

# FOUNDATION CONCEPTS

# PART 1

# CHAPTER

- 1 Introduction to Cost Management
- 2 Basic Cost Management Concepts
- 3 Cost Behavior
- 4 Activity-Based Costing





## Introduction to Cost Management

# CHAPTER

# 1

### AFTER STUDYING THIS CHAPTER, YOU SHOULD BE ABLE TO:

1. List the similarities and differences between financial accounting and cost management.
2. Identify the current factors affecting cost management.
3. Discuss the importance of the accounting system for internal and external reporting.
4. Discuss the need for today's cost accountant to acquire cross-functional expertise.
5. Describe how management accountants function within an organization.
6. Understand the importance of ethical behavior for management accountants.
7. Identify the three forms of certification available to internal accountants.

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## Financial Accounting versus Cost Management

The accounting information system within an organization has two major subsystems: a financial accounting system and a cost management accounting system. One of the major differences between the two systems is the targeted user. **Financial accounting** is devoted to providing information for external users, including investors, creditors (e.g., banks and suppliers), and government agencies. These external users find the information helpful in making decisions to buy or sell shares of stock, buy bonds, issue loans and regulatory acts, and in making other financial decisions. Because the information needs of this group of external

users are so diverse and the information must be so highly reliable, the financial accounting system is designed in accordance with clearly defined accounting rules and formats, or generally accepted accounting principles (GAAP). **Cost management** produces information for internal users. Specifically, cost management identifies, collects, measures, classifies, and reports information that is useful to managers for determining the cost of products, customers, and suppliers, and other relevant objects and for planning, controlling, making continuous improvements, and decision making.

Cost management has a much broader focus than that found in traditional costing systems. It is not only concerned with how much something costs but also with the factors that drive costs, such as cycle time, quality, and process productivity. Thus, cost management requires a deep understanding of a firm's cost structure. Managers must be able to determine the long- and short-run costs of activities and processes as well as the costs of goods, services, customers, suppliers, and other objects of interest. Causes of these costs are also carefully studied.

The costs of activities and processes do not appear on the financial statements. Yet, knowing these costs and their underlying causes is critical for companies engaging in such tasks as continuous improvement, total quality management, environmental cost management, productivity enhancement, and strategic cost management.

Cost management encompasses both the cost accounting and the management accounting information systems. Cost accounting attempts to satisfy costing objectives for both financial and management accounting. When **cost accounting** is used to comply with a financial accounting objective, it measures and assigns costs in accordance with GAAP. When used for internal purposes, cost accounting provides cost information about products, customers, services, projects, activities, processes, and other details that may be of interest to management. The cost information provided plays an important support role for planning, controlling, and decision making. This information need not, and often should not, follow GAAP.

**Management accounting** is concerned specifically with how cost information and other financial and nonfinancial information should be used for planning, controlling, continuous improvement, and decision making. Management accounting has an overall objective of making sure that organizations make effective use of resources so that value is maximized for shareholders and customers and other interested shareholders. **Porsche, Stihl, DaimlerChrysler**, and other German companies view management accounting as a distinct discipline and typically employ as many or more staff in management accounting as in financial accounting.<sup>1</sup>

It should be emphasized that both the cost management information system and the financial accounting information system are part of the total accounting information system. Unfortunately, the content of the cost management accounting system is all too often driven by the needs of the financial accounting system. The reports of both cost management and financial accounting are frequently derived from the same database, which was originally established to support the reporting requirements of financial accounting. Many organizations need to expand this database, or create additional databases, in order to satisfy more fully the needs of internal users. For example, a firm's profitability is of interest to investors, but managers need to know the profitability of individual products. The accounting system should be designed to provide both total profits and profits for individual products. The key point here is flexibility—the accounting system should be able to supply different data for different purposes.

## Factors Affecting Cost Management

Over the last 25 years, worldwide competitive pressures, deregulation, growth in the service industry, and advances in information and manufacturing technology have

### OBJECTIVE 1

List the similarities and differences between financial accounting and cost management.

### OBJECTIVE 2

Identify the current factors affecting cost management.

1. Paul A. Sharman, "German Cost Accounting," *Strategic Finance* (December 2003): 30–38.

changed the nature of our economy and caused many manufacturing and service industries to dramatically change the way in which they operate. These changes, in turn, have prompted the development of innovative and relevant cost management practices. For example, activity-based accounting systems have been developed and implemented in many organizations. Additionally, the focus of cost management accounting systems has been broadened to enable managers to better serve the needs of customers and manage the firm's business processes that are used to create customer value. A firm can establish a competitive advantage by providing more customer value for less cost than its competitors. To secure and maintain a competitive advantage, managers seek to improve time-based performance, quality, and efficiency. Accounting information must be produced to support these three fundamental organizational goals.

## Global Competition

Vastly improved transportation and communication systems have led to a global market for many manufacturing and service firms. Several decades ago, firms neither knew nor cared what similar firms in Japan, France, Germany, and Singapore were producing. These foreign firms were not competitors since their markets were separated by geographical distance. Now, both small and large firms are affected by the opportunities offered by global competition. **Stillwater Designs**, a small firm that designs and markets Kicker speakers, has significant markets in Europe. The manufacture of the Kicker speakers is mostly outsourced to Asian producers. At the other end of the size scale, **Procter & Gamble**, **The Coca-Cola Company**, and **Mars, Inc.**, are developing sizable markets in China. Automobiles, currently being made in Japan, can be in the United States in two weeks. Investment bankers and management consultants can communicate with foreign offices instantly. Improved transportation and communication in conjunction with higher quality products that carry lower prices have upped the ante for all firms. This new competitive environment has increased the demand not only for more cost information but also for more accurate cost information. Cost information plays a vital role in reducing costs, improving productivity, and assessing product-line profitability.

## Growth of the Service Industry

As traditional industries have declined in importance, the service sector of the economy has increased in importance. The service sector now comprises approximately three-quarters of the U.S. economy and employment. Many services—among them accounting services, transportation, and medical services—are exported. Experts predict that this sector will continue to expand in size and importance as service productivity grows. Deregulation of many services (e.g., airlines and telecommunications in the past and utilities in the present) has increased competition in the service industry. Many service organizations are scrambling to survive. The increased competition has made managers in this industry more conscious of the need to have accurate cost information for planning, controlling, continuous improvement, and decision making. Thus, the changes in the service sector add to the demand for innovative and relevant cost management information.

## Advances in Information Technology

Three significant advances relate to information technology. One is intimately connected with computer-integrated applications. With automated manufacturing, computers are used to monitor and control operations. Because a computer is being used, a considerable amount of useful information can be collected, and managers can be informed about what is happening within an organization almost as it happens. It is now possible to track products continuously as they move through the factory and to report (on a real-time basis) such information as units produced, material used, scrap generated, and product cost. The outcome is an operational information system that fully integrates manufacturing with marketing and accounting data.

**Enterprise resource planning (ERP) software** has the objective of providing an integrated system capability—a system that can run all the operations of a company and provide access to real-time data from the various functional areas of a company. Using this real-time data enables managers to continuously improve the efficiency of organizational units and processes. To support continuous improvement, information that is timely, accurate, and detailed is needed.

Automation and integration increase both the quantity (detail) and the timeliness of information. For managers to fully exploit the value of the more complex information system, they must have access to the data of the system—they must be able to extract and analyze the data from the information system quickly and efficiently. This, in turn, implies that the tools for analysis must be powerful.

The second major advance supplies the required tools: the availability of personal computers (PCs), online analytic programs (OLAP), and decision-support systems (DSS). The PC serves as a communications link to the company's information system, and OLAP and DSS supply managers with the capability to use that information. PCs and software aids are available to managers in all types of organizations. Often, a PC acts as a networking terminal and is connected to an organization's database, allowing managers to access information more quickly, do their own analyses, and prepare many of their own reports. The ability to enhance the accuracy of product costing is now available. Because of advances in information technology, cost accountants have the flexibility to respond to the managerial need for more complex product costing methods such as activity-based costing (ABC).

ABC software is classified as online analytic software. Online analytic applications function independently of an organization's core transactions but at the same time are dependent on the data resident in an ERP system.<sup>2</sup> ABC software typically interfaces with DSS software and other online analytic software to facilitate applications such as cost estimating, product pricing, and planning and budgeting. This vast computing capability now makes it possible for accountants to generate individualized reports on an as-needed basis. Many firms have found that the increased responsiveness of a contemporary cost management system has allowed them to realize significant cost savings by eliminating the huge volume of internally generated monthly financial reports.

