In 1988, Outback Steakhouse’s cofounders decided to create a chain of four or five restaurants that would generate enough income to let them have a nice lifestyle, stay in the Tampa Bay area, and play golf. That was then; this is now. Outback Steakhouse Inc., currently owns over 900 steakhouses that operate in all 50 states and in 20 different countries. Outback also owns six other restaurant brands, including Carrabba’s Italian Grill. Annual sales have topped $3.2 billion, and operating income is over $252 million. How did Outback become so successful? Part of the answer is managerial accounting. Outback won’t invest in a new restaurant location unless the projected annual sales are at least double the initial cost of the
location’s property, improvements, and equipment. Outback motivates restaurant managers by requiring them to buy into the property for $25,000 and sign a five-year contract. In exchange, the manager receives an annual base salary of $45,000 plus 10% of the location’s cash flow, resulting in an average pay of $118,000. Outback’s founders also decided that the cost of replacing overworked managers and employees would exceed profits from lunchtime business. So, they bucked the industry trend and open only for dinner. As a result, managers have incentives to ensure their restaurant is profitable and employee turnover is far lower than industry standards.


Learning Objectives

1. Identify managers’ four primary responsibilities
2. Distinguish financial accounting from managerial accounting
3. Describe organizational structure and the roles and skills required of management accountants within the organization
4. Describe the role of the Institute of Management Accountants (IMA) and use its ethical standards to make reasonable ethical judgments
5. Discuss trends in the business environment
6. Use cost-benefit analysis to make business decisions

As the Outback story shows, managers use accounting information for much more than preparing annual financial statements. They use managerial accounting (or management accounting) information to guide their actions and decisions, such as building a new restaurant. In this chapter, we’ll introduce managerial accounting and discuss how managers use it to fulfill their duties. We will also explore how managerial accounting differs from financial accounting. Finally, we will discuss the business environment in which today’s managers and management accountants operate.

Managerial Accounting: Information for Managers

As you will see throughout the book, managerial accounting is very different from financial accounting. Financial accounting focuses on providing stockholders and creditors with the information they need to make investment and lending decisions. This information takes the form of financial statements: the balance sheet, income
statement, statement of shareholders’ equity, and statement of cash flows. Managerial accounting focuses on providing internal management with the information it needs to run the company efficiently and effectively. This information takes many forms depending on management’s needs.

To understand the kind of information managers need, let’s first look at their primary responsibilities.

Managers’ Four Primary Responsibilities

Managerial accounting helps managers fulfill their four primary responsibilities, as shown in Exhibit 1-1: planning, directing, controlling, and decision making.

- **Planning** involves setting goals and objectives for the company and determining how to achieve them. For example, one of Outback’s goals is to generate more sales. One strategy to achieve this goal is to open more restaurants, so management may plan to build and begin operating 25 new steakhouses next year. Managerial accounting translates these plans into **budgets**—the quantitative expression of a plan. Management analyzes the budgets before proceeding to determine whether its expansion plans make financial sense.

- **Directing** means overseeing the company’s day-to-day operations. Management uses product cost reports, product sales information, and other managerial accounting reports to run daily business operations. Outback uses product sales data to determine which menu items are generating the most sales and then uses that information to adjust menus and marketing strategies.

- **Controlling** means evaluating the results of business operations against the plan and making adjustments to keep the company pressing toward its goals. Outback uses performance reports to compare each restaurant’s actual performance against budget and then uses that **feedback** to take corrective actions if needed. If actual costs are higher than planned or actual sales are lower than planned, management may revise its plans or adjust operations. Perhaps the newly opened steakhouses are not generating as much income as budgeted. As a result, management may decide to increase local advertising to increase sales.
Management is continually making decisions while it plans, directs, and controls operations. Outback must decide where to open new restaurants, which restaurants to refurbish, what prices to set for meals, what entrees to offer, and so forth. Because Outback is in business to generate profits for its stockholders, management must consider the financial impact of each of these decisions. Managerial accounting gathers, summarizes, and reports cost and revenue data relevant to each of these decisions.

A Road Map: How Does Managerial Accounting Fit In?

This book will show you how managerial accounting information helps managers fulfill their responsibilities. The rest of the text is organized around the following themes:

1. Managerial Accounting Building Blocks  Chapter 1 helps you understand more about the management accounting profession and today's business environment. Chapter 2 teaches you some of the language that is commonly used in managerial accounting. Just as musicians must know the notes to the musical scale, management accountants and managers must understand managerial accounting terms to effectively use managerial accounting information to run the business.

2. Determining Unit Cost (Product Costing)  How does a company decide how high to set its prices? It must first figure out how much it costs to make its product or deliver its service. Outback must calculate the cost of each item on the menu to set prices high enough to cover costs and generate a profit. This is tougher than it sounds. Outback’s cost to prepare each meal includes more than just the cost of the ingredients. Outback’s cost also includes the chefs’ and servers’ wages and benefits, restaurant lease payments, property taxes, utilities, business and alcohol licenses, and so forth. Chapters 3, 4, and 5 discuss how businesses determine their product costs. Once management knows its product costs, it uses that information for decision making, planning, directing, and controlling.

3. Making Decisions  Before Outback opened any restaurants, management determined how many meals it would have to serve just to break even—that is, just to cover costs. Management had to understand how costs behave before it could calculate a breakeven point. Chapters 6 and 7 discuss how costs behave, how to determine a breakeven point, and how managers use cost behavior knowledge to make good decisions and accurate forecasts. Then, Chapter 8 walks you through some very common business decisions, such as outsourcing and pricing. For example, should Outback outsource its desserts—that is, have another company make them? Many restaurants do. Chapter 9 shows you how managers decide whether to invest in new equipment, new locations, and new projects.

4. Planning  Budgets are management’s primary tool for expressing its plans. Chapter 10 discusses all of the components of the master budget and the way a large company like Outback rolls its 900-plus steakhouse budgets into one corporate budget.

5. Controlling and Evaluating  Management uses budget variances—the difference between actual costs and the budget—to control operations. Chapters 10 and 11 show how management uses variance analysis to determine how and where to adjust operations. Chapter 12 discusses other evaluation tools that management uses to determine whether individual segments of the company are reaching the company’s goals. Finally, Chapter 13 reviews financial statement analysis, which evaluates the company as a whole.
Managerial Accounting Versus Financial Accounting

Managerial accounting information differs from financial accounting information in many respects. Exhibit 1-2 summarizes these differences. Take a few minutes to study the exhibit, and then we’ll apply it to Outback.

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>MANAGERIAL ACCOUNTING</th>
<th>FINANCIAL ACCOUNTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are the primary users of the information?</td>
<td>Internal users such as managers.</td>
<td>External users, such as creditors, stockholders, and government regulators.</td>
</tr>
<tr>
<td>What is the purpose of the information?</td>
<td>To help managers plan, direct, and control business operations and make business decisions.</td>
<td>To help external users make investing and lending decisions.</td>
</tr>
<tr>
<td>What must be included in the report, and how must it be formatted?</td>
<td>Management determines what it wants in a report, and how it wants it formatted. Reports are prepared only when management believes the benefit of using the report exceeds the cost of preparing the report.</td>
<td>Generally accepted accounting principles (GAAP) determine the content and format of financial statements.</td>
</tr>
<tr>
<td>What is the underlying basis of the information?</td>
<td>While some information is based on past transactions, managerial accounting focuses on the future. It provides information on both external and internal transactions.</td>
<td>The information is based on historical transactions with external parties.</td>
</tr>
<tr>
<td>What information characteristic is emphasized?</td>
<td>The data must be relevant.</td>
<td>The data must be reliable and objective.</td>
</tr>
<tr>
<td>What business “unit” is the report about?</td>
<td>Segments of the business, such as products, customers, geographical regions, departments, and divisions.</td>
<td>The company as a whole (consolidated financial statements). Limited segment data is provided in the footnotes.</td>
</tr>
<tr>
<td>How often are the reports prepared?</td>
<td>It depends on management’s needs. Some reports are prepared daily, while others may be prepared only one time.</td>
<td>Annually and quarterly.</td>
</tr>
<tr>
<td>Does anyone verify the information?</td>
<td>There are no independent audits. However, the company’s internal audit function may examine the procedures used in preparing the reports.</td>
<td>Independent certified public accountants (CPAs) audit the annual financial statements of publicly traded companies and express an opinion on the fairness of the financial information they contain.</td>
</tr>
<tr>
<td>Is the information required by an outside group/ government agency?</td>
<td>No authoritative body requires managerial accounting reports.</td>
<td>Yes, the Securities and Exchange Commission (SEC) requires publicly traded companies to issue annual audited financial statements.</td>
</tr>
<tr>
<td>Is there any concern over how the reports will affect employee behavior?</td>
<td>Management carefully considers behavioral implications when designing the managerial accounting system.</td>
<td>The concern is about adequacy of disclosure; behavioral implications are secondary.</td>
</tr>
</tbody>
</table>
Outback is a publicly traded company, so its financial accounting system must generate consolidated financial statements, in accordance with generally accepted accounting principles (GAAP), on an annual and quarterly basis. The annual financial statements, which are audited by independent certified public accountants (CPAs), objectively summarize the transactions that occurred between Outback and external parties during the previous year. Outback's financial statements are useful to its investors and creditors, but they do not provide management with enough information to run the company effectively.

Outback’s managerial accounting system is designed to provide its managers with the accounting information they need to plan, direct, control and make decisions. There are no GAAP-type standards, or audits required, for managerial accounting. Outback's managers tailor the company's managerial accounting system to provide the information they need to help them make better decisions. Outback must weigh the benefits of the system (information that helps the company make decisions that increase profits) against the costs to develop and run the system. The costs and benefits of any particular managerial accounting system differ from one company to another. Different companies create different systems, so Outback's system will differ from Nissan's system.

In contrast to financial statements, most managerial accounting reports focus on the future, providing relevant information that helps managers make profitable business decisions. For example, before putting their plans into action, Outback’s managers determine if their plans make sense by quantitatively expressing them in the form of budgets. Outback’s managerial accounting reports may also plan for and reflect internal transactions, such as the daily movement of beverages and dry ingredients from central warehouses to individual restaurant locations.

