

Edition

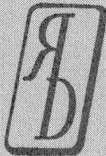
**Fundamentals
of Management
Accounting**

**Anthony
and
Welsch**

Third edition

FUNDAMENTALS OF MANAGEMENT ACCOUNTING

1981



Richard D. Irwin, Inc.

Homewood, Illinois 60430

Irwin-Dorsey Limited

Georgetown, Ontario L7G 4B3

© RICHARD D. IRWIN, INC., 1974, 1977, and 1981

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

ISBN 0-256-02454-5

Library of Congress Catalog Card No. 80-82100

Printed in the United States of America

1 2 3 4 5 6 7 8 9 0 K 8 7 6 5 4 3 2 1

LEARNING SYSTEMS COMPANY—

a division of Richard D. Irwin, Inc.—has developed a
PROGRAMMED LEARNING AID

to accompany texts in this subject area.

Copies can be purchased through your bookstore

or by writing PLAIDS,

1818 Ridge Road, Homewood, Illinois 60430.

Preface

Partly because the treatment of management accounting as a separate subject is relatively new, a satisfactory pedagogical framework for it—one that provides a way of organizing and unifying the several separate topics—has been difficult to devise. In financial accounting, the accounting equation, $\text{Assets} = \text{Liabilities} + \text{Owners' equity}$, provides a unifying theme.

No such unified structure exists for management accounting. On the contrary, instructors spend much time emphasizing the point that “different figures are used for different purposes.” This is a fundamental point, and it is valid, but it does tend to create confusion on the part of the student. In one chapter of the usual text, students are told that in figuring cost they should include an allocated share of overhead costs; in another chapter they are told that the allocated costs are irrelevant and should be disregarded. In still another chapter they are told that costs must be related to personal responsibility, whereas in most other places no mention is made of personal responsibility.

The vagueness of the notion that there are *several* purposes adds to the student’s problem of comprehending what the course is all about. How many purposes are there? Does each type of alternative choice problem (e.g., make or buy, dropping a product, equipment replacement, buy or lease) constitute a separate purpose, with its own peculiar requirements for accounting information? Do the purposes mentioned in the book constitute *all* the purposes, or are there others? Are there topics not mentioned in the elementary course that students must learn about in advanced courses?

The framework

This volume is built on a framework that we believe overcomes these difficulties. We arrived at the framework by shifting the focus from the notion of “purpose” to the notion of “types of accounting information.” It seems to us that there are three, and only three, different ways of constructing accounting information for use by management. One is conventional cost accounting, with its emphasis on full cost and its close ties to generally accepted financial accounting principles and to the financial accounting system. A second is the notion variously labeled as the “differential,” “marginal,” or “incremental” approach. The third is what has

come to be called “responsibility accounting”; it focuses on the costs, revenues, and assets of responsibility centers.

To emphasize these distinctions, we have divided the text into three main parts, each focusing on one type of information: (1) full cost accounting, (2) differential accounting, and (3) responsibility accounting.

It is not possible to relate each of these constructions to a single purpose. Planning, for example, uses all three types. For some pricing problems, full costs are relevant; whereas for others, differential costs are relevant. Nevertheless, if the three topics are arranged in the order given above, it is possible to describe, under the first topic, uses that require the use of full cost data; under the second topic, uses that require differential costs and revenue; and under the third topic, uses that require responsibility accounting data. This approach encourages the student to make a clear distinction among these three different types of information. Failure to appreciate this distinction is a basic cause of the difficulty that some students have in understanding what management accounting is all about.

In stressing the differences among the three types of management accounting information, we run the risk that the student will not appreciate that the three categories use many common elements, that they overlap, and that they constitute a single management accounting system, rather than three separate systems. We have tried to avoid leaving incorrect impressions by emphasizing these points throughout the book, and by a summary chapter that relates the three parts to one another.

