



# ACCOUNTING

for Decision Making  
and Control

Tenth Edition

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Jerold Zimmerman



Tenth Edition



# Accounting for Decision Making and Control

Jerold L. Zimmerman  
*University of Rochester*

**Mc  
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Education



ACCOUNTING FOR DECISION MAKING AND CONTROL, TENTH EDITION

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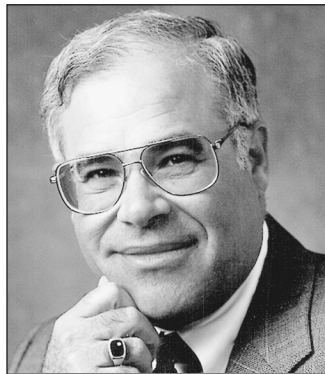
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# About the Author



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## **Jerold L. Zimmerman**

Jerold Zimmerman is Professor Emeritus at the Simon Business School, University of Rochester. He holds an undergraduate degree from the University of Colorado, Boulder, and a doctorate from the University of California, Berkeley.

While at Rochester, Dr. Zimmerman taught a variety of courses spanning accounting, finance, and economics. Accounting courses include nonprofit accounting, intermediate accounting, accounting theory, and managerial accounting. A deeper appreciation of the challenges of managing complex organizations was acquired while serving as the Simon School's Deputy Dean and on the board of directors of several public corporations.

Professor Zimmerman publishes widely in accounting on topics as diverse as cost allocations, corporate governance, disclosure, financial accounting theory, capital markets, and executive compensation. His paper "The Costs and Benefits of Cost Allocations" won the American Accounting Association's Competitive Manuscript Contest. He is recognized for developing Positive Accounting Theory. This work, co-authored with colleague Ross Watts at the Massachusetts Institute of Technology, received the American Institute of Certified Public Accountants' Notable Contribution to the Accounting Literature Award for "Towards a Positive Theory of the Determination of Accounting Standards" and "The Demand for and Supply of Accounting Theories: The Market for Excuses." Both papers appeared in the *Accounting Review*. Professors Watts and Zimmerman are also co-authors of the highly cited textbook *Positive Accounting Theory* (Prentice Hall, 1986). Professors Watts and Zimmerman received the 2004 American Accounting Association Seminal Contribution to the Literature award. Professor Zimmerman's textbooks also include *Managerial Economics and Organizational Architecture* with Clifford Smith and James Brickley, 6th ed. (McGraw-Hill, 2016) and *Management Accounting in a Dynamic Environment* with Cheryl McWatters (Routledge UK, 2016). He is a founding editor of the *Journal of Accounting and Economics*, published by Elsevier. This scientific journal is one of the most highly referenced accounting publications. In 2016, Professor Zimmerman received the American Accounting Association Outstanding Accounting Educator Award, in part for this this textbook's contribution to accounting education.

He and his wife Dodie have two daughters, Daneille and Amy. Jerry has been known to occasionally engage friends and colleagues in an amicable diversion on the links.

# Preface

During their professional careers, managers in all organizations, profit and nonprofit, rely on their accounting systems. Sometimes managers use the accounting system to acquire information for decision making. At other times, the accounting system measures their performance and thereby influences the managers' behavior. The accounting system is both a source of information for decision making and part of the organization's control mechanisms—thus, the title of the book, *Accounting for Decision Making and Control*.

The purpose of this book is to provide students and managers with an understanding and appreciation of the strengths and limitations of an organization's accounting system, thereby allowing them to be more intelligent users of these systems. This book provides a framework for understanding accounting systems and a basis for analyzing proposed changes to these systems. The text demonstrates that managerial accounting is an integral part of the firm's organizational architecture, not just an isolated set of computational topics.

## Changes in the Tenth Edition

Feedback from reviewers and instructors using the prior editions and my own teaching experience provided the basis for the revision. In particular, the following changes have been made:

- Each chapter in the tenth edition was heavily edited with an eye to make it more concise, remove redundancy, and enhance readability while presenting the same fundamental concepts, learning objectives, and challenging critical thinking end-of-chapter materials as in prior editions.
- References to actual company practices have been updated.
- Users were uniform in their praise of the problem material. They found it challenged their students to critically analyze multidimensional issues while still requiring numerical problem-solving skills.
- The end-of-chapter problem material was revised by updating problems with the new tax rates stated in the 2018 U.S. Tax Cuts and Jobs Act.
- Each chapter and all end-of-chapter problems were revised in light of the 2018 tax reform (Tax Cuts and Jobs Act).
- Outdated and obsolete problems were deleted.
- Discussions of how data analytics and Big Data are changing managerial accounting were added.