To make good decisions, Outback’s managers need information about smaller units of the company, not just the company as a whole. For example, management uses revenue and cost data on individual restaurants, geographical regions, and individual menu items to increase the company’s profitability. Regional data helps Outback's management decide where to open more restaurants. Sales and profit reports on individual menu items help management choose menu items and decide what items to offer on a seasonal basis. Rather than preparing these reports just once a year, companies prepare and revise managerial accounting reports as often as needed. For example, Outback revises its budget when new menu items and additional restaurant locations are added.

When designing the managerial accounting system, management must carefully consider how the system will affect employees’ behavior. Employees try to perform well on the parts of their jobs that the accounting system measures. If an Outback restaurant manager were evaluated only on her ability to control costs, she may use cheaper ingredients or hire less experienced servers. Although these actions cut costs, they can hurt profits if the quality of the meals or service declines as a result. As another example, Outback wants to focus each restaurant manager’s attention on cash flow. As a result, Outback pays its restaurant managers a percentage of the restaurant’s cash flows in addition to a base salary.
The Management Accountant Within the Organization

Let’s look at how management accountants fit into the company’s organizational structure, how their roles are changing, what skills they need to successfully fill their roles, and what their professional association is. We’ll also discuss ethical standards.

Organizational Structure

Most corporations are too large to be governed directly by their stockholders. Therefore, stockholders elect a board of directors to oversee the company. Exhibit 1-3 shows a typical organizational structure, with the green boxes representing employees of the firm and the orange and blue boxes representing nonemployees.

The board meets only periodically, so they hire a chief executive officer (CEO) to manage the company on a daily basis. The CEO hires other executives to run various aspects of the organization, including the chief operating officer (COO) and the chief financial officer (CFO). The COO is responsible for the company’s operations, such as research and development (R&D), production, and distribution. The CFO is responsible for all of the company’s financial concerns. The treasurer and the controller report directly to the CFO. The treasurer is primarily responsible for raising capital (through issuing stocks and bonds) and investing funds. The controller is usually responsible for general financial accounting, managerial accounting, and tax reporting.

The New York Stock Exchange requires that listed companies have an internal audit function. The role of the internal audit function is to ensure that the company’s internal controls and risk management policies are functioning properly. The internal audit department reports directly to a subcommittee of the board of directors called the audit committee. The audit committee oversees the internal audit function as well as the annual audit of the financial statements by independent CPAs. Both the internal audit
department and the independent CPAs report directly to the audit committee for one very important reason: to ensure that management will not intimidate them or bias their work. However, since the audit committee meets only periodically, it isn’t practical for the audit committee to manage the internal audit function on a day-to-day basis. Therefore, the internal audit function also reports to a senior executive, such as the CFO or CEO, for administrative matters.

When you look at the organizational chart pictured in Exhibit 1-3, where do you think management accountants work? It depends on the company. Management accountants used to work in accounting departments and reported directly to the controller. Now, over half of management accountants are located throughout the company and work on cross-functional teams. Cross-functional teams consist of employees representing various functions of the company, such as R&D, design, production, marketing, distribution, and customer service. Cross-functional teams are effective because each member can address business decisions from a different viewpoint. These teams often report to various vice presidents of operations. Management accountants often take the leadership role in the teams. Here is what two managers had to say in a study about management accountants:1

Finance (the management accountant) has a unique ability and responsibility to see across all the functions and try and make sense of them. They have the neat ability to be a member of all of the different groups (functions) and yet not be a member of any of them at the same time. (U.S. West)

Basically the role of the financial person on the team is analyzing the financial impact of the business decision and providing advice. Does this make sense financially or not? (Abbott Laboratories)

The Changing Roles of Management Accountants

Technology has changed the roles of management accountants. Management accountants no longer perform routine mechanical accounting tasks. Computer programs perform those tasks. Yet, management accountants are in more demand than ever before. Company managers used to view management accountants as “scorekeepers” or “bean counters” because they spent most of their time recording historical transactions. Now, they view management accountants as internal consultants or business advisors.

Does this mean that management accountants are no longer involved with the traditional task of recording transactions? No. Management accountants must still ensure that the company’s financial records adequately capture economic events. They help design the information systems that capture and record transactions and make sure that the information system generates accurate data. They use professional judgment to record nonroutine transactions and make adjustments to the financial records as needed. Management accountants still need to know what transactions to record and how to record them, but they let technology do most of the routine work.

Freed from the routine mechanical work, management accountants spend more of their time planning, analyzing, and interpreting accounting data and providing decision support. Because their role is changing, management accountants rarely bear the job title “management accountant” any more; managers often refer to them as business management support, financial advisors, business partners, or analysts. Here is what two management accountants have said about their jobs:2

We are looked upon as more business advisors than just accountants, which has a lot to do with the additional analysis and forward-looking goals that we are setting. We spend more of our time analyzing and understanding our margins, our

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prices, and the markets in which we do business. People have a sense of purpose; they have a real sense of “I’m adding value to the company.” (Caterpillar, Inc.)

Accounting is changing. You’re no longer sitting behind a desk just working on a computer, just crunching the numbers. You’re actually getting to be a part of the day-to-day functions of the business. (Abbott Laboratories)

The Skills Required of Management Accountants

Because computers now do the routine “number crunching,” do management accountants need to know as much as they did 20 years ago? The fact is, management accountants now need to know *more!* They have to understand what information management needs and how to generate that information accurately. Therefore, management accountants must be able to communicate with the computer/IT system programmers to create an effective information system. Once the information system generates the data, management accountants interpret and analyze the raw data and turn it into *useful* information management can use.5

Twenty years ago we would say, “Here are the costs and you guys need to figure out what you want to do with them.” Now we are expected to say, “Here are the costs and this is why the costs are what they are, and this is how they compare to other things, and here are some suggestions where we could possibly improve.” (Caterpillar, Inc.)

Today’s management accountants need the following skills:4

- Solid knowledge of both financial and managerial accounting
- Analytical skills
- Knowledge of how a business functions
- Ability to work on a team
- Oral and written communication skills

The skills shown in Exhibit 1-4 are critical to these management accountants:

We’re making more presentations that are seen across the division. So you have to summarize the numbers . . . you have to have people in sales understand what those numbers mean. If you can’t communicate information to the individuals, then the information is never out there; it’s lost. So, your communication skills are very important. (Abbott Laboratories)

Usually when a nonfinancial person comes to you with financial questions, they don’t really ask the right things so that you can give them the correct answer. If they ask you for cost, well, you have to work with them and say, “Well, do you want total plant cost, a variable cost, or an accountable cost?” Then, “What is the reason for those costs?” Whatever they’re using this cost for determines what type of cost you will provide them with. (Caterpillar, Inc.)

Chapter 2 explains these cost terms. The point here is that management accountants need to have a solid understanding of managerial accounting, including how different types of costs are relevant to different situations. Additionally, they must be able to communicate that information to employees from different business functions.

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Average Salaries of Management Accountants

The average salaries of management accountants reflect their large skill set. Naturally, salaries will vary with the accountant’s level of experience, his or her specific job responsibilities, and the size and geographical location of the company. However, to give you a general idea, in 2007, a cost analyst with less than one year of experience could expect to earn between $35,250 and $42,250 at a medium-size company. With one to three years of experience, the average salary increased to $41,750–$52,250. With more experience, salaries ranged upward to approximately $80,500. Accountants in leadership positions command even greater pay. For example, the CFO, controller, treasurer, and internal audit manager of a medium-size company can expect to earn annual salaries exceeding well over $100,000.


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5 A medium-size company is defined as a company with annual sales ranging from $25 million to $250 million.

Professional Association

The Institute of Management Accountants (IMA) is the professional association for management accountants. The goal of the IMA is to advance the managerial accounting profession primarily through certification, practice development, education, and networking. They also want to educate society about the role management accountants play in organizations. According to the IMA, about 85% of accountants work in organizations, performing the roles discussed earlier. The IMA publishes a monthly journal called Strategic Finance. (Prior to 1999, the journal was called Management Accounting; but as the role of management accountants changed, so did the journal’s title.) The journal addresses current topics of interest to management accountants and helps them keep abreast of recent techniques and trends.

The IMA also issues two professional certifications: the Certified Management Accountant (CMA) and the Certified Financial Manager (CFM). To become a CMA or CFM, you must pass a rigorous examination and maintain continuing professional education. The CMA exam focuses on managerial accounting topics similar to those discussed in this book, as well as economics and business finance. The CFM exam focuses on financial statement analysis, working capital policy, capital structure, business valuation, and risk management. While most employers do not require the CMA or CFM designation, management accountants bearing the CMA or CFM designation usually command higher salaries and obtain higher-level positions within the company. You can find out more about the IMA and the certifications it offers at its Web site: www.imanet.org.

Ethics

Management accountants continually face ethical challenges. The IMA has developed principles and standards to help management accountants deal with these challenges. The principles and standards remind us that society expects professional accountants to exhibit the highest level of ethical behavior. The IMA adopted a new Statement on Ethical Professional Practice in 2005, which requires management accountants to:

- Maintain their professional competence.
- Preserve the confidentiality of the information they handle.
- Uphold their integrity.
- Perform their duties with credibility.

These ethical standards are summarized in Exhibit 1-5, while the full Statement of Ethical Professional Practice appears in Exhibit 1-6.