It can be argued that there are more than three types of management accounting information. Our three categories do not suggest such distinctions as long run versus short run, historical versus future, opportunity versus incurred, regulatory versus nonregulatory, direct versus indirect, or strategic planning versus management control. It would be possible to construct frameworks based on any or all of these distinctions. Instead of doing this, we have discussed these topics at the appropriate place in each of our main categories. If students come away from the course with the clear recognition that three types of management accounting information exist, and if they understand how to use them for appropriate purposes, they will be ahead of a great many people (including members of Congress and other public officials, and even some business executives who imply in their speeches and actions that there is such a thing as “the” cost of something).

Plan of the book

There are two introductory chapters. Chapter 1 introduces the three types of management accounting information and describes how each type is used in a motel company, a situation that is easily visualized. Chapter 2, a new chapter, introduces the idea of “cost” and the concepts of fixed and variable costs. These ideas recur throughout the book.

Part One is on full cost accounting. This topic comes first because it is closely related to the subject matter of this text’s companion volume,

Fundamentals of Financial Accounting. Full costs are used to measure inventory amounts in financial accounting, and their construction is essentially governed by generally accepted financial accounting principles. Thus, this topic provides a good way of making the transition from financial accounting to management accounting. In discussing the uses of full cost information, much attention is given to its use as a basis for pricing. Whatever the theoretical merits of marginal cost pricing may be, the fact is that in the real world the great majority of selling prices are based on full costs, and the student should therefore learn how costs are constructed and used for this purpose. (Marginal cost pricing is discussed in Part Two.)

Part Two deals with differential costs, differential revenues, and differential investments. These constructions are used in alternative choice decisions of various types, and the use of accounting information for these purposes is discussed in Chapters 8, 9, and 10. As background for this discussion, Chapter 7 expands on the description of the behavior of costs that was introduced in Chapter 2. It includes a discussion of cost-volume-profit relationships.

Part Three focuses on responsibility accounting, that is, on costs, revenues, and investments that are associated with the activities of responsibility centers. As background, Chapters 11 and 12 discuss the management control structure and process, respectively. Chapters 13–16 discuss the use of accounting information in budgeting, in the analysis of variances, and in reports on performance.

One of these, Chapter 14, introduces standard costs and the analysis of variances. Logically, this chapter could just as well have been located in Part One since standard costs are a part of many cost accounting systems. Students find standard costs quite difficult and complicated, however, and this is the reason for deferring this topic until a later chapter. (The chapter can be assigned following Chapter 5 if an instructor wants to treat standard costs along with other cost accounting topics.)

Chapter 17, on information processing, is more isolated from the main framework of the book than is ideal. We treat it separately because the subject is relevant for all three categories of accounting information, and therefore it is not appropriately included in any single one of them, to the exclusion of the other two.

Design of a course

The book contains more material than can be digested in a one-semester course. The instructor therefore can select from the available topics those that he or she prefers to emphasize. Each of the three parts is constructed so that the final one or two chapters in the part can be omitted without loss of the central ideas of the part. Most chapters have Optional Topics that can be assigned for full study, assigned for skimming, or omitted, as the instructor wishes.

Thus, although most instructors will choose to assign some chapters in each of the three parts, the emphasis given to each part can vary within fairly wide limits. Moreover, the basic topics can be covered without diffi-

culty in a one-quarter course by omitting Chapters 6, 10, 16, and 17. More detailed suggestions on course design are given in a separate publication.

The third edition

In addition to the new Chapter 2, the material in other chapters has been rearranged to make a more careful distinction between basic topics and *Optional Topics*. Every chapter has been rewritten to update, simplify, improve clarity, and smooth the flow of topics. There are additional diagrams and examples. The questions at the end of each chapter have been divided into two types: (1) Review Questions, which are intended to call the student's attention to the important points in the chapter; and (2) Discussion Questions, which provide a basis for expanding on the points made in the chapter if the instructor wishes.

Acknowledgments

We are grateful for comments received from many users of the Revised Edition, particularly Bernard L. Beatty, Wake Forest University; John C. Camillus, University of Pittsburgh; Michelle M. Hamer, University of Maryland; Lyle Jacobsen, University of Hawaii at Maricao; Frank C. Lordi, Widener College; Chris Luneski, University of Oregon; Richard W. Nolan, Ball State University; Ralph B. Tower, Emory University, and Robert J. Zolad, Oakland University.