## Overview of Content

Chapter 1 describes the book's conceptual framework and illustrates the framework using a simple decision context regarding accepting an incremental order from a current customer. The chapter describes why firms use a single accounting system and the concept of economic Darwinism, among other important topics. This chapter is an integral part of the text.

Chapters 2, 4, and 5 present the underlying conceptual framework. The importance of opportunity costs in decision making, cost–volume–profit analysis, and the difference between accounting costs and opportunity costs are discussed in Chapter 2. Chapter 4 employs the economic theory of organizations as the conceptual foundation to understand the role of the accounting system as part of the organization's control mechanism. Chapter 5 describes the crucial role of accounting as part of the firm's organizational architecture. Chapter 3 on capital budgeting extends opportunity costs to a multiperiod setting. This chapter can be skipped without affecting the flow of later material. Alternatively, Chapter 3 can be assigned at the end of the course.

Using budgeting, Chapter 6 applies the conceptual framework and illustrates the trade-off managers face between decision making and control. Budgets are a decision-making tool to coordinate activities within the firm and a device to control behavior. This chapter provides an in-depth illustration of how budgets are an important part of an organization's decision-making and control apparatus.

Chapter 7 presents a general analysis of why managers allocate certain costs and the behavioral implications of these allocations. Cost allocations affect both decision making and incentives. Again, managers face a trade-off between decision making and control. Chapter 8 continues the cost allocation discussion by describing the “death spiral” that can occur when significant fixed costs exist and excess capacity arises. This leads to an analysis of how to treat capacity costs—a trade-off between underutilization and overinvestment. Finally, the chapter describes several specific cost allocation methods such as service department costs and joint costs.

Chapter 9 applies the general analysis of overhead allocation described in Chapters 7 and 8 to the specific case of absorption costing in a manufacturing setting. Chapters 10 and 11 describe the managerial implications of traditional absorption costing. Chapter 10 analyzes variable costing, and activity-based costing is the topic of Chapter 11. Variable costing is an interesting example of economic Darwinism. Proponents of variable costing argue that it does not distort decision making and therefore should be adopted. Nonetheless, variable costing is not widely practiced, probably because of tax, financial reporting, and control considerations.

Chapter 12 discusses the decision-making and control implications of standard labor and material costs. Chapter 13 extends the discussion to overhead and marketing variances. Chapters 12 and 13 can be omitted without interrupting the flow of later material. Finally, Chapter 14 synthesizes the course by reviewing the conceptual framework and applying it to various organizational innovations, such as six sigma/total quality management, lean production/just in time, and the balanced scorecard. These innovations provide an opportunity to apply the analytic framework underlying the text.