To resolve ethical dilemmas, the IMA suggests that management accountants first follow their company’s established policies for reporting unethical behavior. If the conflict is not resolved through the company’s procedures, the management accountant should consider the following steps:

- Discuss the unethical situation with the immediate supervisor unless the supervisor is involved in the unethical situation. If so, notify the supervisor at the next higher managerial level. If the immediate supervisor involved is the CEO, notify the audit committee or board of directors.
- Discuss the unethical situation with an objective advisor, such as an IMA ethics counselor. The IMA offers a confidential “Ethics Hotline” to its members. Members may call the hotline and discuss their ethical dilemma. The ethics counselor will not provide a specific resolution but will clarify how the dilemma relates to the IMA’s Statement of Ethical Professional Practice shown in Exhibit 1-6.
- Consult an attorney regarding legal obligations and rights.
Examples of Ethical Dilemmas

Unfortunately, the ethical path is not always clear. You may want to act ethically and do the right thing, but the consequences can make it difficult to decide what to do. Let’s consider several ethical dilemmas in light of the Statement of Ethical Professional Practice:

Dilemma #1

Sarah Baker is examining the expense reports of her staff, who counted inventory at Top-Flight’s warehouses in Arizona. She discovers that Mike Flinders has claimed but not included hotel receipts for over $1,000 of accommodation expenses. Other staff, who also claimed $1,000, did attach hotel receipts. When asked about the receipts, Mike admits that he stayed with an old friend, not in the hotel, but he believes that he deserves the money he saved. After all, the company would have paid his hotel bill.

By asking to be reimbursed for hotel expenses he did not incur, Flinders violated the IMA’s integrity standards (conflict of interest in which he tried to enrich himself at the company’s expense). Because Baker discovered the inflated expense report, she would not be fulfilling her ethical responsibilities of integrity and credibility if she allowed the reimbursement.

Dilemma #2

As the accountant of Entrée Computer, you are aware of your company’s weak financial condition. Entrée is close to signing a lucrative contract that should ensure its future. To do so, the controller states that the company must report a profit this year (ending December 31). He suggests: “Two customers have placed orders that are really not supposed to be shipped until early January. Ask production to fill and ship those orders on December 31 so we can record them in this year’s sales.”
The resolution of this dilemma is less clear-cut. Many people believe that following the controller’s suggestion to manipulate the company’s income would violate the standards of competence, integrity, and credibility. Others would argue that because Entrée Computer already has the customer orders, shipping the goods and recording the sale in December is still ethical behavior. You might discuss the available alternatives with the next managerial level or the IMA ethics hotline counselor.

**Dilemma #3**

As a new accounting staff member at Central City Hospital, your supervisor has asked you to prepare the yearly Medicare Cost Report, which the government uses to determine its reimbursement to the hospital for serving Medicare patients. The report requires specialized knowledge that you don’t believe you possess. The supervisor is busy planning for the coming year and cannot offer much guidance while you prepare the report.
This situation is not as rare as you might think. You may be asked to perform tasks that you don’t feel qualified to perform. The competence standard requires you to perform professional duties in accordance with laws, regulations, and technical standards; but laws and regulations are always changing. For this reason, the competence standard also requires you to continually develop knowledge and skills. CPAs and CMAs are required to complete annual continuing professional education (about 40 hours per year) to fulfill this responsibility. However, even continuing professional education courses will not cover every situation you may encounter.

In the Medicare cost report situation, advise your supervisor that you currently lack the knowledge required to complete the Medicare cost report. By doing so, you are complying with the competence standard that requires you to recognize and communicate any limitations that would preclude you from fulfilling an activity. You should ask for training on the report preparation and supervision by someone experienced in preparing the report. If the supervisor denies your requests, you should ask him to reassign the Medicare report to a qualified staff member.

**Dilemma #4**

Your company is negotiating a large multiyear sales contract that, if won, would substantially increase the company’s future earnings. At a dinner party over the weekend, your friends ask you how you like your job and the company you work for. In your enthusiasm, you tell them not only about your responsibilities at work but also about the contract negotiations. As soon as the words pop out of your mouth, you worry that you’ve said too much.

This situation is difficult to avoid. You may be so excited about your job and the company you work for that information unintentionally “slips out” during casual conversation with friends and family. The confidentiality standard requires you to refrain from disclosing information or using confidential information for unethical or illegal advantage. Was the contract negotiation confidential? If so, would your friends invest in company stock in hopes that the negotiations increase stock prices? Or were the negotiations public knowledge in the financial community? If so, your friends would gain no illegal advantage from the information. Recent cases, such as those involving Martha Stewart, remind us that insider trading (use of inside knowledge for illegal gain) has serious consequences. Even seemingly mundane information about company operations could give competitors an advantage. Therefore, it’s best to disclose only information that is meant for public consumption.

**Unethical Versus Illegal Behavior**

Finally, is there a difference between unethical and illegal behavior? Not all unethical behavior is illegal, but all illegal behavior is unethical. For example, consider the competence standard. The competence standard states that management accountants have a responsibility to provide decision support information that is accurate, clear, concise, and timely. Failure to follow this standard is unethical but in most cases not illegal. Now, consider the integrity standard. It states that management accountants must abstain from any activity that might discredit the profession. A management accountant who commits an illegal act is violating this ethical standard. In other words, ethical behavior encompasses more than simply following the law. The IMA’s ethical principles include honesty, fairness, objectivity, and responsibility—principles that are much broader than what is codified in the law.
Decision Guidelines

Outback made the following decisions in designing its managerial accounting system to provide managers with the information they need to run operations efficiently and effectively.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>What information should management accountants provide? What is the primary focus of managerial accounting?</td>
<td>Managerial accounting provides information that helps managers plan, direct, and control operations and make better decisions; it has a:</td>
</tr>
<tr>
<td></td>
<td>• Future orientation.</td>
</tr>
<tr>
<td></td>
<td>• Focus on relevance to business decisions.</td>
</tr>
<tr>
<td>How do managers design a company’s managerial accounting system that is not regulated by GAAP?</td>
<td>Managers design the managerial accounting system so that the benefits (from helping managers make wiser decisions) outweigh the costs of the system.</td>
</tr>
<tr>
<td>How should managers decide if their plans make financial sense? How do they decide if the company is operating according to plans?</td>
<td>Managers quantitatively express their plans in the form of budgets. They can analyze the budgets to determine whether the plans will be profitable. Once the plans have been put into place, managers compare actual results to plans and make adjustments where needed.</td>
</tr>
<tr>
<td>In designing the organizational structure, where should managers place management accountants?</td>
<td>In the past, most management accountants worked in isolated departments. Now, over 50% of management accountants are deployed throughout the company and work on cross-functional teams. Management must decide which structure best suits its needs.</td>
</tr>
<tr>
<td>What skills do management accountants need to possess?</td>
<td>Because of their expanding role within the organization, most management accountants need financial and managerial accounting knowledge, analytical skills, knowledge of how a business functions, ability to work on teams, and written and oral communication skills.</td>
</tr>
<tr>
<td>How should a management accountant resolve an ethical dilemma?</td>
<td>Consult the IMA’s Statement of Ethical Professional Practice and the company’s policies. The Statement offers guidance through overarching ethical principles (honesty, fairness, objectivity, and responsibility) and standards (competence, confidentiality, integrity, and credibility).</td>
</tr>
</tbody>
</table>
Summary Problem 1

Requirements

1. Each of the following statements describes a responsibility of management. Match each statement to the management responsibility being fulfilled.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Management Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identifying alternative courses of action and choosing among them</td>
<td>a. Planning</td>
</tr>
<tr>
<td>2. Running the company on a day-to-day basis</td>
<td>b. Decision making</td>
</tr>
<tr>
<td>3. Determining whether the company’s units are operating according to plan</td>
<td>c. Directing</td>
</tr>
<tr>
<td>4. Setting goals and objectives for the company and determining strategies to achieve them</td>
<td>d. Controlling</td>
</tr>
</tbody>
</table>

2. Are the following statements more descriptive of managerial accounting or financial accounting information?

   a. Describes historical transactions with external parties
   b. Is not required by any authoritative body, such as the SEC
   c. Reports on the company’s subunits, such as products, geographical areas, and departments
   d. Is intended to be used by creditors and investors
   e. Is formatted in accordance with GAAP

3. Each of the following statements paraphrases an ethical responsibility. Match each statement to the standard of ethical professional practice being fulfilled. Each standard may be used more than once or not at all.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Standard of Ethical Professional Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Don’t disclose company information unless authorized to do so.</td>
<td>a. Competence</td>
</tr>
<tr>
<td>2. Continue to develop skills and knowledge.</td>
<td>b. Confidentiality</td>
</tr>
<tr>
<td>3. Don’t bias the information and reports presented to management.</td>
<td>c. Integrity</td>
</tr>
<tr>
<td>4. If you don’t have the skills to complete a task correctly, don’t pretend you do.</td>
<td>d. Credibility</td>
</tr>
<tr>
<td>5. Avoid actual and apparent conflicts of interest.</td>
<td></td>
</tr>
</tbody>
</table>
Solutions

Requirement 1
1. (b) Decision making
2. (c) Directing
3. (d) Controlling
4. (a) Planning

Requirement 2
a. financial accounting
b. managerial accounting
c. managerial accounting
d. financial accounting
e. financial accounting

Requirement 3
1. (b) Confidentiality
2. (a) Competence
3. (d) Credibility
4. (a) Competence
5. (c) Integrity
Today’s Business Environment

Discuss trends in the business environment

The following chapters describe managerial accounting tools that managers use to plan, direct, and control operations and make business decisions. Before we turn to these tools, let’s first consider recent trends that affect managers’ decisions and the managerial accounting systems that support them. These trends include the Sarbanes-Oxley Act; the shifting economy; the rise of the global marketplace; time-based competition (including changes in information systems, electronic commerce, and just-in-time management); and total quality management.

Sarbanes-Oxley Act of 2002

As a result of recent corporate accounting scandals, such as those at Enron and WorldCom, the U.S. Congress enacted the Sarbanes-Oxley Act of 2002 (SOX). The purpose of SOX is to restore trust in publicly traded corporations, their management, their financial statements, and their auditors. SOX enhances internal control and financial reporting requirements and establishes new regulatory requirements for publicly traded companies and their independent auditors. Publicly traded companies have spent millions of dollars upgrading their internal controls and accounting systems to comply with SOX regulations.

As shown in Exhibit 1-7, SOX requires the company’s CEO and CFO to assume responsibility for the financial statements and disclosures. The CEO and CFO must certify that the financial statements and disclosures fairly present, in all material respects, the operations and financial condition of the company. Additionally, they must accept responsibility for establishing and maintaining an adequate internal control structure and procedures for financial reporting. The company must have its internal controls and financial reporting procedures assessed annually.