The third major advance is the emergence of electronic commerce. **Electronic commerce (e-commerce)** is any form of business that is executed using information and communications technology. Internet trading, electronic data interchange, and bar coding are examples of e-commerce. Internet trading allows buyers and sellers to come together and execute transactions from diverse locations and circumstances. Internet trading allows a company to act as a virtual organization, thus reducing overhead. **Electronic data interchange (EDI)** involves the exchange of documents between computers using telephone lines and is widely used for purchasing and distribution. The sharing of information among trading partners reduces costs and improves customer relations, thus leading to a stronger competitive position. EDI is an integral part of supply chain management (value-chain management). **Supply chain management** is the management of products and services from the acquisition of raw materials through manufacturing, warehousing, distribution, wholesaling, and retailing. The emergence of EDI and supply chain management has increased the importance of costing out activities in the value chain and determining the cost to the company of different suppliers and customers.

## Advances in the Manufacturing Environment

Manufacturing management approaches such as the theory of constraints and just-in-time have allowed firms to increase quality, reduce inventories, eliminate waste, and re-

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2. R. Shaw, "ABC and ERP: Partners at Last?" *Management Accounting* (November 1998): 56–58.

duce costs. Automated manufacturing has produced similar outcomes. The impact of improved manufacturing technology and practices on cost management is significant. Product costing systems, control systems, allocation, inventory management, cost structure, capital budgeting, variable costing, and many other accounting practices are being affected.

### Theory of Constraints

The **theory of constraints** is a method used to continuously improve manufacturing and nonmanufacturing activities. It is characterized as a “thinking process” that begins by recognizing that all resources are finite. Some resources, however, are more critical than others. The most critical limiting factor, called a constraint, becomes the focus of attention. By managing this constraint, performance can be improved. To manage the constraint, it must be identified and exploited (i.e., performance must be maximized subject to the constraint). All other actions are subordinate to the exploitation decision. Finally, to improve performance, the constraint must be elevated. The process is repeated until the constraint is eliminated (i.e., it is no longer the critical performance limiting factor). The process then begins anew with the resource that has now become the critical limiting factor. Using this method, lead times and, thus, inventories can be reduced.

### Just-in-Time Manufacturing

A demand-pull system, **just-in-time (JIT) manufacturing** strives to produce a product only when it is needed and only in the quantities demanded by customers. Demand, measured by customer orders, pulls products through the manufacturing process. Each operation produces only what is necessary to satisfy the demand of the succeeding operation. No production takes place until a signal from a succeeding process indicates the need to produce. Parts and materials arrive just in time to be used in production.

JIT manufacturing typically reduces inventories to much lower levels (theoretically to insignificant levels) than those found in conventional systems, increases the emphasis on quality control, and produces fundamental changes in the way production is organized and carried out. Basically, JIT manufacturing focuses on continual improvement by reducing inventory costs and dealing with other economic problems. Reducing inventories frees up capital that can be used for more productive investments. Increasing quality enhances the competitive ability of the firm. Finally, changing from a traditional manufacturing setup to JIT manufacturing allows the firm to focus more on quality and productivity and, at the same time, allows a more accurate assessment of what it costs to produce products.

### Computer-Integrated Manufacturing

Automation of the manufacturing environment allows firms to reduce inventory, increase productive capacity, improve quality and service, decrease processing time, and increase output. Automation can produce a competitive advantage for a firm. The implementation of an automated manufacturing facility typically follows JIT and is a response to the increased needs for quality and shorter response times. As more firms automate, competitive pressures will force other firms to do likewise. For many manufacturing firms, automation may be equivalent to survival.

The three possible levels of automation are (1) the stand-alone piece of equipment, (2) the cell, and (3) the completely integrated factory. Before a firm attempts any level of automation, it should first do all it can to produce a more focused, simplified manufacturing process. For example, most of the benefits of going to a completely integrated factory can often be achieved simply by implementing JIT manufacturing.

If automation is justified, it may mean installation of a computer-integrated manufacturing (CIM) system. CIM implies the following capabilities: (1) the products are

designed through the use of a computer-assisted design (CAD) system; (2) a computer-assisted engineering (CAE) system is used to test the design; (3) the product is manufactured using a computer-assisted manufacturing (CAM) system (CAMs use computer-controlled machines and robots); and (4) an information system connects the various automated components.

A particular type of CAM is the flexible manufacturing system. Flexible manufacturing systems are capable of producing a family of products from start to finish using robots and other automated equipment under the control of a mainframe computer. This ability to produce a variety of products with the same set of equipment is clearly advantageous.

## Customer Orientation

Firms are concentrating on the delivery of value to the customer with the objective of establishing a competitive advantage. Accountants and managers refer to a firm's **value chain** as the set of activities required to design, develop, produce, market, and deliver products and services to customers. As a result, a key question to be asked about any process or activity is whether it is important to the customer. The cost management system must track information relating to a wide variety of activities important to customers (e.g., product quality, environmental performance, new product development, and delivery performance). Customers now count the delivery of the product or service as part of the product. Companies must compete not only in technological and manufacturing terms but also in terms of the speed of delivery and response. Firms like **Federal Express** have exploited this desire by identifying and developing a market the **U.S. Post Office** could not serve.

Companies have internal customers as well. The staff functions of a company exist to serve the line functions. The accounting department creates cost reports for production managers. Accounting departments that are “customer driven” assess the value of the reports to be sure that they communicate significant information in a timely and readable fashion. Reports that do not measure up are dropped.

## New Product Development

A high proportion of production costs are committed during the development and design stage of new products. The effects of product development decisions on other parts of the firm's value chain are now widely acknowledged. This recognition has produced a demand for more sophisticated cost management procedures relating to new product development—procedures such as target costing and activity-based management. **Target costing** encourages managers to assess the overall cost impact of product designs over the product's life cycle and simultaneously provides incentives to make design changes to reduce costs. **Activity-based management** identifies the activities produced at each stage of the development process and assesses their costs. Activity-based management is complimentary to target costing because it enables managers to identify the activities that do not add value and then eliminate them so that overall life cycle costs can be reduced.

## Total Quality Management

Continuous improvement and elimination of waste are the two foundation principles that govern a state of manufacturing excellence. Manufacturing excellence is the key to survival in today's world-class competitive environment. Producing products and services that actually perform according to specifications and with little waste are the twin objectives of world-class firms. A philosophy of **total quality management**, in which managers strive to create an environment that will enable organizations to produce defect-free products and services, has replaced the acceptable quality attitudes of the past.

The emphasis on quality applies to services as well as products. **Boeing Aerospace Support (AS)** provides maintenance and training support for Boeing aircraft. From 1999 to 2003, AS significantly improved the quality of its services. From 1998 to 2003, the “exceptional” and “very good” responses on customer satisfaction surveys increased by more than 23 percent. On-time delivery of maintenance services was about 95 percent. For one program, the turn-around time was about three days for AS, while its competitors were taking up to 40 days for the same services. As a consequence of the improved quality, AS more than doubled its revenues from 1999 to 2003 (especially impressive given that the market growth was flat during this period). The company also received the 2003 Malcolm Baldrige National Quality Award in the service category.<sup>3</sup>

The message is clear. Pursuing an objective of improving quality promises major benefits. Cost management supports this objective by providing crucial information concerning quality-related activities and quality costs. Managers need to know which quality-related activities add value and which ones do not. They also need to know what quality costs are and how they change over time.

## Time as a Competitive Element

Time is a crucial element in all phases of the value chain. Firms can reduce time to market by redesigning products and processes, by eliminating waste, and by eliminating non-value-added activities. Firms can reduce the time spent on delivery of products or services, reworking a product, and unnecessary movements of materials and subassemblies.

Decreasing non-value-added time appears to go hand-in-hand with increasing quality. With quality improvements, the need for rework decreases, and the time to produce a good product decreases. The overall objective is to increase customer responsiveness.

Time and product life cycles are related. The rate of technological innovation has increased for many industries, and the life of a particular product can be quite short. Managers must be able to respond quickly and decisively to changing market conditions. Information to allow them to accomplish this goal must be available. **Hewlett-Packard** has found that it is better to be 50 percent over budget in new product development than to be six months late. This correlation between cost and time is a part of the cost management system.