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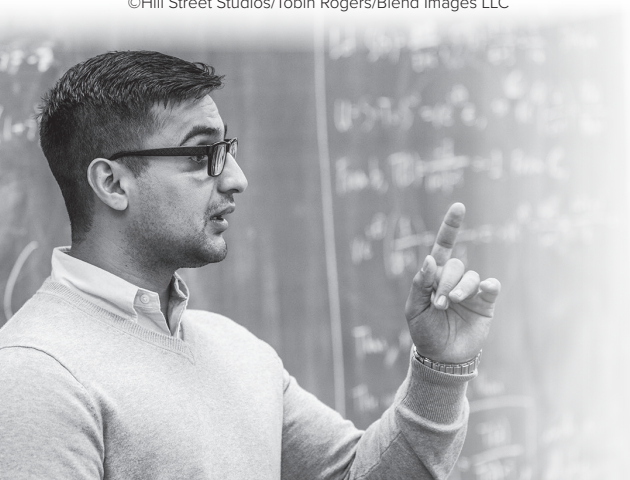
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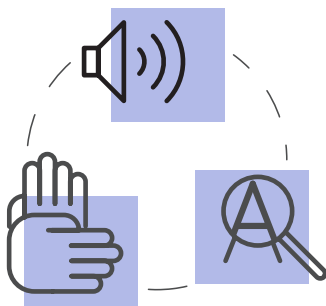
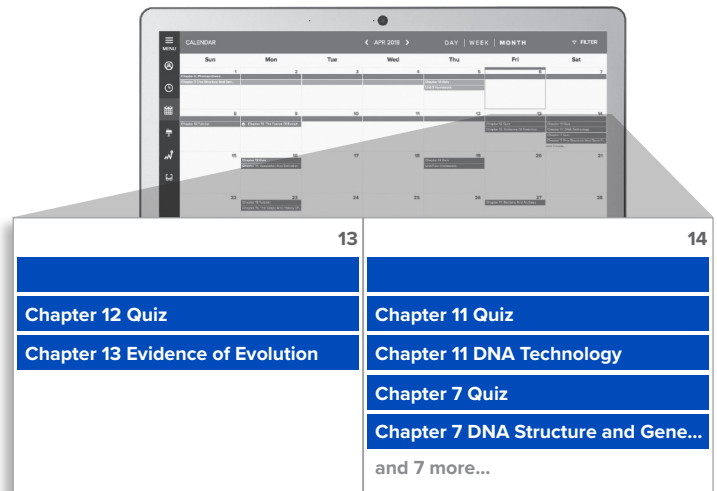
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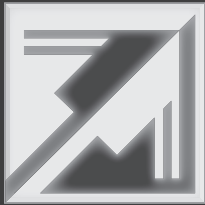


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# Introduction

## Chapter Outline

- A. Managerial Accounting: Decision Making and Control**
- B. Design and Use of Cost Systems**
- C. Marmots and Grizzly Bears**
- D. Management Accountant's Role in the Organization**
- E. Evolution of Management Accounting: A Framework for Change**
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## A. Managerial Accounting: Decision Making and Control

Managers at Hyundai must decide which car models to produce, the quantity of each model to produce given the selling prices for the models, and how to manufacture the automobiles. They must decide which car parts, such as headlight assemblies, Hyundai should manufacture internally and which parts should be outsourced. They must decide not only on advertising, distribution, and product positioning to sell the cars, but also the quantity and quality of the various inputs. For example, they must determine which models will have leather seats and the quality of the leather to be used. Similarly, in deciding which investment projects to accept, capital budgeting analysts require data on future cash flows. How are these numbers derived? How does one coordinate the activities of hundreds or thousands of employees in the firm so that these employees accept senior management's leadership? At Hyundai, and at other organizations small and large, managers must have good information to make all these decisions.

Information about firms' future costs and revenues must be estimated by managers. Organizations' internal information systems provide some of the knowledge for these pricing, production, capital budgeting, and marketing decisions. These systems range from the informal and the rudimentary to very sophisticated, electronic management information systems. The term **information system** should not be interpreted to mean a single, integrated system. Most information systems consist not only of formal, organized, tangible records such as payroll and purchasing documents, but also informal, intangible bits of data such as memos, special studies, and managers' impressions and opinions. The firm's information system also contains nonfinancial information such as customer and employee satisfaction surveys. As firms grow from single proprietorships to large global corporations with tens of thousands of employees, managers lose the knowledge of enterprise affairs gained from personal, face-to-face contact in daily operations. Higher-level managers of larger firms come to rely more and more on formal operating reports.

The **internal accounting system**, an important component of a firm's information system, includes budgets, data on the costs of each product and current inventory, and periodic financial reports. In many cases, especially in small companies, these accounting reports are the only formalized part of the information system providing the knowledge for decision making. Many larger companies have other formalized, nonaccounting-based information systems, such as production planning systems. This book focuses on how internal accounting systems provide knowledge for decision making.

After making decisions, managers must implement them in organizations in which the interests of the employees and the owners do not necessarily coincide. Just because senior managers announce a decision does not ensure that the decision will be implemented.

Organizations do not have objectives; people do. One common objective of owners of the organization is to maximize profits, or the difference between revenues and expenses. Maximizing firm value is equivalent to maximizing the stream of profits over the organization's life. Employees, suppliers, and customers also have their own objectives—usually maximizing their self-interest.