We much appreciate suggestions from the following professors who commented in depth, based on their experience with the Revised Edition: Keith Bryant, Jr., University of Alabama in Birmingham; Samuel Chesler, University of Lowell; Joseph McHugh, Boston College; James S. Reece, University of Michigan; and Robert Waehler, Suffolk University.

Henry B. Reiling, Harvard Business School, made helpful comments on income tax matters. Robert Sage gave valuable technical advice on the operation of motels. Joseph San Miguel, Harvard Business School, wrote the Dallas Consulting Group case.

Professors Bryant and Chesler prepared many of the new problems and revised others.

Dina Dublon did technical research and carefully reviewed the manuscript. The principal typing burden was capably assumed by Pat Lougee.

Loretta Scholten did an extraordinarily good job of editing the manuscript.

Cases are copyrighted by the President and Fellows of Harvard College. Permission to use these cases is appreciated.

Problems from the Uniform CPA Examinations, copyright by the American Institute of Public Accountants, and from the Certificate of Management Accounting Examinations, copyright by the Institute of Management Accounting, are used by permission.

**ROBERT N. ANTHONY
GLENN A. WELSCH**

Contents

1 The nature of management accounting 1

Purpose of the chapter. Characteristics of an organization: *Goals. Strategies. Organization structure. Responsibility centers. Functions of management. Similarities among organizations. Information: Operating information. Financial reporting. Management accounting. Types of management accounting information: Full cost accounting. Differential accounting. Responsibility accounting. Relation of accounting types to management functions. Place of management accounting: Contrast with financial accounting. Differences. Similarities.*

2 An introduction to cost behavior 26

The concept of cost: *General definition. Variable, fixed, and semivariable costs: Variable costs. Fixed costs. Semivariable costs. Unit costs. Total costs. Behavior of unit costs. Some qualifications regarding cost behavior. Application to management accounting: Full cost accounting. Differential accounting. Responsibility accounting.*

part one

FULL COST ACCOUNTING, 47

3 Full cost information and its uses 49

Purpose of the chapter: *Cost objective. Full cost. Direct and indirect costs. Direct costs and variable costs. Governing principle. Collection of costs. Financial accounting: Financial statement items. Segment reporting. What did it cost? Need for a clear definition of cost objective. Need for a clear definition*

of cost. Cost-type contracts. Setting regulated prices. Analysis of profitability. Normal pricing: Rationale for pricing. Adjustment of historical cost. Calculation of the normal price. Pricing in service organizations. Adjusting costs to prices. Pricing tactics. Contribution pricing. Optional topic: Alternative approaches to pricing: Return-on-assets pricing. Profit margin pricing. Gross margin pricing. Direct cost pricing. Choice of a pricing method.

4 Cost accounting systems 85

Purpose of the chapter. Sources of cost principles. Elements of cost: *Direct cost in general. Material cost. Labor cost. Production overhead cost. Distinction between direct and indirect costs. Systems for cost accumulation: Inventory accounts. The account flowchart. Flow costs. Acquisition. Production. Job order costing and process costing: Need for a cost system. Types of cost systems. Job order costing. Process costing. Direct material costs. Choice of a system. Variations in practice. Comparison of records. Terminology. Optional topic: The manufacturing statement.*

5 Production overhead costs 127

Purpose of the chapter. Production activities: *Cost centers. Allocating overhead costs: General approach: Concept of overhead allocation. Basic allocation principles. Overhead rate. Calculation of the predetermined overhead rate: Allocation of overhead to products. Considerations in setting and using overhead rates: Why use predetermined rates. Standard volume. Underabsorbed and overabsorbed overhead. Joint products and by-products: Allocation bases. Optional topic:*

Allocation of service center costs: Initial assignment to cost centers. Reassignment of service center costs. Allocation of overhead costs to products.