## Efficiency

While quality and time are important, improving these dimensions without corresponding improvements in financial performance may be futile, if not fatal. Improving efficiency is also a vital concern. Both financial and nonfinancial measures of efficiency are needed. Cost is a critical measure of efficiency. Trends in costs over time and measures of productivity changes can provide important measures of the efficacy of continuous improvement decisions. For these efficiency measures to be of value, costs must be properly defined, measured, and accurately assigned.

Production of output must be related to the inputs required, and the overall financial effect of productivity changes should be calculated. Activity-based costing and profit-linked productivity measurement are responses to these demands. Activity-based costing is a relatively new approach to cost accounting that provides more accurate and meaningful cost assignments. By analyzing underlying activities and processes, eliminating those that do not add value, and enhancing those that do add value, dramatic increases in efficiency can be realized.

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3. As reported at [http://www.nist.gov/public\\_affairs/releases/2003baldrigewinners.htm](http://www.nist.gov/public_affairs/releases/2003baldrigewinners.htm) on May 5, 2004.

## A Systems Approach

The accounting system can be viewed as an approach to record transactions. A firm may develop a system that ranges from simple to complex, depending on the underlying processes it describes. The financial system of a typical college student is quite simple. It may consist of a checkbook and a wallet. Cash on hand may be counted when necessary to see if a purchase is possible. Similarly, from time to time, the checkbook is balanced to see if the bank's view is similar to the checkbook holder's view. There probably is not much paperwork and no need for a journal and chart of accounts. One individual is responsible for purchases and payments. However, as the entity grows, say as a small business with several employees, the simple system does not work. One person cannot keep track of all the detail; several people may be responsible for payments and purchases as well as sales. Certain standardized techniques are required.

The systems approach for the modern company is a data-based, relationship accounting approach. Exhibit 1-1 shows the traditional accounting system as a funnel. Transactions occur, and supporting documents are accumulated. These documents contain a wealth of data. For example, a purchase order may show the type, amount, and cost of the materials to be purchased, as well as the date and the individual who requested the materials. This purchase is then entered into the journal, yet only the date, account name, and dollar amount are retained. In other words, much potentially useful information is eliminated.

Next, the amounts in the journal are aggregated in the general ledger; thus, more information is lost at this stage. Finally, the ledger amounts are summarized in financial reports—and still more information is deleted.

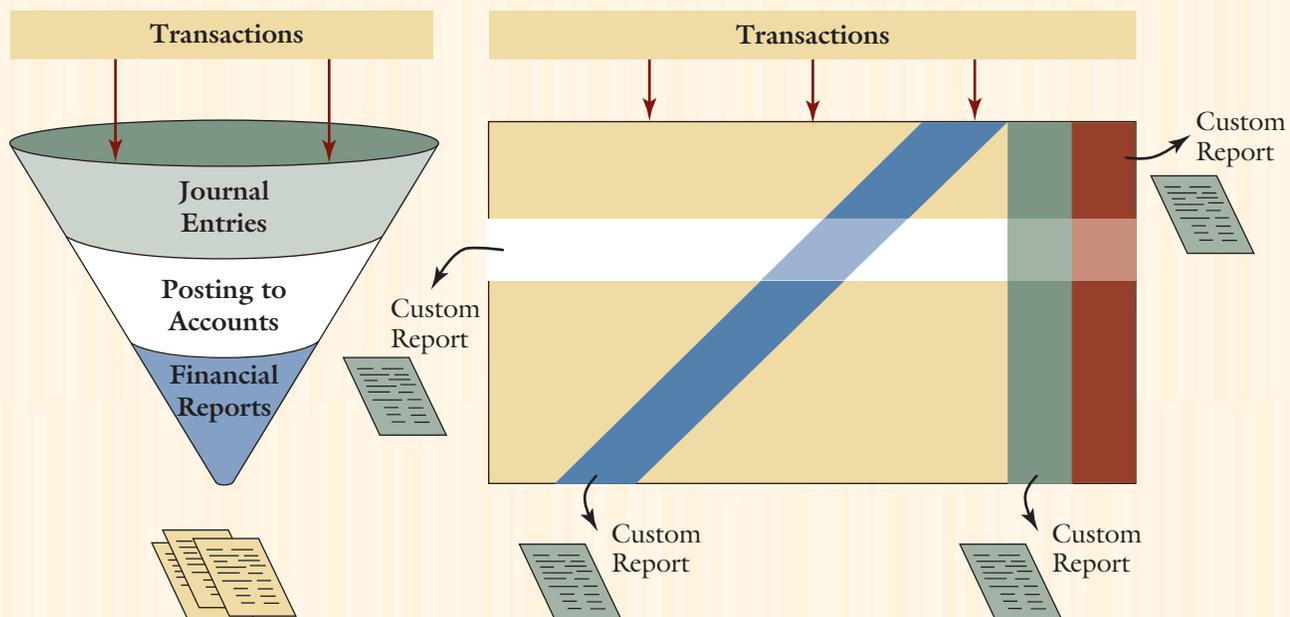
The data-based, or relationship, accounting system preserves information. The rectangle in Exhibit 1-1 represents the new accounting system. All information pertinent to a transaction is entered into a database. Various users of information can extract what they need from the database and create custom accounting reports. Information is not

### OBJECTIVE 3

Discuss the importance of the accounting system for internal and external reporting.

#### EXHIBIT 1-1

#### Traditional Accounting System versus Data-Based Relationship Accounting System



lost; it is still available for other users with different needs. If a salesperson writes up an order, data on the customer's name and address, product ordered, quantity, price, and date to be delivered are entered into the database. The marketing manager may use information on the price and quantity ordered to determine the sales commission. The production manager may need information on product type, quantity, and delivery date to schedule production.

The moving force behind this shift from an external report-based accounting system to a relationship-based accounting system is the widespread availability of technology. Powerful personal computers and networked systems make the accounting system available to a wide variety of users within the company.

The development and adoption of powerful ERP programs (e.g., **SAP**, **Oracle**, **PeopleSoft**, and **JD Edwards**) have moved the concept of an integrated database from the realm of theory to reality. This has forced a shift in perspective. An ERP system integrates many information systems into one enterprise-wide system. This directly impacts costing systems such as activity-based costing (ABC). An ERP system provides access to timely information—both financial and nonfinancial—about many organizational units and processes. This facilitates the adoption and implementation of an ABC system.

## OBJECTIVE 4

Discuss the need for today's cost accountant to acquire cross-functional expertise.

## Cost Management: A Cross-Functional Perspective

Today's cost accountant must understand many functions of a business's value chain, from manufacturing to marketing to distribution to customer service. This need is particularly important when the company is involved in international trade. Definitions of product cost vary. The company's internal accountants have moved beyond the traditional manufacturing cost approach to a more inclusive approach. This newer approach to product costing may take into account the costs of the value-chain activities defined by initial design and engineering, manufacturing, distribution, sales, and service. An individual who is well schooled in the various definitions of cost and who understands the shifting definitions of cost from the short run to the long run can be invaluable in determining what information is relevant in decision making.

Individuals with the ability to think cross-functionally can shift perspectives, expanding their understanding of problems and their solutions. Japanese automakers got their idea for JIT manufacturing from Taiichi Ohno's (the creator of **Toyota's** JIT production system) 1956 trip to the United States. He toured American automobile factories and American supermarkets. The impressive array of goods in the supermarkets and their constant turnover led to Ohno's comprehension of the way that grocery customers "pulled" products through the stores. That understanding led to Toyota's attempt to "pull" parts through production precisely when and where needed.<sup>4</sup>

Why try to relate cost management to marketing, management, and logistics? On-time delivery affects costs. Cycle time affects costs. The way orders are received and processed from customers affects costs. The way goods are purchased and delivered affects costs—as do the quality of the components purchased and the reliability of suppliers. It is clearly difficult—if not impossible—to manage costs unless there is interaction and cooperation among all parts of a company.

## The Need for Flexibility

No one cost management system exists. Costs important to one firm may be irrelevant to another. Similarly, costs that are important in one context to a firm are unimportant in other contexts.

4. Jeremy Main, "How to Steal the Best Ideas Around," *Fortune* (October 19, 1992): 102–106.

A member of the board of directors for **Stillwater's Mission of Hope**, a nonprofit shelter for the homeless, asked his accountant how to value the building used as the shelter. In other words, what did it cost? The accountant's answer was: "Why do you want to know? If you need to know the value for insurance purposes—to determine how much insurance to buy—then perhaps replacement cost would be the answer. If you are trying to set a price to sell the building (and build another one elsewhere), then current market value of the real estate would be the answer. If you need the cost for the balance sheet, then historical cost is required by GAAP." Different costs are needed for different purposes. The intelligent cost accountant must find the reason for the question in order to suggest an appropriate answer. A good cost management system facilitates these answers.