Not all owners care only about monetary flows. An owner of a professional sports team might care more about winning (subject to covering costs) than maximizing profits. Nonprofits do not have owners with the legal rights to the organization's profits. Moreover, nonprofits seek to maximize their value by serving some social goal such as education or health care.

No matter what the firm's objective, the organization will survive only if its inflow of resources (such as revenue) is at least as large as the outflow. Accounting information is useful to help manage the inflow and outflow of resources and to help align the owners' and employees' interests, no matter what objectives the owners wish to pursue.

Throughout this book, we assume that individuals maximize their self-interest. The owners of the firm usually want to maximize profits, but managers and employees will do so only if it is in their interest. Hence, a conflict of interest exists between owners—who, in general, want higher profits—and employees—who want easier jobs, higher wages, and more fringe benefits. To control this conflict, senior managers and owners design systems to monitor employees' behavior and incentive schemes that reward employees for generating more profits. Not-for-profit organizations face similar conflicts. Those people responsible for the nonprofit organization (boards of trustees and government officials) must design incentive schemes to motivate their employees to operate the organization efficiently.

All successful firms must devise mechanisms that help align employee interests with maximizing the organization's value. All of these mechanisms constitute the firm's **control system**; they include performance measures and incentive compensation systems, promotions, demotions and terminations, security guards and video surveillance, internal auditors, and the firm's internal accounting system.

As part of the firm's control system, the internal accounting system helps align the interests of managers and shareholders to cause employees to maximize firm value. It sounds like a relatively easy task to design systems to ensure that employees maximize firm value. But a significant portion of this book demonstrates the exceedingly complex nature of aligning employee interests with those of the owners.

Internal accounting systems serve two purposes: (1) to provide some of the knowledge necessary for planning and making decisions (*decision making*) and (2) to help motivate and monitor people in organizations (*control*). Preventing fraud and embezzlement is the most basic control use of accounting. Maintaining inventory records helps reduce employee theft. Accounting budgets, discussed more fully in Chapter 6, provide an example of both decision making and control. Asking each salesperson in the firm to forecast his or her sales for the upcoming year generates useful information for planning next year's production (decision making). However, if the salesperson's sales forecast is used to benchmark performance for compensation purposes (control), he or she has incentives to underestimate those forecasts.

Using internal accounting systems for both decision making and control gives rise to the fundamental trade-off in these systems: A system cannot be designed to perform two tasks as well as a system that must perform only one task. Some ability to deliver knowledge for decision making is sacrificed to provide better motivation (control). The trade-off between providing knowledge for decision making and motivation/control arises continually throughout this text.

This book is applications oriented: It describes how the accounting system assembles knowledge necessary for implementing decisions using the theories from microeconomics, finance, operations management, and marketing. It also shows how the accounting system helps motivate employees to implement these decisions. Moreover, it stresses the continual trade-offs that must be made between the decision making and control functions of accounting.

Chief financial officers (CFOs), responsible for their company's accounting system, identify "managing costs and profitability" as their most important goal. Other top priorities include setting budgets and measuring performance. These findings indicate that firms use their internal accounting system both for decision making (managing costs and profitability) and for controlling behavior (setting budgets and measuring performance).<sup>1</sup>

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<sup>1</sup>S. White, "How CFOs Can Support the Transformation to a Digital Business Model," *Financial Management*, November 4, 2015, <https://www.fm-magazine.com/news/2015/nov/how-cfos-can-support-digital-business-model-201513323.html>.



The firm's accounting system provides much of the fabric that helps hold the organization together. It contains knowledge for decision making, and it provides information for evaluating and motivating the behavior of individuals within the firm. Being such an integral part of the organization, the accounting system cannot be studied in isolation from the other mechanisms used for decision making or for aligning incentives. A firm's internal accounting system should be examined from a broad perspective, as part of the larger organization design question facing managers.

This book uses an economic perspective to study how accounting can motivate and control behavior in organizations. Besides economics, a variety of other paradigms also are used to investigate organizations: scientific management (Taylor), the bureaucratic school (Weber), the human relations approach (Mayo), human resource theory (Maslow, Rickert, Argyris), the decision-making school (Simon), and the political science school (Selznick). Behavior is a complex topic. No single theory or approach is likely to capture all the elements. However, understanding managerial accounting requires addressing the behavioral and organizational issues. Economics offers one useful and widely adopted framework.