6 Other aspects of cost accounting 165

Purpose of the chapter. Nonmanufacturing costs: Selling costs. Marketing costs. Logistics costs. Research and development costs. General and administrative costs. Capital costs. Merchandising companies. Service organizations: Similarity to measurement of manufacturing costs. Pricing. Defining cost objectives and outputs. Nonprofit organizations. Significant points about cost accounting: Relation to financial accounting. Broad applicability of cost accounting. Direct and indirect costs. Direct costs and variable costs. Capital expenditures, product costs, and period costs. Validity of costs. Accuracy of direct costs. Accuracy of overhead costs. Differences and similarities in practice. Variable costing. Optional topic: Effect of variable costing on income.

part two

DIFFERENTIAL ACCOUNTING, 199

7 The differential concept: Cost-volume-profit relationships 201

Purpose of the chapter. Concept of differential costs and revenues: Contrasts with full costs. Sources of differential cost data. Variable and fixed costs. Relation of costs to volume: Cost assumptions. Plotting the cost line. Estimating the cost-volume relationship. Measures of volume. The profitgraph and contribution analysis: Contribution income statement. Uses of the profitgraph and contribution income statement. Marginal income. Contribution profitgraph. Break-even volume. Planned income. Margin of safety. Improving profit performance. Several products. The effect of inventory levels. Service and nonprofit organizations. Problems with scatter diagrams. Optional topic: The least-squares method.

8 Alternative choice decisions 247

Purpose of the chapter. Nature of alternative choice problems: Organization goals. Steps in

analysis: Steps 1 and 2. Definition of the problem and of alternative solutions. Step 3. Weighing and measuring quantitative factors. Step 4. Evaluating the unmeasured factors. Step 5. Reaching a decision. Differential costs: Differential costs contrasted with variable costs. Mechanics of the calculation: Danger of using full cost. Opportunity costs. Out-of-pocket costs. Estimates of future costs. Sunk costs. Importance of the time span. Types of alternative choice problems. Problems involving costs: Methods change. Overtime versus second shift. Operation versus shutdown. Make or buy. Problems involving both revenues and costs: Contribution pricing. Price/volume/profit analysis. Changes in selling prices. Discontinuing a product. Sales versus further processing. Other marketing tactics. Benefit/cost analysis. Estimating sales. Optional topic: Useful decision models.

9 Capital investment decisions 300

Purpose of the chapter. The concept of present value: Difference between personal and business attitudes. Present value. Finding present values. Application to investment decisions. General approach. Meaning of return on investment. Stream of cash inflows. Other present value tables. Notations. Estimating the variables: Required rate of return. Cash inflows. Economic life. Investment. Other considerations: Summary of the analytical process.

10 Additional aspects of investment decisions 334

Purpose of the chapter. Income taxes: Nature of income tax impact. Implications for depreciable assets. Taxes in capital investment decisions. Depreciation tax shield. Accelerated depreciation. Investment tax credit. Other methods of analysis: Project rate-of-return method. Payback method. Accounting return on investment method. Preference problems: Criteria for preference problems. Comparison of preference rules. Comparison of methods. Concluding comments: Additional intricacies. Nonquantitative factors. Nonuse of discounting. Optional topic: Effect of income taxes on business decisions.

part three

RESPONSIBILITY ACCOUNTING, 375**11 The management control structure 377**

Purpose of the chapter. Characteristics of organizations: *Management. Organizational hierarchy. Responsibility center. Environment. Reality versus information.* Responsibility centers: *Responsibility accounting. Efficiency and effectiveness. Types of responsibility centers.* Expense centers: *Distinguished from cost center. Measurement of output.* Profit centers: *Advantages of profit centers. Criteria for profit centers. Measurement of expenses.* Transfer prices: *Market-based transfer prices. Cost-based transfer prices. Negotiated prices. Transfer price policies.* Investment centers: *Investment base. Measures of performance. Management by objectives.*

12 The management control process 419

Purpose of the chapter. Planning and control processes: *Desired versus planned results. Strategic planning. Management control. Operational control. Distinctions among the processes.* Steps in the management control process: *Programming. Budget preparation. Operating and measurement. Reporting and analysis.* Accounting information used in management control: *Controllable costs. Engineered, discretionary, and committed costs. Summary of cost classifications.* Behavioral aspects of management control: *Behavior of participants. Motivation and incentives. Rewards. Focus on line managers. Goal congruence. An example: The computer department. Cooperation and competition.*