An understanding of the structure of the business environment in which the company operates is an important input in designing a cost management system. A primary distinction is made between manufacturing and service firms. However, overlap occurs because some manufacturing firms emphasize service to customers while some service firms emphasize the quality of their "product." Retailing is another classification, and its needs would require still another system.

## Behavioral Impact of Cost Information

Cost information is not neutral; it does not stand in the background, merely reflecting what has happened in an unbiased way. Instead, the cost management information system also shapes business. By keeping track of certain information, business owners are saying that these things are important. The ignoring of other information implies that it is not important. An old joke states that an accountant is someone who knows the cost of everything and the value of nothing.

Today's accountant must be an expert at valuing things. This includes methods (1) of costing and achieving quality, (2) of differentiating between value-added and non-value-added activities, and (3) of measuring and accounting for productivity. Thus, it is crucial that owners, managers, and accountants be aware of the signals that are being sent out by the accounting information system and ensure that correct signals are being sent.

## The Role of Today's Cost and Management Accountant

World-class firms are those that are at the cutting edge of customer support. They know their market and their product. They strive continually to improve product design, manufacture, and delivery. These companies can compete with the best of the best in a global environment. Accountants, too, can be termed world class. Those who merit this designation are intelligent and well prepared. They not only have the education and training to accumulate and provide financial information, but they stay up to date in their field and in business. In addition, world-class accountants must be familiar with the customs and financial accounting rules of the countries in which their firm operates.

## Line and Staff Positions

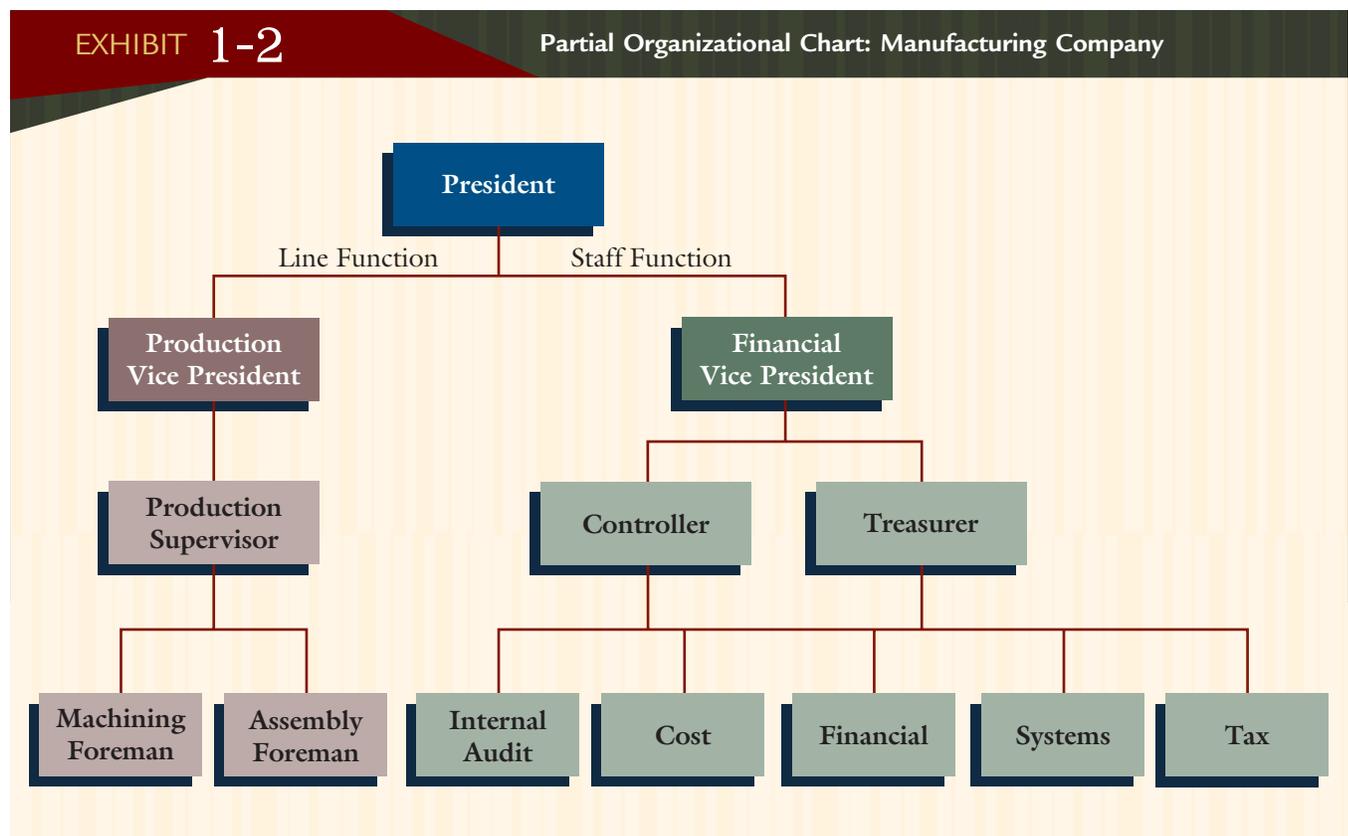
The role of cost and management accountants in an organization is one of support and teamwork. They assist those who are responsible for carrying out an organization's basic objectives. Positions that have direct responsibility for the basic objectives of an organization are referred to as **line positions**. In general, individuals in line positions participate in activities that produce and sell their company's product or service. Positions that are supportive in nature and have only indirect responsibility for an organization's basic objectives are called **staff positions**.

### OBJECTIVE 5

Describe how management accountants function within an organization.

In an organization whose basic mission is to produce and sell laser printers, the vice presidents of manufacturing and marketing, the factory manager, and the assemblers are all line positions. The vice presidents of finance and human resources, the cost accountant, and the purchasing manager are all staff positions.

The partial organization chart, shown in Exhibit 1-2, illustrates the organizational positions for production and finance. Because one of the basic objectives of the organization is to produce, those directly involved in production hold line positions. Although management accountants such as controllers and cost accounting managers may exercise considerable influence in the organization, they have no authority over the managers in the production area. The managers in line positions are the ones who set policy and make the decisions that impact production. However, by supplying and interpreting accounting information, accountants can have significant input into policies and decisions. Accountants also participate in project teams that are involved in decision making.



### The Controller

The **controller**, the chief accounting officer, supervises all accounting departments. Because of the critical role that management accounting plays in the operation of an organization, the controller is often viewed as a member of the top management team and encouraged to participate in planning, controlling, and decision-making activities. As the chief accounting officer, the controller has responsibility for both internal and external accounting requirements. This charge may include direct responsibility for internal auditing, cost accounting, financial accounting [including Securities Exchange Commission (SEC) reports and financial statements], systems accounting (including analysis, design, and internal controls), budgeting support, economic analysis, and taxes.

The duties and organization of the controller's office vary from firm to firm. In some companies, the internal audit department may report directly to the financial vice president; similarly, the systems department may report directly to the financial vice president or even to another staff vice president. A possible organization of a controller's office is also shown in Exhibit 1-2.

## The Treasurer

The **treasurer** is responsible for the finance function. Specifically, the treasurer raises capital and manages cash (banking and custody), investments, and investor relations. The treasurer may also be in charge of credit and collections as well as insurance. As shown in Exhibit 1-2, the treasurer reports to the financial vice president.

## Information for Planning, Controlling, Continuous Improvement, and Decision Making

The cost and management accountant is responsible for generating financial information required by the firm for internal and external reporting. This involves responsibility for collecting, processing, and reporting information that will help managers in their planning, controlling, and other decision-making activities.

## Planning

The detailed formulation of future actions to achieve a particular end is the management activity called **planning**. Planning therefore requires setting objectives and identifying methods to achieve those objectives. A firm may have the objective of increasing its short- and long-term profitability by improving the overall quality of its products. By improving product quality, the firm should be able to reduce scrap and rework, decrease the number of customer complaints and the amount of warranty work, reduce the resources currently assigned to inspection, and so on, thus increasing profitability. This is accomplished by working with suppliers to improve the quality of incoming raw materials, establishing quality control circles, and studying defects to ascertain their cause.