## B. Design and Use of Cost Systems

Managers make decisions and monitor subordinates who make decisions. Both managers and accountants must acquire sufficient familiarity with cost systems to perform their jobs. Accountants (often called *controllers*) are charged with designing, improving, and operating the firm's accounting system—an integral part of both the decision-making and performance evaluation systems. Both managers and accountants must understand the strengths and weaknesses of current accounting systems. Internal accounting systems, like all systems within the firm, are constantly being refined and modified. Accountants' responsibilities include making these changes.

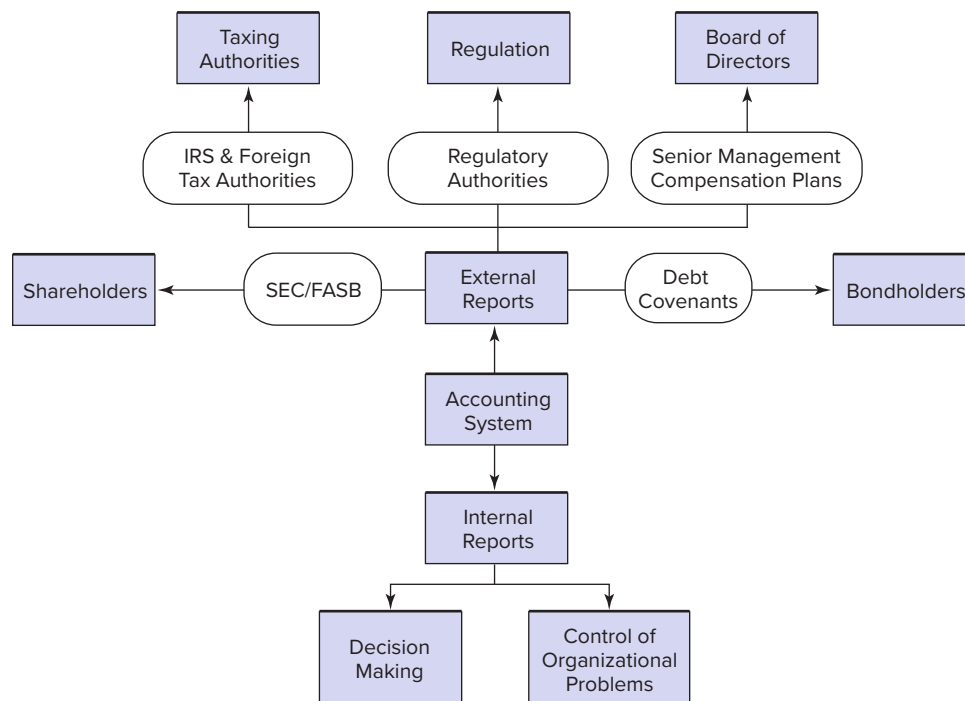
Internal accounting systems:

1. Provide information to assess the profitability of products or services and to optimally price and market these products or services.
2. Provide information to detect production inefficiencies to ensure that the proposed products and volumes are produced at minimum cost.
3. When combined with the performance evaluation and reward systems, create incentives for managers to maximize firm value.
4. Support the financial accounting and tax accounting reporting functions.
5. Contribute more to firm value than it costs.

Figure 1–1 portrays the functions of the accounting system. In it, the accounting system supports both external and internal reporting systems. Examine the top half of Figure 1–1. The accounting procedures chosen for external reports to shareholders and taxing authorities are dictated in part by regulators. In the United States, the **Securities and Exchange Commission (SEC)** and the **Financial Accounting Standards Board (FASB)** regulate the financial statements issued to shareholders. The **Internal Revenue Service (IRS)** administers the accounting procedures used in calculating corporate income taxes. If the firm is involved in international trade, foreign tax authorities prescribe the accounting rules applied in calculating foreign taxes. Regulatory agencies constrain public utilities' and financial institutions' accounting procedures.