13 Programming and budget preparation 456

Purpose of the chapter. Programming: *Ongoing programs. Proposed new programs. Formal programming systems.* Budget preparation: *Relation to programming. Uses of the budget. Types of budgets. The operating budget. Flexible budgets. Relationships among the budget components.* Organization for preparation of budgets: *Budget staff. Preparing*

the operating budget: The budget period. Relation to accounting. Steps in the process. Time required. Step 1. *Setting planning guidelines.* Step 2. *Preparing the sales budget.* Step 3. *Initial preparation of other budget components.* Step 4. *Negotiation.* Step 5. *Coordination and review.* Steps 6 and 7. *Final approval and distribution. Revisions. Variations in practice.* The cash budget: *Accounts receivable. Materials purchases. Other cash flows.* The capital expenditure budget: *Justification. Authorization.* Optional topic: *The mechanics of budget preparation.*

14 Standard costs 502

Purpose of the chapter. Nature of standard costs: *Contrast with actual costs. Standard costs and budgets.* Developing the cost standards: *Separation of quantity and price. Types of standards. Standard direct material cost. Standard direct labor costs. Spoilage and rework. Overhead. Adjustments in standards. Variances.* Analysis of material and labor variances: *Usage and price variances, in general. Direct material variances. Direct labor variance.* Uses of standard costs. Optional topic: *Mechanics of a standard cost system.*

15 Analysis of variances 541

Purpose of the chapter. Overview of the analytical process: *Types of variances.* Variance analysis when goods are produced to order: *Sales volume variance. Selling price variance. Production cost variances. Direct material and direct labor variances. Selling and administrative expense variances. Summary of the variances.* Marketing variances separated from production variances: *Marketing variances. Production cost variances. Selling and administrative variances. Interpretation of the overhead variances.* Significance of variances. Variations in practice. Summary of variances. Optional topic: *Mix variance.*

16 Control reports and their use 584

Purpose of the chapter. Types of management reports: *Information reports. Performance reports.* Contents of control reports: *Focus on personal responsibility. Selection of a standard. Significant information.* Technical criteria for reports: *Tim-*

reports. Cost of reporting. Balance between relevance and feasibility. Format of control reports. Use of control reports: Feedback. Identification. Investigation. Action.

17 Information processing 624

Purpose of the chapter. Nature of information processing: Criteria for information processing. Historical development of systems. Manual systems. Automated data processing: Computer operations. Computer components. Input. Storage. Processing. Output. Processing modes. Minicomputers. Implications for accounting: General impact. The input problem. Operating data. Financial accounting. Full cost accounting. Differential accounting. Responsibility accounting. Integrated data processing.

18 Summary: The total picture 651

Purpose of the chapter. Types of management accounting: Full cost accounting. Differential accounting. Responsibility accounting. Relative importance of the cost types. Types of cost constructions: By timing of expense recognition. By traceability to a cost objective. By cost object. By behavior with respect to volume. By time perspective. By degree of management influence. By ability to budget "right" amounts. The accounting system: Operating information. The account building block. The management control process: Programming. Budget preparation. Performance measurement, appraisal, and action.

Index 673

The nature of management accounting

PURPOSE OF THE CHAPTER

The companion volume of this book, *Fundamentals of Financial Accounting*, focuses on financial accounting.¹ The principal objective of financial accounting is to furnish information that is useful to investors and other persons who are *outside* the organization. In this volume, the focus is on management accounting. The principal objective of management accounting is to furnish information that is useful to managers, that is, to persons who are *inside* the organization.

This chapter gives a general description of the work that managers do and the information that they use in doing this work. Accounting information is one type of information that managers use. The nature of management accounting and the similarities and differences between management accounting and financial accounting are discussed. The three types of management accounting information and the purposes for which they are used are introduced.