## Controlling

The processes of monitoring a plan's implementation and taking corrective action as needed are referred to as **controlling**. Control is usually achieved with the use of **feedback**. Feedback is information that can be used to evaluate or correct the steps that are actually being taken to implement a plan. Based on the feedback, a manager may decide to let the implementation continue as is, take corrective action of some type to put the actions back in harmony with the original plan, or do some midstream replanning.

Feedback is a critical facet of the control function. It is here that accounting once again plays a vital role. Accounting reports that provide feedback by comparing planned (budgeted) data with actual data are called **performance reports**. Exhibit 1-3 shows a performance report that compares budgeted sales and cost of goods sold with the actual amounts for the month of August. Deviations from the planned amounts that increase profits are labeled "favorable," while those that decrease profits are called "unfavorable." These performance reports can have a dramatic impact on managerial actions—but they must be realistic and supportive of management plans. Revenue and spending targets must be based (as closely as possible) on actual operating conditions.

## Continuous Improvement

In a dynamic environment, firms must continually improve their performance to remain competitive or to establish a competitive advantage. Continuous improvement has the goals to do better than before and to do better than competitors. **Continuous im-**

## EXHIBIT 1-3

## Performance Report Illustrated

<b>Golding Foods, Inc. Performance Report For the Month Ended August 31, 2007</b>			
Budget Item	Actual	Budgeted	Variance
Sales . . . . .	\$800,000	\$900,000	\$100,000 U
Cost of goods sold . . . . .	600,000	650,000	50,000 F
<i>Note:</i> U = Unfavorable; F = Favorable.			

**provement** has been defined as “the relentless pursuit of improvement in the delivery of value to customers.”<sup>5</sup> In practical terms, continuous improvement means searching for ways to increase overall efficiency by reducing waste, improving quality, and reducing costs. Cost management supports continuous improvement by providing information that helps identify ways to improve and then reports on the progress of the methods that have been implemented. It also plays a critical role by developing a control system that locks in and maintains any improvements realized.

### Decision Making

The process of choosing among competing alternatives is **decision making**. Decisions can be improved if information about the alternatives is gathered and made available to managers. One of the major roles of the accounting information system is to supply information that facilitates decision making. This pervasive managerial function is an important part of both planning and control. A manager cannot plan without making decisions. Managers must choose among competing objectives and methods to carry out the chosen objectives. Only one of numerous mutually exclusive plans can be chosen. Similar comments can be made concerning the control function.

## OBJECTIVE 6

Understand the importance of ethical behavior for management accountants.

## Accounting and Ethical Conduct

**Business ethics** is learning what is right or wrong in the work environment and choosing what is right. Business ethics could also be described as the science of conduct for the work environment.<sup>6</sup> Principles of personal ethical behavior include concern for the well-being of others, respect for others, trustworthiness and honesty, fairness, doing good, and preventing harm to others. For professionals such as accountants, managers, engineers, and physicians, ethical behavior principles can be expanded to include concepts such as objectivity, full disclosure, confidentiality, due diligence, and avoiding conflicts of interest.

### Benefits of Ethical Behavior

Attention to business ethics can bring significant benefits to a company. Companies with a strong code of ethics can create strong customer and employee loyalty. Observing

5. As defined in P. B. B. Turney and B. Anderson, “Accounting for Continuous Improvement,” *Sloan Management Review* (Winter 1989): 37–47.

6. For a brief but thorough introduction to business ethics, see Carter McNamara, “Complete Guide to Ethics Management: An Ethics Toolkit for Managers,” <http://www.mapnp.org/library/ethics/ethxgde.htm> as of May 10, 2004.

ethical practices now can avoid later litigation costs. Companies in business for the long term find that it pays to treat all of their constituents honestly and fairly. Furthermore, a company that values people more than profit and is viewed as operating with integrity and honor is more likely to be a commercially successful and responsible business. These observations are supported by a 1997 U.S. study and a more recent 2002 U.K. study concerning ethics and financial performance. Both studies find that publicly held firms with an emphasis on ethics outperform firms without any such emphasis (emphasis is measured by a management report mentioning ethics for the U.S. study and by the presence of an ethics code for the U.K. study).<sup>7</sup>

## Standards of Ethical Conduct for Management Accountants

Organizations and professional associations often establish a code of ethics or standards of conduct for their managers and employees. All firms subject to the Sarbanes-Oxley Act of 2002 must establish a code of ethics. A survey taken by **Deloitte & Touche LLP** and the *Corporate Board Member* magazine in 2003 revealed that 83 percent of the corporations surveyed had established formal codes of ethics, 98 percent agreed that an ethics and compliance program is an essential part of corporate governance, and 75 percent of those with codes of ethics were actively monitoring compliance.<sup>8</sup> The Institute of Management Accountants (IMA) has established ethical standards for management accountants. Management accountants are subject to this professional code and have been advised that, “they shall not commit acts contrary to these standards nor shall they condone the commission of such acts by others in their organizations.”<sup>9</sup> The standards and the recommended resolution of ethical conflict are presented in Exhibit 1-4. The code has five major divisions: competence, confidentiality, integrity, objectivity, and resolution of ethical conflict.

To illustrate an application of the code, suppose that the vice president of finance has informed Bill Johnson, a divisional controller, that the division’s accounting staff will be reduced by 20 percent within the next four weeks. Furthermore, Bill Johnson is instructed to refrain from mentioning the layoffs because of the potential uproar that would be caused. One of the targeted layoffs is a cost accounting manager who happens to be a good friend. Bill Johnson also knows that his good friend is planning to buy a new sports utility vehicle within the next week. Bill is strongly tempted to inform his friend so that he can avoid tying up cash that he may need until a new position is found. Would it be unethical for Bill to share his confidential information with his friend? This situation is an example of an ethical dilemma. Informing the friend would violate II-1, the requirement that confidential information must not be disclosed unless authorized. Resolution of the conflict may be as simple as chatting with the vice president, explaining the difficulty, and obtaining permission to disclose the layoff.

## Certification

A variety of certifications are available to management accountants. Three of the major certifications available are a Certificate in Management Accounting, a Certificate in

7. Curtis C. Verschoor, “Principles Build Profits,” *Management Accounting* (October 1997): 42–46; Simon Webley and Elise Moore, “Does Business Ethics Pay?” *Executive Summary, Institute of Business Ethics*, <http://www.ibe.org.uk> as of May 11, 2004.

8. Deloitte & Touche LLP and *Corporate Board Member* magazine, “Business Ethics and Compliance in the Sarbanes-Oxley Era: A Survey,” <http://www.deloitte.com/US/corpgov> as of May 11, 2004.

9. Statement on Management Accounting No. 1C, “Standards of Ethical Conduct for Management Accountants” (Montvale, NJ: Institute of Management Accountants, 1983). The Standards of Ethical Conduct are reprinted with permission from the Institute of Management Accountants.

### OBJECTIVE 7

Identify the three forms of certification available to internal accountants.

**EXHIBIT 1-4****Standards of Ethical Conduct for Management Accountants***I. Competence*

Management accountants have a responsibility to:

1. Maintain an appropriate level of professional competence by ongoing development of their knowledge and skills.
2. Perform their professional duties in accordance with relevant laws, regulations, and technical standards.
3. Prepare complete and clear reports and recommendations after appropriate analyses of relevant and reliable information.

*II. Confidentiality*

Management accountants have a responsibility to:

1. Refrain from disclosing confidential information acquired in the course of their work except when authorized, unless legally obligated to do so.
2. Inform subordinates as appropriate regarding the confidentiality of information acquired in the course of their work and monitor their activities to ensure the maintenance of that confidentiality.
3. Refrain from using or appearing to use confidential information acquired in the course of their work for unethical or illegal advantage either personally or through a third party.

*III. Integrity*

Management accountants have a responsibility to:

1. Avoid actual or apparent conflicts of interest and advise all appropriate parties of any potential conflict.
2. Refrain from engaging in any activity that would prejudice their abilities to carry out their duties ethically.
3. Refuse any gift, favor, or hospitality that would influence their actions.
4. Refrain from either actively or passively subverting the attainment of the organization's legitimate and ethical objectives.
5. Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.
6. Communicate unfavorable as well as favorable information and professional judgments or opinions.
7. Refrain from engaging in or supporting any activity that would discredit the profession.