Management compensation plans and debt contracts often rely on external reports. Senior managers' bonuses are often based on accounting net income. Likewise, if the firm issues long-term bonds, it agrees in the debt covenants not to violate specified

**FIGURE 1-1**  
The multiple role of  
accounting systems



accounting-based constraints. For example, the bond contract might specify that the debt-to-equity ratio will not exceed some limit. Like taxes and regulation, compensation plans and debt covenants create incentives for managers to choose particular accounting procedures.<sup>2</sup>

As companies expand into international markets, external users of the firm's financial statements become global. No longer are the firm's shareholders, tax authorities, and regulators domestic. Rather, the firm's internal and external reports are used internationally in a variety of ways.

The bottom of Figure 1-1 illustrates that internal reports are used for decision making as well as control of organizational problems. As discussed earlier, managers use a variety of sources of data for making decisions. The internal accounting system provides one important source. These internal reports affect the behavior of managers in the firm. The internal accounting system reports on managers' performance and therefore provides incentives for them. Any changes to the internal accounting system can affect all the various uses of the resulting accounting numbers.

The internal and external accounting reports are closely linked. The internal accounting system affords a more disaggregated view of the company. These internal reports are generated more frequently, usually monthly or even weekly or daily, whereas the external reports are provided quarterly for publicly traded U.S. companies. The internal reports offer costs and profits by specific products, customers, lines of business, and divisions of the company. For example, the internal accounting system computes the unit cost of individual products produced. These unit costs are then used to value the work-in-process and finished goods inventory, and to compute cost of goods sold. Chapter 9 describes the details of product costing.

<sup>2</sup>For further discussion of the incentives of managers to choose accounting methods, see R. Watts and J. Zimmerman, *Positive Accounting Theory* (Englewood Cliffs, NJ: Prentice Hall, 1986).

**Managerial Application: Spaceship Lost Because Two Measures Used**

Multiple accounting systems are confusing and can lead to errors. An extreme example of this occurred in 1999 when NASA lost its \$125 million Mars spacecraft. Engineers at Lockheed Martin built the spacecraft and specified the spacecraft's thrust in English pounds. But NASA scientists, navigating the craft, assumed the information was in metric newtons. As a result, the spacecraft was off course by 60 miles as it approached Mars and crashed. Multiple systems for the same underlying construct often produce confusion and decision making errors.

SOURCE: A. Pollack, "Two Teams, Two Measures Equaled One Lost Spacecraft," *The New York Times*. October 1, 1999, p. 1.

Because internal accounting systems serve multiple users and have several purposes, the firm employs either multiple systems (one for each function) or one basic system that serves all three functions (decision making, performance evaluation, and external reporting). Firms can either maintain a single set of books and use the same accounting methods for both internal and external reports, or they can keep multiple sets of books. The decision depends on the costs of writing and maintaining contracts based on accounting numbers, the costs from the dysfunctional internal decisions made using a single system, the additional bookkeeping costs arising from the extra system, and the confusion of having to reconcile the different numbers arising from multiple accounting systems.

Inexpensive accounting software packages and falling costs of information technology reduce some of the costs of maintaining multiple accounting systems. However, confusion arises when the systems report different numbers for the same concept. For example, when one system reports the manufacturing cost of a product as \$12.56 and another system reports it at \$17.19, managers wonder which system is producing the "right" number. Some managers may be using the \$12.56 figure while others are using \$17.19, causing inconsistency and uncertainty. Whenever two numbers for the same concept are produced, the natural tendency is to explain (i.e., reconcile) the differences. Managers involved in this reconciliation could have used their time more productively. Also, using the same accounting system for multiple purposes increases the credibility of the financial reports for each purpose. With only one accounting system, the external auditor monitors the internal reporting system at little or no additional cost.

A survey of large U.S. firms found that managers typically use the same accounting procedures for both external and internal reporting. More than 80 percent of chief financial officers (CFOs) report using the same accounting methods and report the same earnings internally and externally. In other words, most firms use "one number" for both external and internal communications. One CFO stated, "We make sure that everything that we have underneath—in terms of the detailed reporting—also rolls up basically to the same

**Historical Application: Different Costs for Different Purposes**

"... cost accounting has a number of functions, calling for different, if not inconsistent, information. As a result, if cost accounting sets out, determined to discover what the cost of everything is and convinced in advance that there is one figure which can be found and which will furnish exactly the information which is desired for every possible purpose, it will necessarily fail, because there is no such figure. If it finds a figure which is right for some purposes it must necessarily be wrong for others."