EXHIBIT 1-7

Some Important Results of SOX

- CEO and CFO assume responsibility for the company’s financial statements, internal control system, and procedures for financial reporting.
- Audit committee must be independent and should include a financial expert.
- New requirements for CPA firms, including limited non-audit services for audit clients and periodic quality review.
- Stiffer imprisonment and monetary fines for white-collar crimes.

SOX also requires audit committee members to be independent, meaning that they may not receive any consulting or advisory fees from the company other than for their service on the board of directors. In addition, at least one of the members should be a financial expert. The audit committee oversees not only the internal audit function but also the company’s audit by independent CPAs.

To ensure that CPA firms maintain independence from their client company, SOX does not allow CPA firms to provide certain non-audit services (such as bookkeeping and financial information systems design) to companies during the same period of time in which they are providing audit services. If a company wants to obtain such services from a CPA firm, it must hire a different firm to do the non-audit work. Tax services may be provided by the same CPA firm if preapproved by the audit committee. The audit partner must rotate off the audit engagement every five years, and the audit firm must undergo quality reviews every one to three years.

SOX also increases the penalties for white-collar crimes such as corporate fraud. These penalties include both monetary fines and substantial imprisonment. For example, knowingly destroying or creating documents to “impede, obstruct, or influence” any federal investigation can result in up to 20 years of imprisonment.\(^7\)

Since its enactment in 2002, SOX has significantly affected the internal operations of publicly traded corporations and their auditors. SOX will continue to play a major role in corporate management and the audit profession.

**Shifting Economy**

In the last century, North American economies have shifted away from manufacturing toward service. Service companies provide health care, communication, transportation, banking, and other important benefits to society. Service companies now make up the largest sector of the U.S. economy and employ 55% of the workforce. The U.S. Census Bureau expects services, especially technology and health care services, to be among the fastest-growing industries over the next decade. Even companies that traditionally carried out manufacturing, such as General Electric (GE), are shifting toward selling more services. It’s easy to see why. In GE’s jet engine business, services contribute only 30% of the revenues but generate two-thirds of the profit.

Managerial accounting has its roots in the industrial age of manufacturing. Most traditional managerial accounting practices were developed to fill the needs of manufacturing firms. However, since the U.S. economy has shifted away from manufacturing, managerial accounting has shifted, too. The field of managerial accounting has *expanded* to meet the needs of service and merchandising firms as well as manufacturers. For example:

1. Manufacturers still need to know how much each unit of their product costs to manufacture. In addition to using this information for inventory valuation and pricing decisions, manufacturers now use cost information to determine whether they should outsource production to another company or to an overseas location.

2. Service companies also need cost information to make decisions. They need to know the cost of providing a service rather than manufacturing a product. For example, banks must include the cost of servicing checking and savings accounts in the fees they charge customers. And hospitals need to know the cost of performing appendectomies to justify reimbursement from insurance companies and from Medicare.

3. Retailers need to consider importing costs when determining the cost of their merchandise. Because many goods are now produced overseas rather than domestically, determining the cost of a product is often more difficult than it was in the past. Management accountants need to consider foreign currency translation, shipping costs, and import tariffs when determining the cost of imported products.

Competing in the Global Marketplace

The barriers to international trade have fallen over the past decades, allowing foreign companies to compete with domestic firms. Firms that are not world-class competitors will vanish from the global market. However, global markets provide competitive companies with great potential: Foreign operations account for over 35% of GE’s revenues, over 40% of Amazon.com’s revenues, and over 65% of Coca-Cola’s and McDonald’s revenues.

Manufacturers often move operations to other countries to be closer to new markets and less expensive labor. For example, Thomson SA, maker of GE’s television sets, closed the world’s largest TV factory in Bloomington, Indiana, and moved the work to Mexico to save an estimated $75 million a year in labor costs. Ford, General Motors, and DaimlerChrysler all built plants in Brazil to feed Brazil’s car-hungry middle class. The same week Alcoa announced it was closing two plants in the United States, it spelled out plans to build a $1 billion plant in Iceland.

Globalization has several implications for managerial accounting:

1. Stiffer competition means managers need more accurate information to make wise decisions. For example, if Nokia overestimates the cost of its new cell phone, it may set prices too high and lose business to competitors.

2. Companies must decide whether to expand sales and/or production into foreign countries. Managers need estimates of the costs and benefits of international expansion.


Time-Based Competition

The Internet, electronic commerce (e-commerce), and other new technologies speed the pace of business. Think about your last trip to the grocery store or Wal-Mart. Did you use the self-scanning checkout? Retailers install expensive self-scanning technology to give shoppers an alternative to standing in longer checkout lines. Some studies have shown that, on average, the self-scanning checkout process is really not faster. However, shoppers perceive the checkout time to be faster because they are actively engaged rather than passively standing in line. Businesses are doing whatever they can to shorten the time a customer has to wait for their order. Why? Because time is the latest competitive weapon in business.

Dell Computer commits to delivering your desktop computer within a week of receiving your order. Toyota says that it can make a car within five days of receiving a custom order. Sweden’s Ericsson Radio Systems has increased on-time delivery from 20% to 99.98%—nearly perfect. How do they do it? By using advanced information systems, e-commerce, and just-in-time management.

Advanced Information Systems

Many small businesses use QuickBooks or Peachtree software to track their costs and to develop the information that owners and managers need to run the business. But large companies such as Fujitsu and Allstate Insurance are turning to enterprise resource planning (ERP) systems that can integrate all of a company’s worldwide
functions, departments, and data. ERP systems such as SAP, Oracle, and PeopleSoft gather company data into a centralized data warehouse. The system feeds the data into software for all of the company’s business activities, from budgeting and purchasing to production and customer service.

Advantages of ERP systems include the following:

• Companies streamline their operations before mapping them into ERP software. Streamlining operations saves money.

• ERP helps companies respond quickly to changes. A change in sales instantly ripples through the ERP’s purchases, production, shipping, and accounting systems.

• An ERP system can replace hundreds of separate software systems, such as different software in different regions, or different payroll, shipping, and production software.

ERP is expensive. Major installations cost Fujitsu and Allstate over $40 million. ERP also requires a large commitment of time and people. For example, Hershey Foods tried to shrink a four-year ERP project into two and one-half years. The result? The software did not map into Hershey Foods’ operations, and it disrupted deliveries and hurt profits during the critical Halloween season.

E-commerce

To survive in a competitive, globally wired economy, companies use the Internet in everyday operations such as budgeting, planning, selling, and customer service. Imagine a salesclerk who can sell to thousands of customers at once. This clerk instantly provides every product, option, and price the company offers. It works 24 hours a day, 365 days a year, and never takes a break or vacation. This salesclerk is an e-commerce Web site!

Business-to-business e-commerce takes speed and efficiency to new levels. Imagine sitting in your office anywhere in the world. You enter Dell’s Web site and customize the new computer you’re buying. After you fill your virtual shopping cart, business-to-business software automates ordering, approval, and delivery.

Electronic purchases below specified dollar limits are often untouched by human hands, generate little if any paper, and avoid the time and cost of processing paperwork. Even the federal government is on the e-bandwagon. An electronic marketplace, E-Mall, allows buyers in the Department of Defense and other federal agencies access to 17 million items online. An order on E-Mall costs about $11 to process, while one placed by hand costs around $150.

Stop & Think...

Electronically billing customers is also becoming more popular. Analysts estimate that:

1. Companies save $7 per invoice by billing customers electronically.
2. The average large company issues 800,000 invoices a year.
3. The average cost of installing an e-billing system is $500,000. Should companies that issue 800,000 invoices a year consider e-billing?

Answer: Yes, these companies should consider e-billing. Comparing expected benefits to costs reveals significant expected net benefits from e-billing:

<table>
<thead>
<tr>
<th>Expected benefits:</th>
<th>Expected costs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>800,000 invoices × $7 savings per invoice</td>
<td>Installation of e-billing system</td>
</tr>
<tr>
<td>$5,600,000</td>
<td>(500,000)</td>
</tr>
<tr>
<td>Net expected benefits</td>
<td>$5,100,000</td>
</tr>
</tbody>
</table>
Managers of Krispy Kreme’s stores use the company’s customized Web portal to plan production and order supplies. Weather news appears on the opening screen. Why? Because Krispy Kreme found that people buy more coffee and doughnuts when the weather is bad. This simple innovation helps managers forecast how many doughnuts to make. “I’ve seen a good 2 to 3 percent increase in profitability just from the portal,” says the manager of a Miami-based store.8

Firms also use the Internet to tap into other companies’ business processes. Companies that supply component parts to Dell use the Internet to look into Dell’s production process through a customized virtual window. Each supplier sees the current demand for and inventory levels of the parts it supplies Dell. Access to real-time information that lets suppliers automate the size of the next day’s order helps Dell cut order-to-delivery times and control costs.

E-commerce is an important means of supply-chain management, where companies exchange information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company itself and on to the customer. E-commerce also increases a firm’s ability (and need) to use just-in-time management.

Just-in-Time Management

The costs of holding inventory can add up to 25% or more of the inventory’s value. Money tied up in inventory cannot be used for other purposes. Inventory held too long becomes obsolete. Storing inventory costs money and takes up space that could be used to increase production. The just-in-time philosophy helps managers cut holding costs by speeding the transformation of raw materials into new, finished products. Let’s see how it works.

Toyota generally gets credit for pioneering the just-in-time (JIT) philosophy, which means producing just in time to satisfy needs. Exhibit 1-8 shows that ideally, suppliers deliver materials for today’s production in exactly the right quantities just in time to begin production and finished units are completed just in time for delivery to customers. This means that raw materials are not stored before production and that finished units are shipped directly to the customer when they are completed, rather than first being stored in a finished goods warehouse. By reducing the amount of inventory stored, JIT reduces storage costs (warehousing and associated security, utilities, and shrinkage costs) and handling costs (labor costs associated with storing and unstoring inventory). Firms adopting JIT report sharp reductions in inventory and related carrying costs.