*IV. Objectivity*

Management accountants have a responsibility to:

1. Communicate information fairly and objectively.
2. Disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented.

*Resolution of Ethical Conflict*

In applying the standards of ethical conduct, management accountants may encounter problems in identifying unethical behavior or in resolving ethical conflict. When faced with significant ethical issues, management accountants should follow the established policies of the organization bearing on the resolution of such conflict. If these policies do not resolve the ethical conflict, management accountants should consider the following courses of action:

1. Discuss such problems with the immediate supervisor except when it appears that the superior is involved, in which case the problem should be presented initially to the next higher management level. If satisfactory resolution cannot be achieved when the problem is initially presented, submit the issues to the next higher management level.
2. If the immediate superior is the chief executive officer, or equivalent, the acceptable reviewing authority may be a group such as the audit committee, executive committee, board of directors, board of trustees, or owners. Contact with levels above the immediate superior should be initiated only with the superior's knowledge, assuming the superior is not involved.
3. Clarify relevant concepts by confidential discussion with an objective advisor to obtain an understanding of possible courses of action.
4. If the ethical conflict still exists after exhausting all levels of internal review, the management accountant may have no other recourse on significant matters than to resign from the organization and to submit an informative memorandum to an appropriate representative of the organization.
5. Except where legally prescribed, communication of such problems to authorities or individuals not employed or engaged by the organization is not considered appropriate.

Public Accounting, and a Certificate in Internal Auditing. Each certification offers particular advantages to a cost or management accountant. In each case, an applicant must meet specific educational and experience requirements and pass a qualifying examination to become certified. Thus, all three certifications offer evidence that the holder has achieved a minimum level of professional competence. Furthermore, all three certifications require the holder to engage in continuing professional education in order to maintain certification. Because certification reveals a commitment to professional competency, most organizations encourage their management accountants to be certified.

## The Certificate in Management Accounting

In 1974, the Institute of Management Accountants (IMA) developed the Certificate in Management Accounting to meet the specific needs of management accountants. A **Certified Management Accountant (CMA)** has passed a rigorous qualifying examination, has met an experience requirement, and participates in continuing education.

One of the key requirements for obtaining the CMA certificate or designation is passing a qualifying examination. Four areas are emphasized: (1) economics, finance, and management; (2) financial accounting and reporting; (3) management reporting, analysis, and behavioral issues; and (4) decision analysis and information systems. The parts to the examination reflect the needs of management accounting and underscore the earlier observation that management accounting has more of an interdisciplinary flavor than other areas of accounting.

One of the main purposes of creating the CMA program was to establish management accounting as a recognized, professional discipline, separate from the profession of public accounting. Since its inception, the CMA program has been very successful. Many firms now sponsor and pay for classes that prepare their management accountants for the qualifying examination, as well as provide other financial incentives to encourage acquisition of the CMA certificate.

## The Certificate in Public Accounting

The Certificate in Public Accounting is the oldest certification in accounting. Unlike the CMA designation, the purpose of the Certificate in Public Accounting is to provide evidence of a minimal professional qualification for external auditors. The responsibility of external auditors is to provide assurance concerning the reliability of the information contained in a firm's financial statements. Only **Certified Public Accountants (CPAs)** are permitted (by law) to serve as external auditors. CPAs must pass a national examination and be licensed by the state in which they practice. Although the Certificate in Public Accounting does not have a management accounting orientation, many management accountants hold it.

## The Certificate in Internal Auditing

Another certification available to internal accountants is the Certificate in Internal Auditing. The forces that led to the creation of this certification in 1974 are similar to those that resulted in the CMA program. As an important part of the company's control environment, internal auditors evaluate and appraise various activities within the company. While internal auditors are independent of the departments being audited, they do report to the top management of the company. Since internal auditing differs from both external auditing and management accounting, many internal auditors felt a need for a specialized certification. To attain the status of a **Certified Internal Auditor (CIA)**, an individual must pass a comprehensive examination designed to ensure technical competence and have two years' work experience.

## SUMMARY

Managers use accounting information to identify problems, solve problems, and evaluate performance. Essentially, accounting information helps managers carry out their roles of planning, controlling, and decision making. Planning is the detailed formulation of action to achieve a particular end. Controlling is the monitoring of a plan's implementation. Decision making is choosing among competing alternatives.

Management accounting differs from financial accounting primarily in its targeted users. Management accounting information is intended for internal users, whereas financial accounting information is directed toward external users. Management accounting is not bound by the externally imposed rules of financial reporting. It provides more detail than financial accounting, and it tends to be broader and multidisciplinary.

Management accountants are responsible for identifying, collecting, measuring, analyzing, preparing, interpreting, and communicating information used by management to achieve the basic objectives of the organization. Management accountants need to be sensitive to the information needs of managers. Management accountants serve as staff members of the organization and are responsible for providing information; they are usually intimately involved in the management process as valued members of the management team.

Changes in the manufacturing environment brought about by global competition, the advanced manufacturing environment, customer focus, total quality management, time as a competitive factor, and efficiency are having a significant effect on the management accounting environment. Many traditional management accounting practices will be altered because of the revolution taking place among many manufacturing firms. Deregulation and growth in the service sector of our economy are also increasing the demand for management accounting practices.

Management accounting aids managers in their efforts to improve the economic performance of the firm. Unfortunately, some managers have overemphasized the economic dimension and have engaged in unethical and illegal actions. Many of these actions have relied on the management accounting system to bring about and even support that unethical behavior. To emphasize the importance of the ever-present constraint of ethical behavior on profit-maximizing behavior, this text presents ethical issues in many of the problems appearing at the end of each chapter.

Three certifications are available to internal accountants: the CMA, the CPA, and the CIA certificates. The CMA certificate is designed especially for management accountants. The prestige of the CMA certificate or designation has increased significantly over the years and is now well regarded by the industrial world. The CPA certificate is primarily intended for those practicing public accounting; however, this certification is also highly regarded and is held by many management accountants. The CIA certificate serves internal auditors and is also well respected.

## KEY TERMS

Activity-based management 8  
Business ethics 15  
Certified Internal Auditor (CIA) 18  
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Continuous improvement 14  
Controller 13  
Controlling 14  
Cost accounting 4

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Decision making	15	Performance reports	14
Electronic commerce (e-commerce)	6	Planning	14
Electronic data interchange (EDI)	6	Staff positions	12
Enterprise resource planning (ERP) software	6	Supply chain management	6
Feedback	14	Target costing	8
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Just-in-time (JIT) manufacturing	7	Total quality management	8
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## QUESTIONS FOR WRITING AND DISCUSSION

1. What is cost management, and how does it differ from management accounting and cost accounting?
2. How do cost management and financial accounting differ?
3. Identify and discuss the factors that are affecting the focus and practice of cost management.
4. What is a flexible manufacturing system?
5. What is the role of the controller in an organization? Describe some of the activities over which he or she has control.
6. What is the difference between a line position and a staff position?
7. The controller should be a member of the top management staff. Do you agree or disagree with this statement? Explain.
8. Describe the connection among planning, controlling, and feedback.
9. What is the role of cost management with respect to the objective of continuous improvement?
10. What role do performance reports play with respect to the control function?
11. What is business ethics? Is it possible to teach ethical behavior in a management accounting course?
12. Firms with higher ethical standards will experience a higher level of economic performance than firms with lower or poor ethical standards. Do you agree? Why or why not?
13. Review the code of ethical conduct for management accountants. Do you believe that the code will have an effect on the ethical behavior of management accountants? Explain.
14. Identify the three forms of accounting certification. Which form of certification do you believe is best for a management accountant? Why?
15. What are the four parts to the CMA examination? What do they indicate about cost and management accounting versus financial accounting?

## EXERCISES

### 1-1 FINANCIAL ACCOUNTING AND COST MANAGEMENT

- LO1** Classify each of the following actions as either being associated with the financial accounting information system (FS) or the cost management information system (CMS):

- a. Determining the future cash flows of a proposed flexible manufacturing system
- b. Filing reports with the SEC
- c. Determining the cost of a customer
- d. Issuing a voluntary annual report on environmental costs and issues
- e. Reducing costs by eliminating activities that do not add value
- f. Preparing a performance report that compares actual costs with budgeted costs
- g. Preparing financial statements that conform to GAAP
- h. Determining the cost of a supplier
- i. Using cost information to decide whether to accept or reject a special order
- j. Reporting a large contingent liability to current and potential shareholders
- k. Using future expected earnings to estimate the risk of investing in a public company
- l. Preparing a performance report that compares budgeted costs with actual costs

## 1-2 CUSTOMER ORIENTATION, QUALITY, TIME-BASED COMPETITION

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**LO2** Byers Electronics produces hand-held calculators. Three of the major electronic components are produced internally (components 2X334K, 5Y227M, and 8Z555L). There is a separate department in the plant for each component. The three manufactured components and other parts are assembled (by the assembly department) and then tested (by the testing department). Any units that fail the test are sent to the rework department where the unit is taken apart and the failed component is replaced. Data from the testing department reveal that component 2X334K is the most frequent cause of calculator failure. One out of every 100 calculators fails because of a faulty 2X334K component.