SOURCE: J. Clark, *Studies in the Economics of Overhead Cost* (Chicago: University of Chicago Press, 1923), p. 234.

story that we've told externally."<sup>3</sup> Nothing prevents firms from using separate accounting systems for internal decision making and internal performance evaluation except the confusion generated and the extra data processing costs.

Probably the most important reason firms use a single accounting system is it allows reclassification of the data. An accounting system does not present a single, bottom-line number, such as the "cost of publishing this textbook." Rather, the system reports the components of the total cost of this textbook: the costs of proofreading, typesetting, paper, binding, cover, and so on. Managers in the firm then reclassify the information on the basis of different attributes and derive different cost numbers for different decisions. For example, if the publisher is considering translating this book into Chinese, not all the components used in calculating the U.S. costs are relevant. The Chinese edition might be printed on different paper stock with a different cover. The point is, a single accounting system usually offers enough flexibility for managers to reclassify, recombine, and reorganize the data for multiple purposes.

A single internal accounting system requires the firm to make trade-offs. A system that is best for performance measurement and control is unlikely to be the best for decision making. It's like configuring a motorcycle for both off-road and on-road racing: Riders on bikes designed for both racing conditions probably lose to riders on bikes designed for just one racing surface. Wherever a single accounting system exists, additional analyses arise. Managers making decisions find the accounting system less useful and devise other systems to augment the accounting numbers for decision-making purposes.

### Concept Questions

- Q1-1 What causes the conflict between using internal accounting systems for decision making and control?
- Q1-2 Describe the different kinds of information provided by the internal accounting system.
- Q1-3 Give three examples of the uses of an accounting system.
- Q1-4 List the characteristics of an internal accounting system.
- Q1-5 Do firms have multiple accounting systems? Why or why not?

## C. Marmots and Grizzly Bears

Managers often criticize accounting's usefulness for making pricing or outsourcing decisions. Accounting data are based on historical costs rather than current values, and hence contain stale information. Why then do managers persist in using (presumably inferior) accounting information?

Before addressing this question, consider the parable of the marmots and the grizzly bears.<sup>4</sup> Marmots are small groundhogs that are a principal food source for certain bears. Zoologists studying the ecology of marmots and bears observed bears digging and moving rocks in the autumn in search of marmots. They estimated that the calories expended searching for marmots exceeded the calories obtained from their consumption. A zoologist

<sup>3</sup>SOURCE: I. D. Dichev, J. R. Graham, H. Campbell, and S. Rajgopal, S., "Earnings Quality: Evidence from the Field," *Journal of Accounting and Economics* 56, no. 2-3 (2013), pp. 1-33.

<sup>4</sup>This example is suggested by J. McGee, "Predatory Pricing Revisited," *Journal of Law & Economics* XXIII (October 1980), pp. 289-330.



relying on Darwin's theory of natural selection might conclude that searching for marmots is an inefficient use of the bear's limited resources and thus these bears should become extinct. But fossils of marmot bones near bear remains suggest that bears have been searching for marmots for tens of thousands of years.

Because the bears survive, the benefits of consuming marmots must exceed the costs. Bears' claws might be sharpened as a by-product of the digging involved in hunting for marmots. Sharp claws help bears searching for food under the ice after winter's hibernation. Therefore, the benefit of sharpened claws and the calories derived from the marmots offset the calories consumed gathering the marmots.

What does the marmot-and-bear parable say about why managers persist in using apparently inferior accounting data in their decision making? As it turns out, the marmot-and-bear parable is an extremely important proposition in the social sciences known as *economic Darwinism*. In a competitive world, if surviving organizations use some operating procedure (such as historical cost accounting) over long periods of time, then this procedure likely yields benefits in excess of its costs. Firms survive in competition by selling goods or services at lower prices than their competitors while still covering costs. Companies cannot survive by making more mistakes than their competitors.

Economic Darwinism suggests that successful (surviving) firms should not change internal processes unless they are clearly broken. Currently, considerable attention is being directed at revising and updating firms' internal accounting systems because many managers believe their current accounting systems are "broken" and require major overhaul. Alternative internal accounting systems are being proposed, among them **activity-based costing (ABC)**, **balanced scorecards**, **economic value added (EVA)**, and **lean accounting systems**. These systems are discussed and analyzed later in terms of their ability to help managers make better decisions, as well as to help provide better measures of performance for managers in organizations, thereby aligning managers' and owners' interests.