JIT also cuts throughput time, the time between buying raw materials and selling finished products. For example, Dell Computer recently cut its throughput time from 17 days to fewer than 5 days. Why is this important? An article in The Wall Street Journal estimates that new technologies reduce the value of a completed PC by 1% per week.9 Moving inventory quickly means that Dell can cut prices immediately when costs of component parts decline. Less inventory means that Dell can quickly incorporate new technologies and that more plant space is available for production.

Manufacturers adopting JIT have a limited safety stock of raw materials, so they depend on their suppliers to make on-time deliveries of perfect-quality materials. As noted earlier, Dell designed special Web pages for its major suppliers that give them a “virtual window” into Dell’s operations. Suppliers use these windows to decide when and how much raw material to deliver to Dell.

Companies that adopt JIT strive for perfect quality because defects stop production lines. Firms that adopt JIT also commit to total quality management.

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Total Quality Management

Companies must deliver high-quality goods and services to remain competitive. Hewlett-Packard and Ford in the United States, British Telecom in the United Kingdom, and Toyota in Japan view total quality management (TQM) as a key to succeeding in the global economy. The goal of TQM is to delight customers by providing them with superior products and services. Companies achieve this goal by improving quality and eliminating defects and waste.

In TQM, each business function examines its own activities and works to improve performance by continually setting higher goals. For example, Motorola wanted to reduce the time required to issue a purchase order. The TQM team of Motorola’s purchasing department reduced the number of steps in handling a purchase order from 17 to 6, slashing average processing time from 30 minutes to 3.

ISO 9001:2000

Many firms want to demonstrate their commitment to continuous quality improvement. The International Organization for Standardization (ISO), made up of 146 member countries, has developed international quality management standards and guidelines. Firms may become ISO 9001:2000-certified by complying with the quality management standards set forth by the ISO and undergoing extensive audits of their quality management processes. The prestigious certification gives firms a competitive advantage in the global marketplace. Many companies will purchase supplies only from firms bearing the ISO 9001:2000 certification. To better understand the ISO’s global impact, consider the following: by 2005, over 650,000 certificates had been issued to firms in 154 countries! The certification does not only apply...
to manufacturing firms. Service firms account for over 31% of all certificates issued. The American Institute of Certified Public Accountants was the first professional membership organization in the United States to earn the ISO 9001 certification.

**Cost-Benefit Analysis**

How do managers decide which quality improvement initiatives to undertake? They use cost-benefit analysis—weighing costs against benefits. Most decisions involve comparing the estimated costs of the project with the estimated benefits. Quality improvement programs cost money up front, but the benefits accrue over time. In deciding whether to undertake such projects, managers compare the project’s present cost to the present value of the project’s future benefits. (This is called discounting the future amounts to their present values. You may already be familiar with present value concepts and calculations from previous accounting and finance classes. Chapter 9 discusses these concepts in detail. For now, the present value of the benefits is given.) Because no one can foresee the future, the exact amount of the future benefits is not known. Let’s see how managers adjust for this uncertainty in performing cost-benefit analysis.

GE recently started nearly 3,000 quality-related projects at a cost of more than $200 million. The first-year cost savings from these projects totaled only $170 million. Does this mean that GE made a bad decision? Not necessarily. GE expects these projects to continue yielding benefits in the future.

Suppose GE managers predict that these projects will be moderately successful or extremely successful. Assume that if the projects are moderately successful, they will yield additional benefits (cost savings) with a present value of $20 million. If the projects are extremely successful, they will yield extra benefits with a present value of $100 million.

Suppose the managers estimate a 60% chance that the projects will be extremely successful and a 40% chance that they will be moderately successful. In an uncertain environment, managers make decisions based on expected values. We compute expected values by multiplying the dollar value of each possible outcome by the probability of that outcome and then adding the results:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Benefit</th>
<th>Probability</th>
<th>Expected Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely successful</td>
<td>$100 million</td>
<td>60% chance</td>
<td>$60 million</td>
</tr>
<tr>
<td>Moderately successful</td>
<td>20 million</td>
<td>40% chance</td>
<td>$8 million</td>
</tr>
</tbody>
</table>

What does this $68 million mean? If GE faced this exact situation ten times, it would expect to get $100 million in extra benefits six times and only $20 million of additional benefits four times. The average extra benefits across the ten situations is $68 million.

Thus, the total benefits expected from GE’s quality projects ($238 million, calculated as $170 million initial benefits + $68 million additional expected benefits) exceed the $200 million cost of the projects. This analysis suggests that GE’s quality initiative was worthwhile.

Even after adopting quality programs, companies cannot “rest on their laurels.” TQM requires that companies (and individual employees) continually look for ways to improve performance. This is the continuous improvement philosophy.
How do companies improve? Many businesses find that they can save money in the long run by spending more up front on preventing defects from occurring in the first place. Successful companies design and build quality into their products and services rather than depending on finding and fixing defects later. For example, by increasing the proportion of vehicles built right the first time from 50% to 70%, General Motors cut average warranty costs from roughly $1,600 to $1,000 per vehicle, in addition to reducing costs of rework and inspections.

### Decision Guidelines

**The Changing Business Environment**

Successful companies have to respond to changes in the business environment. Here are some of the key decisions managers consider to ensure that the company thrives in the future.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>What companies need to comply with SOX?</td>
<td>Publicly traded companies must comply with SOX. Many of the law’s specific requirements focus on implementing adequate internal controls and financial reporting procedures and maintaining independence from the company’s auditors.</td>
</tr>
<tr>
<td>How do companies compete in a global economy?</td>
<td>They use advanced information systems; embrace e-commerce; and use supply-chain management, JIT, and TQM to compete more effectively. They consider becoming ISO 9001:2000-certified.</td>
</tr>
<tr>
<td>How do companies decide whether to undertake new projects such as international expansion, ERP, JIT, and TQM?</td>
<td>They use cost-benefit analysis. They compute the benefits of the project and compare them with the costs. They undertake the project if benefits exceed costs. They abandon the project if costs exceed benefits.</td>
</tr>
<tr>
<td>How do companies adjust the cost-benefit analysis if they do not know the exact amount of the benefit (or cost)?</td>
<td>They compute the expected value of the benefits (or costs) of each outcome as follows:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated amount of outcome</th>
<th>Probability of outcome</th>
<th>Expected value of outcome</th>
</tr>
</thead>
</table>

Then, they add the expected values across all possible outcomes.
Summary Problem 2

This summary review problem shows how you can apply cost-benefit analysis to a decision about international expansion.

EZ-Rider Motorcycles is considering whether to expand into Germany. If gas prices increase, EZ-Rider Motorcycles expects more interest in fuel-efficient transportation such as motorcycles. EZ-Rider Motorcycles is considering setting up a motorcycle assembly plant on the outskirts of Berlin.

EZ-Rider Motorcycles estimates it will cost €850,000 (€850,000 euros) to convert an existing building to motorcycle production. Workers will need training, at a total cost of €65,000. The CEO of EZ-Rider Motorcycles, Dennis Popper, would have to spend a month in Berlin to organize the business and to establish relationships. He estimates the cost of this travel at €43,000.

Popper sees a 60% chance that the price of gasoline in Germany will increase significantly. If this increase occurs, he believes EZ-Rider Motorcycles can earn profits (before considering the costs in the preceding paragraph) with a present value of €1,624,000. However, if gas prices remain stable, Popper expects to earn profits with a present value of only about €812,000. He believes there is a 40% chance that gas prices will remain stable.

Requirements

1. What are the total costs of EZ-Rider Motorcycles’ proposed expansion into Germany?

2. Compute the expected value of the benefits if EZ-Rider Motorcycles expands into Germany.

3. Do the benefits outweigh the costs of expanding into Germany? Explain.

Solution

Requirement 1

The total costs are as follows:

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion of building to manufacturing plant</td>
<td>€850,000</td>
</tr>
<tr>
<td>Workforce training</td>
<td>€65,000</td>
</tr>
<tr>
<td>Popper’s trip to Berlin</td>
<td>€43,000</td>
</tr>
<tr>
<td><strong>Total costs</strong></td>
<td><strong>€958,000</strong></td>
</tr>
</tbody>
</table>

Requirement 2

Expected value of the benefits is computed as follows:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Probability</th>
<th>Expected Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>€1,624,000</td>
<td>0.60</td>
<td>€974,400</td>
</tr>
<tr>
<td>812,000</td>
<td>0.40</td>
<td>324,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>€1,299,200</strong></td>
</tr>
</tbody>
</table>

The expected value of the benefits, or profits, is €1,299,200. This means that should EZ-Rider Motorcycles find itself in this exact situation many times, its average profits across all of the situations would be €1,299,200.
**Requirement 3**
Yes, the total expected benefits outweigh the costs of the expansion:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total expected value of benefits of expansion (from requirement 2)</td>
<td>€1,299,200</td>
</tr>
<tr>
<td>Total costs of expansion (from requirement 1)</td>
<td>958,000</td>
</tr>
<tr>
<td>Net benefits of expansion</td>
<td>€341,200</td>
</tr>
</tbody>
</table>
Audit Committee. (p. 7)  
A subcommittee of the board of directors that is responsible for overseeing both the internal audit function and the annual financial statement audit by independent CPAs.

Board of Directors. (p. 7)  
The body elected by shareholders to oversee the company.

Budget. (p. 3)  
Quantitative expression of a plan that helps managers coordinate and implement the plan.

Certified Financial Manager (CFM). (p. 11)  
A professional certification issued by the IMA to designate expertise in the areas of financial statement analysis, working capital policy, capital structure, business valuation, and risk management.

Certified Management Accountant (CMA). (p. 11)  
A professional certification issued by the IMA to designate expertise in the areas of managerial accounting, economics, and business finance.

Chief Executive Officer (CEO). (p. 7)  
The position hired by the board of directors to oversee the company on a daily basis.

Chief Financial Officer (CFO). (p. 7)  
The position responsible for all of the company’s financial concerns.

Chief Operating Officer (COO). (p. 7)  
The position responsible for overseeing the company’s operations.

Continuous Improvement. (p. 24)  
A philosophy requiring employees to continually look for ways to improve performance.

Controller. (p. 7)  
The position responsible for general financial accounting, managerial accounting, and tax reporting.

Cost-Benefit Analysis. (p. 24)  
Weighing costs against benefits to help make decisions.