Recently, Milton Lawson was hired to manage the 2X334K department. The plant manager told Milton that he needed to be more sensitive to the needs of the department's customers. This charge puzzled Milton somewhat—after all, the component is not sold to anyone but is used in producing the plant's calculators.

### Required:

1. Explain to Milton who his “customers” are.
2. Discuss how Milton can be sensitive to his customers. Explain also how this increased sensitivity could improve the company's time-based competitive ability.
3. What role would cost management play in helping Milton be more sensitive to his customers?

## 1-3 CUSTOMER ORIENTATION

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**LO2** A number of mail-order computer and software companies have set up customer service telephone lines. Some are toll-free. Some are not. A customer can wait on hold anywhere from three seconds to 20 minutes.

### Required:

Evaluate all of the costs that these companies might consider when setting up the customer service lines. (*Hint:* Should you consider costs to the customer?)

## 1-4 ETHICAL BEHAVIOR

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**LO3, LO4,  
LO6**

Consider the following thoughts of a manager at the end of the company's third quarter: If I can increase my reported profit by \$2 million, the actual earnings per share will exceed analysts' expectations, and stock prices will increase, and the stock options that I

am holding will become more valuable. The extra income will also make me eligible to receive a significant bonus. With a son headed to college, it would be good if I could cash in some of these options to help pay his expenses. However, my vice president of finance indicates that such an increase is unlikely. The projected profit for the fourth quarter will just about meet the expected earnings per share. There may be ways, though, that I can achieve the desired outcome. First, I can instruct all divisional managers that their preventive maintenance budgets are reduced by 25 percent for the fourth quarter. That should reduce maintenance expenses by approximately \$1 million. Second, I can increase the estimated life of the existing equipment, producing a reduction of depreciation by another \$500,000. Third, I can reduce the salary increases for those being promoted by 50 percent. And that should easily put us over the needed increase of \$2 million.

### Required:

Comment on the ethical content of the earnings management being considered by the manager. Is there an ethical dilemma? What is the right choice for the manager to make? Is there any way to redesign the accounting reporting system to discourage the type of behavior the manager is contemplating?

## 1-5 BEHAVIORAL IMPACT OF COST INFORMATION

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**LO4** Bill Christensen, the production manager, was grumbling about the new quality cost system the plant controller wanted to put into place. “If we start trying to track every bit of spoiled material, we’ll never get any work done. Everybody knows when they ruin something. Why bother to keep track? This is a waste of time. Besides, this isn’t the first time scrap reduction has been emphasized. You tell my workers to reduce scrap, and I’ll guarantee it will go away, but not in the way you would like.”

### Required:

1. Why do you suppose that the controller wants a written record of spoiled material? If “everybody knows” what the spoilage rate is, what benefits can come from keeping a written record?
2. Now consider Bill Christensen’s position. In what way(s) could he be correct? What did he mean by his remark concerning scrap reduction? Can this be avoided? Explain.

## 1-6 MANAGERIAL USES OF ACCOUNTING INFORMATION

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**LO5** Each of the following scenarios requires the use of accounting information to carry out one or more of the following managerial activities: (1) planning, (2) control and evaluation, (3) continuous improvement, or (4) decision making.

- a. **MANAGER:** At the last board meeting, we established an objective of earning a 25 percent return on sales. I need to know how many units of our product we need to sell to meet this objective. Once I have estimated sales in units, we then need to outline a promotional campaign that will take us where we want to be. However, to compute the targeted sales in units, I need to know the unit sales price and the associated production and support costs.
- b. **MANAGER:** We have a number of errors in our order entry process. Incorrect serial number of the system on the order entry, duplicate orders, and incorrect sales representative codes are examples. To improve the order entry process and reduce errors, we can improve communication, provide better training for sales representatives, and develop a computer program to check for prices and duplica-

tion of orders. Reducing errors will not only decrease costs, but will also increase sales as customer satisfaction increases.

- c. **MANAGER:** This report indicates that we have spent 35 percent more on rework than originally planned. An investigation into the cause has revealed the problem. We have a large number of new employees who lack proper training on our production techniques. Thus, more defects were produced than expected, causing a higher than normal rework requirement. By providing the required training, we can eliminate the excess usage.
- d. **MANAGER:** Our bank must decide whether the addition of fee-based products is in our best interest or not. We must determine the expected revenues and costs of producing the new products. We also need to know how much it will cost us to upgrade our information system and train our new employees in cross-selling tactics.
- e. **MANAGER:** This cruise needs to make more money. I would like to know how much our profits would be if we reduce our variable costs by \$10 per passenger while maintaining our current passenger volume. Also marketing claims that if we increase advertising expenditures by \$500,000 and cut fares by 20 percent, we can increase the number of passengers by 30 percent. I would like to know which approach offers the most profit, or if a combination of the approaches may be best.
- f. **MANAGER:** We are forming manufacturing cells for each major product, and we are automating our die-making process. I would like to know if the number of defects drops and if cycle time actually decreases as a result. Furthermore, do these changes reduce our production costs? I also want to know the cost of resources before and after the proposed changes to see if cost improvement is taking place.
- g. **MANAGER:** We are considering the possibility of outsourcing our legal services. I need to know the types of services provided by our internal staff for the past five years. I want an accurate assessment of the cost per hour for each type of service that has been performed. Once I have an idea of the internal cost then I can compare our cost with the hourly billing rates of external law firms.
- h. **MANAGER:** My engineers have said that by redesigning our two main production processes, we can reduce setup time by 90 percent. This would produce savings of nearly \$200,000 per setup. They have also indicated that some additional minor modifications in the designs of our three main products would reduce our materials waste by 12 percent, saving nearly \$70,000 per month.

### Required:

1. Describe each of the four managerial responsibilities.
2. Identify the managerial activity or activities applicable for each scenario, and indicate the role of accounting information in the activity.

## 1-7 LINE VERSUS STAFF

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**LOS** The job responsibilities of three employees of Ruido Speakers, Inc., are described as follows:

Kaylin Hepworth, production manager, is responsible for production of the plastic casing in which the speaker components are placed. She supervises the line workers, helps develop the production schedule, and is responsible for meeting the production budget. She also takes an active role in reducing production costs.

Joseph Henson, plant manager, supervises all personnel in the plant. Kaylin and other production managers report directly to Joseph. Joseph is in charge of all that takes place in the plant, including production, logistics, personnel, and accounting. He helps develop the plant's production budgets and is responsible for controlling plant costs.

Leo Tidwell, plant controller, is responsible for all of the accounting functions within the plant. He supervises three cost accounting managers and four staff accountants. He is responsible for preparing all cost of production reports. For example, he prepares periodic performance reports that compare actual costs with budgeted costs. He helps explain and interpret the reports and provides advice to the plant manager on how to control costs.

**Required:**

Identify Kaylin, Joseph, and Leo as line or staff, and explain your reasons.

## PROBLEMS

### 1-8 FINANCIAL ACCOUNTING VERSUS COST MANAGEMENT

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- LO1** Lily Shultz is a junior majoring in hotel and restaurant management. She wants to work for a large hotel chain with the goal of eventually managing a hotel. She is considering the possibility of taking a course in either financial accounting or cost management. Before choosing, however, she has asked you to provide her with some information about the advantages that each course offers.

**Required:**

Prepare a letter advising Lily about the differences and similarities between financial accounting and cost management. Describe the advantages each might offer the manager of a hotel.

### 1-9 ETHICAL ISSUES

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- LO6** John Biggs and Patty Jorgenson are both cost accounting managers for a manufacturing division. During lunch yesterday, Patty told John that she was planning on quitting her job in three months because she had accepted a position as controller of a small company in a neighboring state. The starting date was timed to coincide with the retirement of the current controller. Patty was excited because it allowed her to live near her family. Today, the divisional controller took John to lunch and informed him that he was taking a position at headquarters and that he had recommended that Patty be promoted to his position. He indicated to John that it was a close call between him and Patty and that he wanted to let John know personally about the decision before it was announced officially.