Although internal accounting systems often appear inconsistent with some particular theory, these systems (like the bears searching for marmots) have survived the test of time and therefore are likely yielding unobserved benefits (like claw sharpening). This book discusses these additional benefits. Two caveats exist concerning too strict an application of economic Darwinism:

1. Some surviving operating procedures can be neutral mutations. Just because a system survives does not mean that its benefits exceed its costs. Benefits less costs might be close to zero.
2. Just because a given system survives does not mean it is optimal. A better system might exist but has not yet been discovered.

### Terminology: Benchmarking and Economic Darwinism

Benchmarking is a technique where a company compares its performance against the best firms, determines how those firms achieved their superior performance, and uses the knowledge to improve its own performance.

*Economic Darwinism* predicts that managers copy the practices of highly successful companies through benchmarking studies. The practice of benchmarking dates back to 607, when Japan sent teams to China to learn the best practices in business, government, and education. Today, most large enterprises routinely conduct benchmarking studies to discover the best business practices and then implement them in their firms.

SOURCE: American Society for Quality <http://asq.org/learn-about-quality/benchmarking/overview/overview.html>.

### Historical Application: Sixteenth-Century Cost Records

The well-known Italian Medici family had extensive banking interests and owned textile plants in the fifteenth and sixteenth centuries. They used sophisticated cost records to maintain control of their cloth production. These cost reports contained detailed data on the costs of purchasing, washing, beating, spinning, and weaving the wool, of supplies, and of overhead (tools, rent, and administrative expenses). Modern costing methodologies closely resemble these fifteenth-century cost systems, suggesting they yield benefits in excess of their costs.

SOURCE: P. Garner, *Evolution of Cost Accounting to 192* (Montgomery, AL: University of Alabama Press, 1954), pp. 12–13. Original source: R. de Roover, “A Florentine Firm of Cloth Manufacturers,” *Speculu. XVI* (January 1941), pp. 3–33.

The fact that most managers use their accounting system as the primary formal information system suggests that these accounting systems yield total benefits that exceed their total costs. These benefits include financial and tax reporting, providing information for decision making, and creating internal incentives. The proposition that surviving firms have efficient accounting systems does not imply that better systems do not exist, only that they have not yet been discovered. What is, is not necessarily the “best.” Economic Darwinism helps identify the costs and benefits of alternative internal accounting systems and is applied repeatedly throughout the book.

## D. Management Accountant’s Role in the Organization

Describing how firms organize their accounting functions provides further understanding of internal accounting systems. No single organizational structure applies to all firms. Figure 1–2 presents one common organization chart. The design and operation of the internal and external accounting systems are the responsibility of the firm’s chief financial officer. The firm’s line-of-business or functional areas, such as marketing, manufacturing, and research and development, are combined and shown under a single organization, “operating divisions.” The remaining staff and administrative functions include human resources, chief financial officer, legal, and other. In Figure 1–2, the CFO oversees all the financial and accounting functions in the firm and reports directly to the president. The CFO’s three major functions include controllership, treasury, and internal audit. Controllership involves tax administration, the internal and external accounting reports (including statutory filings with the Securities and Exchange Commission if the firm is publicly traded), and the planning and control systems (including budgeting). Treasury involves short- and long-term financing, banking, credit and collections, investments, insurance, and capital budgeting. Depending on their size and structure, firms organize these functions differently. Figure 1–2 shows the internal audit group reporting directly to the CFO. In other firms, internal audit reports to the controller, the chief executive officer (CEO), or the board of directors.

The controller, the firm’s chief management accountant, has responsibility for data collection and reporting. The controller compiles the data to prepare the firm’s balance sheet, income statement, and tax returns. In addition, this person prepares the internal reports for the various divisions and departments within the firm and helps other managers by providing them with the data to make decisions—as well as the data to evaluate these managers’ performance.

Usually, each operating division or department has its own controller. For example, if a firm has several divisions, each division has its own division controller, who reports to both the division manager and the corporate controller. In Figure 1–2, the operating