Cross-Functional Teams. (p. 8)  
Corporate teams whose members represent various functions of the organization, such as R&D, design, production, marketing, distribution, and customer service.

Decision Making. (p. 4)  
One of management's primary responsibilities; identifying possible courses of action and choosing among them.

Directing. (p. 3)  
One of management's primary responsibilities; running the company on a day-to-day basis.

Enterprise Resource Planning (ERP). (p. 20)  
Software systems that can integrate all of a company's worldwide functions, departments, and data into a single system.

Institute of Management Accountants (IMA). (p. 11)  
The professional organization that promotes the advancement of the management accounting profession.

Internal Audit Function. (p. 7)  
The corporate function charged with assessing the effectiveness of the company’s internal controls and risk management policies.

Just-In-Time (JIT). (p. 22)  
A system in which a company produces just in time to satisfy needs. Suppliers deliver materials just in time to begin production, and finished units are completed just in time for delivery to customers.

Planning. (p. 3)  
One of management's primary responsibilities; setting goals and objectives for the company and deciding how to achieve them.

Sarbanes-Oxley Act of 2002 (SOX). (p. 18)  
A congressional act that enhances internal control and financial reporting requirements and establishes new regulatory requirements for publicly traded companies and their independent auditors.
Supply-Chain Management. (p. 22)
Exchange of information with suppliers to reduce costs, improve quality, and speed delivery of goods and services from suppliers to the company itself and on to customers.

Throughput Time. (p. 22)
The time between buying raw materials and selling finished products.

Treasurer. (p. 7)
The position responsible for raising the firm’s capital and investing funds.

Total Quality Management (TQM). (p. 23)
A philosophy of delighting customers by providing them with superior products and services. Requires improving quality and eliminating defects and waste throughout the value chain.

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Quick Check

1. Which of the following is not one of the four primary responsibilities of management?
   a. controlling
   b. costing
   c. directing
   d. planning

2. Which of the following about managerial accounting is true?
   a. GAAP requires managerial accounting.
   b. Internal decision makers use managerial accounting.
   c. CPAs audit managerial accounting reports.
   d. Managerial accounting reports are usually prepared on an annual basis.

3. Which of the following is not a characteristic of managerial accounting information?
   a. emphasizes relevance
   b. focuses on the future more than the past
   c. provides detailed information about parts of the company, not just the company as a whole
   d. emphasizes reliability

4. What company position is in charge of raising the firm’s capital?
   a. director of internal audit
   b. controller
   c. COO
   d. treasurer

5. Which of the following statements is true?
   a. The COO reports to the CFO.
   b. The treasurer reports to the CEO.
   c. The internal audit department reports to the audit committee.
   d. The controller reports to the internal auditor.

6. To get a job as a management accountant in most companies, you must:
   a. join the IMA
   b. be certified as a CMA
   c. be certified as a CFM
   d. none of the above
7. In addition to accounting knowledge, management accountants must possess all of the following skills except:
   a. written communication skills
   b. knowledge of how a business functions
   c. computer programming skills
   d. analytical skills

8. A management accountant who refuses an expensive gift from a software salesman meets the ethical standard of:
   a. credibility
   b. confidentiality
   c. integrity
   d. competence

9. Which of the following is not one of the provisions of the Sarbanes-Oxley Act of 2002?
   a. The company’s auditors assume responsibility for the financial statements.
   b. The penalties (i.e., prison time and fines) for corporate fraud were increased.
   c. At least one audit committee member should be a financial expert.
   d. The CEO and CFO must certify that the financial statements fairly present the company’s operations and financial condition.

10. All of the following tools help companies compete in today’s market except:
    a. JIT
    b. KJD
    c. ERP
    d. TQM

Quick Check Answers

For Internet Exercises, Excel in Practice, and additional online activities, go to this book’s Web site at www.prenhall.com/bamber.
Assess Your Progress

Learning Objectives

1. Identify managers’ four primary responsibilities
2. Distinguish financial accounting from managerial accounting
3. Describe organizational structure and the roles and skills required of management accountants within the organization
4. Describe the role of the Institute of Management Accountants (IMA) and use its ethical standards to make reasonable ethical judgments
5. Discuss trends in the business environment
6. Use cost-benefit analysis to make business decisions

Short Exercises

S1-1 Roles of managers (Learning Objective 1)
Describe the four primary roles of managers and the way they relate to one another.

S1-2 Contrast managerial and financial accounting (Learning Objective 2)
Your roommate, who plans to specialize in international business, is considering whether to enroll in the second principles of accounting course. She says, “I don’t want to be an accountant, so why do I need a second accounting course? I just spent a whole term on financial accounting. Most of this second course focuses on managerial accounting, but how can that be so different from what I already learned in financial accounting?” Respond.

S1-3 Roles and skills of management accountants (Learning Objective 3)
Your friends call you a “bean counter” because you are taking an accounting class. Explain to them why they are wrong.

S1-4 Role of internal audit function (Learning Objective 3)
Explain what the role of the internal audit function is and why the internal audit function usually reports to the CEO or CFO and the audit committee.

S1-5 Importance of ethical standards (Learning Objective 4)
Explain why each of the four broad ethical standards in the IMA’s Statement of Ethical Professional Practice is necessary.

S1-6 Violations of ethical standards (Learning Objective 4)
The IMA’s Statement of Ethical Professional Practice (Exhibit 1-6) requires management accountants to meet standards regarding:

- Competence.
- Confidentiality.
- Integrity.
- Credibility.

continued . . .
Consider the following situations. Which guidelines are violated in each situation?

a. You tell your brother that your company will report earnings significantly above financial analysts’ estimates.

b. You see that other employees take home office supplies for personal use. As an intern, you do the same thing, assuming that this is a “perk.”

c. At a conference on e-commerce, you skip the afternoon session and go sightseeing.

d. You failed to read the detailed specifications of a new general ledger package that you asked your company to purchase. After it is installed, you are surprised that it is incompatible with some of your company’s older accounting software.

e. You do not provide top management with the detailed job descriptions they requested because you fear they may use this information to cut a position from your department.

S1-7  Just-in-time management  (Learning Objective 5)

Is JIT more appropriate for Amazon.com, a book, music, and electronics e-tailer, or Mouton-Rothschild, a French winemaker specializing in fine red wines? Explain.

S1-8  Cost-benefit analysis  (Learning Objective 6)

Consider the cost-benefit analysis for GE’s quality program discussed on page 24. Suppose GE’s managers now estimate an 85% chance that the projects will yield an extra $20 million in benefits and a 15% chance that the projects will yield an extra $80 million. What is the expected value of the additional benefits now? Assuming that total costs remain at $200 million, and cost savings in the first year already amounted to $170 million, does this change your mind about whether the quality program was a worthwhile investment?

Exercises

E1-9  Managers’ responsibilities  (Learning Objective 1)

Categorize each of the following activities as to which management responsibility it fulfills: planning, directing, controlling, or decision making. Some activities may fulfill more than one responsibility.

a. Management conducts variance analysis by comparing budget to actual.

b. Management reviews hourly sales reports to determine the level of staffing needed to service customers.

c. Management decides to increase sales growth by 10% next year.

d. Management uses information on product costs to determine sales prices.

e. To lower product costs, management moves production to Mexico.

E1-10  Define key terms  (Learning Objectives 1, 2)

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

<table>
<thead>
<tr>
<th>Budget</th>
<th>Creditors</th>
<th>Managerial accounting</th>
<th>Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling</td>
<td>Financial accounting</td>
<td>Managers</td>
<td>Shareholders</td>
</tr>
</tbody>
</table>

a. Companies must follow GAAP in their ________ systems.

b. Financial accounting develops reports for external parties such as ________ and ________.
c. When managers evaluate the company’s performance compared to the plan, they are performing the ______ role of management.
d. ______ are decision makers inside a company.
e. ______ provides information on a company’s past performance to external parties.
f. ______ systems are not restricted by GAAP but are chosen by comparing the costs versus the benefits of the system.
g. Choosing goals and the means to achieve them is the ______ function of management.
h. ______ systems report on various segments or business units of the company.
i. ______ statements of public companies are audited annually by CPAs.

E1-11 Classify roles within the organization (Learning Objective 3)

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

<table>
<thead>
<tr>
<th>Audit committee</th>
<th>Board of directors</th>
<th>CEO</th>
<th>CFO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasurer</td>
<td>Controller</td>
<td>Cross-functional teams</td>
<td>COO</td>
</tr>
</tbody>
</table>

a. The ______ and the ______ report to the CEO.
b. The internal audit function reports to the CFO or ______ and the ______.
c. The ______ is directly responsible for financial accounting, managerial accounting, and tax reporting.
d. The CEO is hired by the ______.
e. The ______ is directly responsible for raising capital and investing funds.
f. The ______ is directly responsible for the company’s operations.
g. Management accountants often work with ______.
h. A subcommittee of the board of directors is called the ______.

E1-12 Describe needed skills and knowledge (Learning Objective 3)

A study by the IMA found that management accountants need skills and knowledge above and beyond pure accounting knowledge. Describe the set of skills and knowledge identified in the study and explain why they are important to the new role of management accountants.

E1-13 Professional organization and certification (Learning Objective 4)

Complete the following sentences:

a. The ______ is the professional association for management accountants.
b. The institute offers two types of certification: the ______ and ______.
c. The ______ exam focuses on managerial accounting topics, economics, and business finance.
d. The ______ exam focuses on financial statement analysis, business valuation, risk management, working capital policy, and capital structure.
e. The institute’s monthly publication, called ______, addresses current topics of interest to management accountants.
f. The institute says that approximately ______ percent of accountants work in organizations rather than at CPA firms.
E1-14 Ethical dilemma (Learning Objective 4)
Mary Gonzales is the controller at Automax, a car dealership. She recently hired Cory Loftus as a bookkeeper. Loftus wanted to attend a class on Excel spreadsheets, so Gonzales temporarily took over Loftus's duties, including overseeing a fund for topping off a car’s gas tank before a test drive. Gonzales found a shortage in this fund and confronted Loftus when he returned to work. Loftus admitted that he occasionally uses this fund to pay for his own gas. Gonzales estimated that the amount involved is close to $300.