**Required:**

What should John do? Describe how you would deal with his ethical dilemma (considering the IMA code of ethics in your response).

### 1-10 ETHICAL ISSUES

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- LO6** Emily Henson, controller of an oil exploration division, has just been approached by Tim Wilson, the divisional manager. Tim told Emily that the projected quarterly prof-

its were unacceptable and that expenses need to be reduced. He suggested that a clean and easy way to reduce expenses is to assign the exploration and drilling costs of four dry holes to those of two successful holes. By doing so, the costs could be capitalized and not expensed, reducing the costs that need to be recognized for the quarter. He further argued that the treatment is reasonable because the exploration and drilling all occurred in the same field; thus, the unsuccessful efforts really were the costs of identifying the successful holes. “Besides,” he argued, “even if the treatment is wrong, it can be corrected in the annual financial statements. Next quarter’s revenues will be more and can absorb any reversal without causing any severe damage to that quarter’s profits. It’s this quarter’s profits that need some help.”

Emily was uncomfortable with the request because generally accepted accounting principles do not sanction the type of accounting measures proposed by Tim.

**Required:**

1. Using the code of ethics for management accountants, recommend the approach that Emily should take.
2. Suppose Tim insists that his suggested accounting treatment be implemented. What should Emily do?

## 1-11 ETHICAL ISSUES

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**LO6**  
**CMA**

Silverado, Inc., is a closely held brokerage firm that has been very successful over the past five years, consistently providing most members of the top management group with 50 percent bonuses. In addition, both the chief financial officer and the chief executive officer have received 100 percent bonuses. Silverado expects this trend to continue.

Recently, the top management group of Silverado, which holds 40 percent of the outstanding shares of common stock, has learned that a major corporation is interested in acquiring Silverado. Silverado’s management is concerned that this corporation may make an attractive offer to the other shareholders and that management would be unable to prevent the takeover. If the acquisition occurs, this executive group is uncertain about continued employment in the new corporate structure. As a consequence, the management group is considering changes to several accounting policies and practices that, although not in accordance with generally accepted accounting principles, would make the company a less attractive acquisition. Management has told Larry Stewart, Silverado’s controller, to implement some of these changes. Stewart has also been informed that Silverado’s management does not intend to disclose these changes at once to anyone outside the immediate top management group.

**Required:**

Using the code of ethics for management accountants, evaluate the changes that Silverado’s management is considering, and discuss the specific steps that Larry Stewart should take to resolve the situation. (*CMA adapted*)

## 1-12 ETHICAL ISSUES

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**LO6**  
**CMA**

Emery Manufacturing Company produces component parts for the farm equipment industry and has recently undergone a major computer system conversion. Jake Murray, the controller, has established a trouble-shooting team to alleviate accounting problems that have occurred since the conversion. Jake has chosen Gus Swanson, assistant controller, to head the team that will include Linda Wheeler, cost accountant; Cindy Madsen, financial analyst; Randy Lewis, general accounting supervisor; and Max Crandall, financial accountant.

The team has been meeting weekly for the last month. Gus insists on being part of all the team conversations in order to gather information, to make the final decision on any ideas or actions that the team develops, and to prepare a weekly report for Jake. He has also used this team as a forum to discuss issues and disputes about him and other members of Emery's top management team. At last week's meeting, Gus told the team that he thought a competitor might purchase the common stock of Emery, because he had overheard Jake talking about this on the telephone. As a result, most of Emery's employees now informally discuss the sale of Emery's common stock and how it will affect their jobs.

### Required:

Is Gus Swanson's discussion with the team about the prospective sale of Emery unethical? Discuss, citing specific standards from the code of ethical conduct to support your position. (*CMA adapted*)

## 1-13 ETHICAL ISSUES

LO6  
CMA

The external auditors for Heart Health Procedures (HHP) are currently performing the annual audit of HHP's financial statements. As part of the audit, the external auditors have prepared a representation letter to be signed by HHP's chief executive officer (CEO) and chief financial officer (CFO). The letter provides, among other items, a representation that appropriate provisions have been made for:

*Reductions of any excess or obsolete inventories to net realizable values, and Losses from any purchase commitments for inventory quantities in excess of requirements or at prices in excess of market.*

HHP began operations by developing a unique balloon process to open obstructed arteries to the heart. In the last several years, HHP's market share has grown significantly because its major competitor was forced by the Food and Drug Administration (FDA) to cease its balloon operations. HHP purchases the balloon's primary and most expensive component from a sole supplier. Two years ago, HHP entered into a 5-year contract with this supplier at the then current price, with inflation escalators built into each of the five years. The long-term contract was deemed necessary to ensure adequate supplies and discourage new competition. However, during the past year, HHP's major competitor developed a technically superior product, which utilizes an innovative, less costly component. This new product was recently approved by the FDA and has been introduced to the medical community, receiving high acceptance. It is expected that HHP's market share, which has already seen softness, will experience a large decline and that the primary component used in the HHP balloon will decrease in price as a result of the competitor's use of its recently developed superior, cheaper component. The new component has been licensed by the major competitor to several outside supply sources to maintain available quantity and price competitiveness. At this time, HHP is investigating the purchase of this new component.

HHP's officers are on a bonus plan that is tied to overall corporate profits. Jim Honig, vice president of manufacturing, is responsible for both manufacturing and warehousing. During the course of the audit, he advised the CEO and CFO that he was not aware of any obsolete inventory nor any inventory or purchase commitments where current or expected prices were significantly below acquisition or commitment prices. Jim took this position even though Marian Nevins, assistant controller, had apprised him of both the existing excess inventory attributable to the declining market share and the significant loss associated with the remaining years of the 5-year purchase commitment.

Marian has brought this situation to the attention of her superior, the controller, who also participates in the bonus plan and reports directly to the CFO. Marian worked closely with the external audit staff and subsequently ascertained that the external audit manager was unaware of the inventory and purchase commitment problems. Marian is concerned about the situation and is not sure how to handle the matter.

**Required:**

1. Assuming that the controller did not apprise the CEO and CFO of the situation, explain the ethical considerations of the controller's apparent lack of action by discussing specific provisions of the Standards of Ethical Conduct for Management Accountants.
2. Assuming Marian Nevins believes the controller has acted unethically and not apprised the CEO and CFO of the findings, describe the steps that she should take to resolve the situation. Refer to the Standards of Ethical Conduct for Management Accountants in your answer.
3. Describe actions that HHP can take to improve the ethical situation within the company. (*CMA adapted*)

## 1-14 COLLABORATIVE LEARNING EXERCISE

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**LO6** In the 1400s, Europeans valued the gold, gems, drugs, and spices that came from the Orient. However, these goods were very costly, since they could be transported to Europe only via long overland caravans. Portuguese sailors tried to reach the Orient by sea—around Africa. Christopher Columbus felt that a shorter, easier route lay to the west. He offered Queen Isabella of Spain a business proposition: financing for three completely outfitted ships, honors, titles, and a percentage of the trade in exchange for opening up a direct route to the Indies and establishing a city devoted to trade. King John II of Portugal had previously turned down his offer, but Queen Isabella accepted. On August 3, 1492, the Nina, Pinta, and Santa Maria set sail from Palos, Spain.

**Required:**

Form a cooperative learning group (typically a group of four or five). Using a single piece of paper and a pen, record the ideas/responses of each member of the group to the following two items:

1. Suppose a communication device had existed in 1492 that permitted Isabella to talk with Columbus for 15 minutes once each month during the 8-month voyage. What types of accounting information would she have wanted to obtain regarding the success of the enterprise? Write down a list of the questions she might have asked (each group member in turn should come up with a question).
2. Classify each question as a financial accounting (F) or cost management (CM) type of question. Do the questions change as the months progress? (*Hint: A little reading up on Columbus in an encyclopedia will make the role playing in this problem easier.*)

## 1-15 CYBER RESEARCH CASE

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**LO7 Research Assignment**

Many other certifications are available to accountants other than the three described in the chapter. Using Internet resources, select three of these additional certifications and write a memo for each describing them. In describing the certifications, answer the following questions: What are the relative advantages of each certification for the internal accountant? What are the stated purposes for certification? Indicate when an accountant might wish to obtain each one. (*Hint: Try <http://www.taxsites.com/certification.html>.*)