current year

LO 5: Explain the principal sections of a cash budget.
### Example - Hayes Company

**HAYES COMPANY**

**Budgeted Balance Sheet**

**December 31, 2009**

<table>
<thead>
<tr>
<th>Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$37,900</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>108,000</td>
</tr>
<tr>
<td>Finished goods inventory</td>
<td>44,000</td>
</tr>
<tr>
<td>Raw materials inventory</td>
<td>4,080</td>
</tr>
<tr>
<td>Buildings and equipment</td>
<td>$192,000</td>
</tr>
<tr>
<td>Less: Accumulated depreciation</td>
<td>48,000</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>$337,980</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities and Stockholders’ Equity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable</td>
<td>$18,600</td>
</tr>
<tr>
<td>Common stock</td>
<td>225,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>94,380</td>
</tr>
<tr>
<td><strong>Total liabilities and stockholders’ equity</strong></td>
<td><strong>$337,980</strong></td>
</tr>
</tbody>
</table>

**Additional data:**

<table>
<thead>
<tr>
<th>Buildings and equipment</th>
<th>$182,000</th>
<th>Common stock</th>
<th>$225,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated depreciation</td>
<td>$28,800</td>
<td>Retained earnings</td>
<td>$46,480</td>
</tr>
</tbody>
</table>

**LO 5:** Explain the principal sections of a cash budget.
Expected direct materials purchases in Read Company are $70,000 in the first quarter and $90,000 in the second quarter. Forty percent of the purchases are paid in cash as incurred, and the balance is paid in the following quarter. The budgeted cash payments for purchases in the second quarter are:

a. $96,000  
b. $90,000  
c. $78,000  
d. $72,000

Review Question

LO 5: Explain the principal sections of a cash budget.
Budgeting: Merchandisers

- **Sales Budget**: starting point and key factor in developing the master budget
- Use a **purchases budget** instead of a production budget
- Does **not** use the manufacturing budgets (direct materials, direct labor, manufacturing overhead)
- To determine budgeted merchandise purchases:

\[
\text{Budgeted Cost of Goods Sold} + \text{Desired Ending Merchandise Inventory} - \text{Beginning Merchandise Inventory} = \text{Required Merchandise Purchases}
\]

**LO 6**: Indicate the applicability of budgeting in nonmanufacturing companies.
**Example – Lima Company**

Budgeted sales for July $300,000 and for August $320,000  
**Cost of Goods Sold:** 70% of sales  
Desired ending inventory: 30% of next month’s Cost of Goods Sold

---

**LIMA COMPANY**  
Merchandise Purchases Budget  
For the Month Ending July 31, 2008

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeted cost of goods sold ($300,000 × 70%)</td>
<td>$210,000</td>
</tr>
<tr>
<td>Add: Desired ending merchandise inventory ($224,000 × 30%)</td>
<td>67,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>277,200</strong></td>
</tr>
<tr>
<td>Less: Beginning merchandise inventory ($210,000 × 30%)</td>
<td>63,000</td>
</tr>
<tr>
<td><strong>Required merchandise purchases for July</strong></td>
<td><strong>$214,200</strong></td>
</tr>
</tbody>
</table>

---

**LO 6:** Indicate the applicability of budgeting in nonmanufacturing companies.
Critical factor in budgeting is **coordinating professional staff needs with anticipated services**

Problems if **overstaffed**:  
- Disproportionately high labor costs  
- Lower profits due to additional salaries  
- Increased staff turnover due to lack of challenging work

Problems if **understaffed**:  
- Lost revenues because existing and future client needs for services cannot be met  
- Loss of professional staff due to excessive work loads

**LO 6:** Indicate the applicability of budgeting in manufacturing companies.
Budgeting: Not-for-Profit Companies

- Just as important as for profit-oriented company
- However, budget process differs significantly from that of a profit-oriented company
- **Budget on the basis of cash flows** (expenditures and receipts), not on a revenue and expense basis
- The starting point is usually expenditures, not receipts
- Management’s task is to find receipts needed to support planned expenditures
- Budget must be strictly followed, overspending often illegal

LO 6: Indicate the applicability of budgeting in nonmanufacturing companies.
The budget for a merchandiser differs from a budget for a manufacturer because:

a. A merchandise purchases budget replaces the production budget.

b. The manufacturing budgets are not applicable.

c. None of the above.

d. Both (a) and (b) above
Perine Company has completed all of its operating budgets. The sales budget for the year shows 50,000 units and total sales of $2,000,000. The total unit cost of making one unit of sales is $22. Selling and administrative expenses are expected to be $300,000. Income taxes are estimated to be $150,000.

Prepare a budgeted income statement for the year ending December 31, 2008.
### Perine Company

#### Budgeted Income Statement

For Year Ending December 31, 2008

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Cost of Goods Sold (50,000 units @ $22)</td>
<td>1,100,000</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>900,000</td>
</tr>
<tr>
<td>Selling &amp; Administrative Expenses</td>
<td>300,000</td>
</tr>
<tr>
<td>Income from Operations</td>
<td>600,000</td>
</tr>
<tr>
<td>Income Tax Expense</td>
<td>150,000</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td><strong>$450,000</strong></td>
</tr>
</tbody>
</table>
The average American household income is $49,430, before taxes.

The average family spends $5,375 on food, $1,283 on housing, and $7,759 on transportation.

* This includes Social Security tax.

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