CHARACTERISTICS OF AN ORGANIZATION

The purpose of management accounting is to provide information that helps managers carry out their responsibilities within an organization. We therefore start with a description of organizations and of the management functions that are aided by accounting information.

An **organization** is a group of people who work together for some purpose. Let us look at a specific organization, Saga Company. Saga Com-

¹ Glenn A. Welsch and Robert N. Anthony, *Fundamentals of Financial Accounting*, 3d ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1981). © 1981 by Richard D. Irwin, Inc.

pany operates three motels, each located in a suburb of a large midwestern city. These motels are named Saga West, Saga South, and Saga East.

Saga Company is a corporation. Its owners are the shareholders who have invested money in it. They have elected a board of directors to represent their interests, and the board has hired Robert Wise as president. Robert Wise manages the company.

Goals

The purposes for which the organization exists are called its **goals**. Shareholders of Saga Company have voluntarily invested money in the company with the expectation of earning a return, or profit, on that investment. A primary goal of Saga Company, therefore, is to earn profits. Earning a satisfactory profit is an important goal of most businesses. For this reason such organizations are called profit-oriented organizations to distinguish them from government organizations, hospitals, colleges, and similar organizations. These nonprofit organizations have quite different goals.

Although earning profits is one goal, it is not the only goal of Saga Company. Its owners want to be well regarded in the community, they want to create jobs, they want to encourage the growth of the city. The profit goal is tempered by the existence of these other goals.

Strategies

There are many alternative ways in which a motel company can seek its goal of earning a satisfactory profit. The management of Saga Company has selected from the various possible alternatives certain courses of action that seem best for it. These are its **strategies**.

Robert Wise, with the approval of the board of directors, has decided that the best strategies for Saga Company are to provide high-quality motel rooms, to operate a restaurant and a bar in each motel, to provide meeting rooms and banquet facilities in Saga East, and to advertise heavily.

The management and board of directors could have selected quite different strategies. Motels may offer lower quality rooms at a correspondingly lower price, they may have no restaurant or no bar, they may lease space in the motel to another company that operates a restaurant, they may provide no meeting rooms or banquet facilities, they may do very little advertising. These and many other alternative strategies have been considered by Saga Company from time to time, but decisions on strategies have led to the Saga Company as it currently operates.

Every business has a set of strategies, although often they are not written down. Essentially they state (1) the goods the business has decided to manufacture and/or the services it has decided to offer, and (2) which of the available alternatives for producing and marketing these goods and services the management has decided on. Nonbusiness organizations also have strategies that state the services they will offer, the clientele they seek to serve, and how the services will be provided.

Incidentally, the fact that investors make their own decisions as to where to invest their money and the fact that individual companies can select their own strategies are two of the great strengths of the free enterprise

system. As a result there is a constant search for new opportunities, and this helps to keep the economy dynamic. Governments in Soviet countries have discovered that the socialist system, as originally conceived, did not permit adequate flexibility in channeling investment funds or in selecting strategies, and they are now using various capitalistic devices that provide more flexibility.

Organization structure

Robert Wise does not execute the strategies himself; Saga Company has over 200 employees. Since he cannot personally supervise the work of so many people, Wise has set up an organization structure. Each of the three motels has a manager who is responsible for operation of that motel. Within each motel there is a food service department, a housekeeping department, and a front office department. The front office department is responsible for making reservations, assigning rooms, collecting amounts due from customers, and similar functions. Each of these departments is headed by a manager.

The managers of the motels and of the departments within motels are **line managers**. **Line managers manage organization units that are directly involved in an organization's production and marketing activities.** Their departments are line departments.