Requirements
1. What should Gonzales do?
2. Would you change your answer to the previous question if Gonzales was the one recently hired as controller and Loftus was a well-liked, longtime employee who indicated that he always eventually repaid the fund?

E1-15 Classify ethical responsibilities (Learning Objective 4)
According to the IMA’s Statement of Ethical Professional Practice (Exhibit 1-6), management accountants should follow four standards: competence, confidentiality, integrity, and credibility. Each of these standards contains specific responsibilities. Classify each of the following responsibilities according to the standard it addresses.

Responsibility:
1. Refrain from using confidential information for unethical or illegal advantage.
2. Maintain an appropriate level of professional expertise by continually developing knowledge and skills.
3. Communicate information fairly and objectively.
4. Recognize and communicate professional limitations that would preclude responsible judgment or successful performance of an activity.
5. Mitigate actual conflicts of interest. Regularly communicate with business associates to avoid apparent conflicts of interest. Advise all parties of any potential conflicts.
6. Provide decision support information and recommendations that are accurate, clear, concise, and timely.
7. Abstain from engaging in or supporting any activity that might discredit the profession.
8. Disclose all relevant information that could reasonably be expected to influence an intended user’s understanding of the reports, analyses, or recommendations.
9. Inform all relevant parties regarding the appropriate use of confidential information. Monitor subordinates’ activities to ensure compliance.
10. Perform professional duties in accordance with relevant laws, regulations, and technical standards.
11. Refrain from engaging in any conduct that would prejudice carrying out duties ethically.
12. Keep information confidential except when disclosure is authorized or legally required.
13. Disclose delays or deficiencies in information, timeliness, processing, or internal controls in conformance with organization policy and/or applicable law.
E1-16 Define key terms (Learning Objectives 5, 6)

Complete the following statements with one of the terms listed here. You may use a term more than once, and some terms may not be used at all.

| E-commerce | Future value | Shift to service economy |
| ERP        | JIT          | Throughput time          |
| Expected value | Present | TQM                  |
| Future   | Present value | ISO 9001:2000          |

a. To account for uncertainty in the amounts of future costs and benefits, we compute the _____ by multiplying the probability of each outcome by the dollar value of that outcome.

b. To make a cost-benefit decision today, we must find the _____ of the costs and benefits that are incurred in the future.

c. The goal of _____ is to meet customers’ expectations by providing them with superior products and services by eliminating defects and waste throughout the value chain.

d. Most of the costs of adopting ERP and JIT, expanding into a foreign market, or improving quality are incurred in the _____; but most of the benefits occur in the _____.

e. _____ is the time between buying raw materials and selling the finished products.

f. _____ serves the information needs of people in accounting as well as people in marketing and in the warehouse.

g. Firms adopt _____ to conduct business on the Internet.

h. Firms acquire the _____ certification to demonstrate their commitment to quality.

E1-17 Summarize the Sarbanes-Oxley Act (Learning Objective 5)

You just obtained an entry-level job as a management accountant. Other newly hired accountants have heard of the Sarbanes-Oxley Act of 2002 (SOX), but don’t know much about it (they attended a different university). Write a short memo to your colleagues discussing the reason for SOX, the goal of SOX, and some of the specific requirements of SOX that will affect your company.

E1-18 JIT cost-benefit analysis (Learning Objective 6)

Wild Rides manufactures snowboards. Shawn Mobbs, the CEO, is trying to decide whether to adopt JIT. He expects that in present-value terms, adopting JIT would save $97,000 in warehousing expenses and $46,000 in spoilage costs. Adopting JIT will require several one-time up-front expenditures: (1) $13,500 for an employee training program, (2) $37,000 to streamline the plant’s production process, and (3) $8,000 to identify suppliers that will guarantee zero defects and on-time delivery.

Requirements

1. What are the total costs of adopting JIT?
2. What are the total benefits of adopting JIT?
3. Should Wild Rides adopt JIT? Why or why not?
Problems (Problem Set A)

P1-19A Summarize managerial accounting and recent business trends (Learning Objectives 1, 2, 3, 5)

Your roommate is an engineering student who has developed a new marketable technology as part of her graduate studies. As soon as she finishes her degree, she intends to start her own company to manufacture and sell the technology. She has not taken any business classes but has begun to read business periodicals to develop some business savvy. She has several issues on which she would like your input. Discuss what you know about the following:

1. Your roommate feels confident about her abilities as the company’s chief product engineer but questions whether she should manage the company herself. She wonders what her role as company manager would be.

2. She’s heard of financial and managerial accounting and wonders if they are the same thing.

3. Because you are taking an accounting class, she asks you to explain how to structure the financial arm of a large organization.

4. Your roommate has high hopes for her company. She’s already anticipating it to be publicly traded some day in the near future. She wants to know how SOX will affect her business.

5. The business magazines often mention TQM and the ISO. She wants to know more about TQM and the ISO 9001:2000 certification.

6. Your roommate also sees frequent references to JIT production. She would like to know what JIT is about and if she should consider adopting it.

7. Because she will sell the new technology to other companies rather than consumers, your roommate doesn’t see the need to set up an electronic purchasing Web site. Explain to her why e-commerce is helpful even if she isn’t selling directly to individual consumers.

P1-20A Ethical dilemmas (Learning Objective 4)

Kate Royer is the new controller for ED Software, which develops and sells educational software. Shortly before the December 31 fiscal year-end, Matt Adams, the company president, asks Royer how things look for the year-end numbers. He is not happy to learn that earnings growth may be below 15% for the first time in the company’s five-year history. Adams explains that financial analysts have again predicted a 15% earnings growth for the company and that he does not intend to disappoint them. He suggests that Royer talk to the assistant controller, who can explain how the previous controller dealt with this situation. The assistant controller suggests the following strategies:

a. Persuade suppliers to postpone billing until January 1.

b. Record as sales certain software awaiting sale that is held in a public warehouse.

c. Delay the year-end closing a few days into January of the next year so that some of next year’s sales are included as this year’s sales.

d. Reduce the allowance for bad debts (and bad debts expense).

e. Postpone routine monthly maintenance expenditures from December to January.

Which of these suggested strategies are inconsistent with IMA standards? What should Royer do if Adams insists that she follow all of these suggestions?
P1-21A ERP cost-benefit analysis (Learning Objectives 5, 6)
As CEO of SeaSpray Marine, Ron Greenwood knows it is important to control costs and to respond quickly to changes in the highly competitive boat-building industry. When IDG Consulting proposes that SeaSpray Marine invest in an ERP system, he forms a team to evaluate the proposal: the plant engineer, the plant foreman, the systems specialist, the human resources director, the marketing director, and the management accountant.

A month later, management accountant Mike Cobalt reports that the team and IDG estimate that if SeaSpray Marine implements the ERP system, it will incur the following costs:

a. $350,000 in software costs
b. $80,000 to customize the ERP software and load SeaSpray’s data into the new ERP system
c. $125,000 for employee training

The team estimates that the ERP system should provide several benefits:

a. More efficient order processing should lead to savings with a present value of $185,000.
b. Streamlining the manufacturing process so that it maps into the ERP system will create savings with a present value of $275,000.
c. Integrating purchasing, production, marketing, and distribution into a single system will allow SeaSpray Marine to reduce inventories, saving $220,000.
d. Higher customer satisfaction should increase sales, which, in turn, should increase the present value of profits by $150,000.

The team knows that because of complexity, some ERP installations are not successful. If SeaSpray Marine’s system fails, there will be no cost savings and no additional sales. The team predicts that there is an 80% chance that the ERP installation will succeed and a 20% chance that it will fail.

Requirements
1. If the ERP installation succeeds, what is the dollar amount of the benefits?

P1-22A Continuation of P1-21A: revised probabilities (Learning Objectives 5, 6)
P1-21A asked you to perform a quantitative analysis to help SeaSpray Marine’s managers decide whether to embark on the project. Now consider some qualitative factors in SeaSpray Marine’s ERP project.

1. Why did Greenwood create a team to evaluate IDG’s proposal? Consider each piece of cost-benefit information that management accountant Cobalt reported. Which person on the team is most likely to have contributed each item? (Hint: Which team member is likely to have the most information about each cost or benefit?)

2. Quantifying ERP benefits can be difficult. After further discussion, the team predicts that there is a 60% chance that the ERP installation will succeed and a 40% chance that it will fail. Should SeaSpray Marine still install the new ERP system?
P1-23A  **E-commerce cost-benefit analysis** *(Learning Objectives 5, 6)*

Sun Gas wants to move its sales order system to the Web. Under the proposed system, gas stations and other merchants will use a Web browser and, after typing in a password for the Sun Gas Web page, will be able to check the availability and current price of various products and place an order. Currently, customer service representatives take dealers’ orders over the phone; they record the information on a paper form, then manually enter it into the firm’s computer system.

CFO Carrie Smith believes that dealers will not adopt the new Web system unless Sun Gas provides financial assistance to help them purchase or upgrade their PCs. Smith estimates this one-time cost at $750,000. Sun Gas will also have to invest $150,000 in upgrading its own computer hardware. The cost of the software and the consulting fee for installing the system will be $230,000. The Web system will enable Sun Gas to eliminate 25 clerical positions. Smith estimates that the benefits of the new system’s lower labor costs will have a present value of $1,357,000.

**Requirements**

Use a cost-benefit analysis to recommend to Smith whether Sun Gas should proceed with the Web-based ordering system. Give your reasons, showing supporting calculations.

P1-24A  **Continuation of P1-23A: revised probabilities** *(Learning Objectives 5, 6)*

Consider the Sun Gas proposed entry into e-commerce in P1-23A. Smith revises her estimates of the benefits from the new system’s lower labor costs. She now thinks there is a 40% chance of receiving the $1,357,000 in benefits and a 60% chance the benefits will be only $933,000.

**Requirements**

1. Compute the expected benefits of the Web-based ordering system.
2. Would you recommend that Sun Gas accept the proposal?
3. Before Smith makes a final decision, what other factors should she consider?

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**Problems (Problem Set B)**

P1-25B  **Summarize managerial accounting and recent business trends** *(Learning Objectives 1, 2, 3, 5)*

One of your friends has taken a great interest in Australia and wants to import home décor items from Australia after college. He has not taken any business classes but has begun to read business newspapers and magazines to develop some business knowledge. He has several issues on which he would like your input. Discuss with him what you know about the following:

1. Your friend feels confident about his abilities to select marketable Australian home décor, but questions whether he should manage the company himself or hire someone to manage the company while he takes on the role of the chief buyer. He wonders what his role would be if he were the company manager as well.
2. He’s heard of financial and managerial accounting and wonders if they are the same thing.
3. Because you are taking an accounting class, he asks you to explain how to structure the financial arm of a large organization.
4. Your friend has high hopes for his company. He foresees his business growing into a chain of home décor stores, similar to Pier 1 Imports or Cost Plus World Market. To grow the business to this level, he will have to take the company public. He wants to know how SOX will affect a publicly traded company.

5. The business magazines often mention TQM and the ISO. He wants to know if TQM and the ISO 9001:2000 certification apply only to manufacturers.

6. Your friend also sees frequent references to JIT production. First, he would like to know what JIT is. Second, he wonders if it would apply to his business.

7. Your friend wonders if he should invest in e-commerce or depend solely on sales generated by foot traffic into his “brick-and-mortar” retail stores.

**P1-26B Ethical dilemmas (Learning Objective 4)**

Kara Williams is the new controller for Colors, a designer and manufacturer of sportswear. Shortly before the December 31 fiscal year-end, Lashea Lucas (the company president) asks Williams how things look for the year-end numbers. Lucas is not happy to learn that earnings growth may be below 10% for the first time in the company’s five-year history. Lucas explains that financial analysts have again predicted a 12% earnings growth for the company and that she does not intend to disappoint them. She suggests that Williams talk to the assistant controller, who can explain how the previous controller dealt with this situation. The assistant controller suggests the following strategies:

a. Postpone planned advertising expenditures from December to January.

b. Do not record sales returns and allowances on the basis that they are individually immaterial.

c. Persuade retail customers to accelerate January orders to December.

d. Reduce the allowance for bad debts (and bad debts expense).

e. Colors ships finished goods to public warehouses across the country for temporary storage until it receives firm orders from customers. As Colors receives orders, it directs the warehouse to ship the goods to nearby customers. The assistant controller suggests recording goods sent to the public warehouses as sales.

Which of these suggested strategies are inconsistent with IMA standards? What should Williams do if Lucas insists that she follow all of these suggestions?

**P1-27B TQM cost-benefit analysis (Learning Objectives 5, 6)**

CRM manufactures computer disk drives. It sells these disk drives to other manufacturers, which use them in assembling computers. CRM is having trouble with its new DVD drive. About half the time, CRM employees find defects while the disk drive is still on the production line. These drives are immediately reworked in the plant. Otherwise, CRM’s customers do not identify the problem until they install the disk drives they’ve purchased. Customers return defective drives for replacement under warranty. They have also complained that after they install the disk drive, the drive’s connector (which plugs into the computer system board) often shakes loose while the computer is being assembled. The customers must then reassemble the computer after fixing the loose connection.

CRM’s CEO Jay Rich has just returned from a seminar on TQM. He forms a team to address these quality problems. The team includes the plant engineer, the production supervisor, a customer service representative, the marketing director, and the management accountant.

*continued . . .*
Three months later, the team proposes a major project to prevent these quality problems. CRM’s accountant Anna Crowe reports that implementing the team’s proposal will require CRM to incur the following costs over the next three months:

- $180,500 for CRM’s scientists to develop a completely new disk drive.
- $70,000 for the company’s engineers to redesign the connector so that it better tolerates rough treatment.

The project team is unsure whether this investment will pay off. If the effort fixes the problem, Crowe expects that:

- A reputation for higher quality will increase sales, which, in turn, will increase the present value of profits by $200,000.
- Fewer disk drives will fail. The present value of the savings from fewer warranty repairs is $170,300.
- The plant will have fewer defective disk drives to rework. The present value of this savings is $100,200.

However, if this project is not successful, there will be no cost savings and no additional sales. The team predicts a 70% chance that the project will succeed and a 30% chance that it will fail.

Requirements

1. If the quality improvement project succeeds, what is the dollar amount of the benefits?
2. Should CRM undertake this project? Why or why not? Show supporting calculations.

P1-28B Continuation of P1-27B: revised probabilities (Learning Objectives 5, 6)

P1-27B asked you to perform a quantitative analysis to help CRM’s managers decide whether to embark on the project. Now consider some qualitative factors in CRM’s quality improvement project.

1. Why did Rich create a team to address this quality problem rather than assigning the task to one person? Consider each piece of cost/benefit information reported by management accountant Crowe. Which person on the team is most likely to have contributed each item? (Hint: Which team member is likely to have the most information about each cost or benefit?)
2. Quantifying TQM benefits can be difficult. After further discussion, the team predicts that there is only a 50% chance that the proposal will succeed, and a 50% chance that it will fail. Should CRM still implement the project?

P1-29B Information system cost-benefit analysis (Learning Objectives 5, 6)

Smart Bank processes checks for smaller banks and insurance companies. When a customer complains that a check was not deposited to its account, a Smart Bank clerk takes the complaint over the phone and fills out a paper form. The complaint form triggers a long search through piles of canceled checks in a warehouse to find the check in question. Smart Bank then compares this check to its computer and paper records.

Smart Bank is considering moving this process to the Web. When a customer has a question, an employee simply uses a Web browser and a password to access Smart Bank’s databases. The customer’s employee pulls up a computerized image of the check in question to verify the amount and then queries Smart Bank’s databases to locate the mistake. If required, a credit to the customer’s account can be issued immediately.
The Web-based system will require the bank to invest $83,000 in a new server and check-scanning equipment. eNow! Consultants will charge $110,000 for the software and consulting fees to get the system running. The system will also require increasing the bank’s Internet capacity. The present value of this cost is $20,000.

Smart Bank has identified two benefits of this project. First, several bank clerks freed from searching through stacks of canceled checks will be reassigned, which will lead to cost savings with a present value of $173,000. Second, the new system’s additional capacity will enable Smart Bank to accept more check-processing business, which should lead to additional profits with a present value of $43,200.

Requirements
Does a cost-benefit analysis justify the Web-based system? Explain why, showing supporting calculations.

P1-30B Continuation of P1-29B: revised probabilities (Learning Objectives 5, 6)
Consider the Smart Bank project described in P1-29B. Smart Bank has revised its estimates of additional profits the bank is likely to earn. There is an 80% chance that the bank will earn $43,200 in extra profits, but also a 20% chance the bank will earn $75,000.

Requirements
1. Compute the expected value of the benefits from the additional business.
2. Would you recommend that Smart Bank accept the proposal? Give your reason, showing supporting calculations.
3. Are there other potential benefits not listed in P1-29B or P1-30B that may make the proposal more attractive to Smart Bank?
Apply Your Knowledge

Decision Case

Case 1-31. Ethical standards (Learning Objective 4)
The IMA’s Statement of Ethical Professional Practice (Exhibit 1-6) can be applied to more than just managerial accounting. It is also relevant to college students. Explain at least one situation that shows how each IMA standard is relevant to your experiences as a student. For example, the ethical standard of competence would suggest not cutting classes.

Ethical Issue

Issue 1-32. Ethical dilemma (Learning Objective 4)
Ricardo Valencia recently resigned his position as controller for Tom White Automotive, a small, struggling foreign car dealer in Austin, Texas. Valencia has just started a new job as controller for Mueller Imports, a much larger dealer for the same car manufacturer. Demand for this particular make of car is exploding, and the manufacturer cannot produce enough cars to satisfy demand. Each manufacturer’s regional sales managers is given a certain number of cars. Each regional sales manager then decides how to divide the cars among the independently owned dealerships in the region. Because most dealerships can sell every car they receive, the key is getting a large number of cars from the manufacturer’s regional sales manager.

Valencia’s former employer, Tom White Automotive, received only about 25 cars a month. Consequently, the dealership was not very profitable.

Valencia is surprised to learn that his new employer, Mueller Imports, receives over 200 cars a month. Valencia soon gets another surprise. Every couple of months, a local jeweler bills the dealer $5,000 for “miscellaneous services.” Franz Mueller, the owner of the dealership, personally approves the payment of these invoices, noting that each invoice is a “selling expense.” From casual conversations with a salesperson, Valencia learns that Mueller frequently gives Rolex watches to the manufacturer’s regional sales manager and other sales executives. Before talking to anyone about this, Valencia decides to work through his ethical dilemma by answering the following questions:

1. What is the ethical issue?
2. What are my options?
3. What are the possible consequences?
4. What should I do?
Team Project

Project 1-33. Interviewing a local company about e-commerce (Learning Objective 5)

Search the Internet for a nearby company that also has a Web page. Arrange an interview with a management accountant, a controller, or another accounting/finance officer of the company. Before you conduct the interview, answer the following questions:

1. What is the company’s primary product or service?
2. Is the primary purpose of the company’s Web site to provide information about the company and its products, to sell online, or to provide financial information for investors?
3. Are parts of the company’s Web site restricted so that you need password authorization to enter? What appears to be the purpose of limiting access?
4. Does the Web site provide an e-mail link for contacting the company?
   At the interview, begin by clarifying your answers to questions 1 through 4 and ask the following additional questions:

5. If the company sells over the Web, what benefits has the company derived? Did the company perform a cost-benefit analysis before deciding to begin Web sales? Or
   If the company does not sell over the Web, why not? Has the company performed a cost-benefit analysis and decided not to sell over the Web?
6. What is the biggest cost of operating the Web site?
7. Does the company make any purchases over the Internet? What percentage?
8. How has e-commerce affected the company’s managerial accounting system? Have the management accountant’s responsibilities become more or less complex? more or less interesting?
9. Does the company use Web-based accounting applications such as accounts receivable or accounts payable?
10. Does the company use an ERP system? If so, does it view the system as a success? What have been the benefits? the costs?

Prepare a report describing the results of your interview.