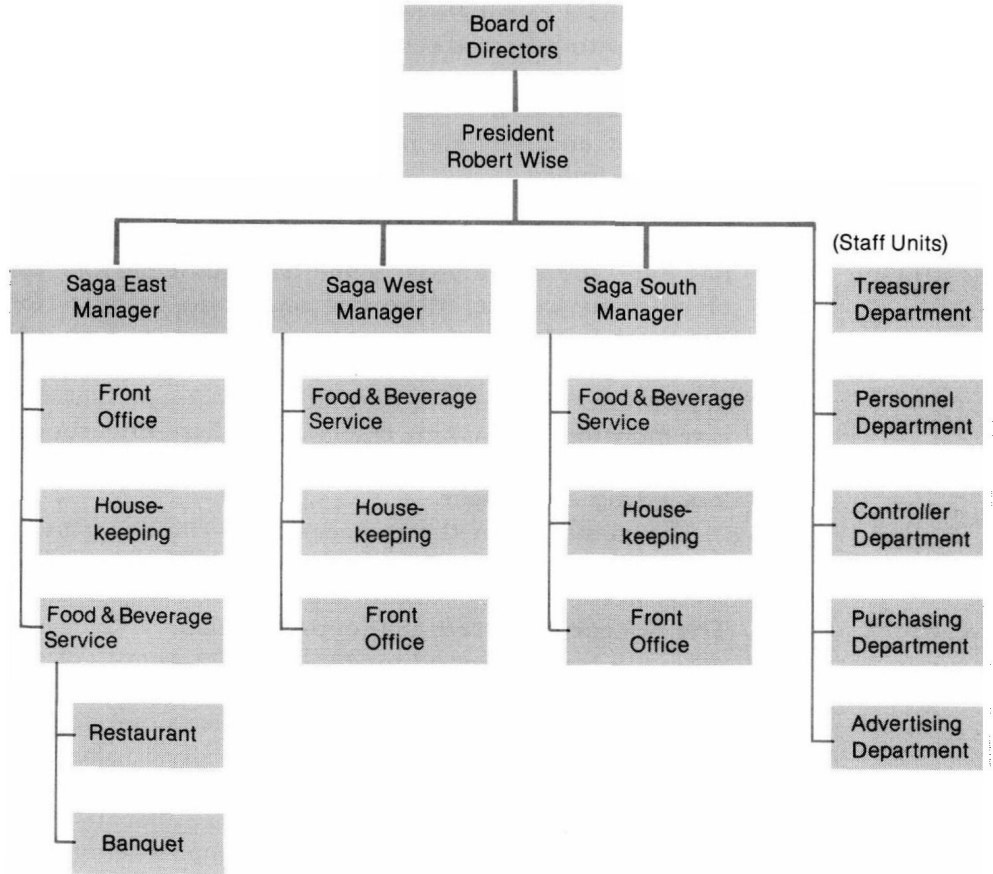
In addition to these line departments, there are **staff units**. **Staff units provide services to other departments and to the organization as a whole.** In Saga Company, there is a personnel department, an advertising department, a purchasing department, a controller department, and a treasurer department. Employees of these departments are part of the headquarters organization. They are physically located on the premises of Saga East, but the managers of these departments report to the president, Robert Wise, not to the manager of Saga East.

Controller department. The controller department, which is one staff department of Saga Company, collects, reports, and analyzes accounting information and other information, and prepares reports for both internal and external use. The controller department provides this service—that is, information—to the other departments and to top management. In this book we are particularly interested in the work of the controller department² and in the use of the information it prepares.

Organization chart. Exhibit 1-1 is an **organization chart** depicting the arrangements described above. The boxes represent the various organization units, and the lines connecting the boxes represent the relationships of the units to one another. The chart shows that the manager of the restaurant and the manager of the banquet facilities at Saga East report to the manager of food service. The managers of the food service, housekeeping, and front office departments report to the manager of Saga East.

² Although the word **controller** is widely used, the title *financial vice president* is used in many companies, and *chief accountant* is used in others (though less commonly). The word *comptroller* is an obsolete spelling of *controller* but continues to be used in some organizations; *comptroller* is pronounced as if it were spelled *controller*.

EXHIBIT 1-1
Saga Company
organization chart



The managers of the three motels and the managers of staff units report to the president. The president is responsible to the board of directors. **An organization chart shows the responsibility relationships among managers in an organization.**

In its essentials, the organization chart in Exhibit 1-1 is similar to that of many medium-sized companies. In many companies there would be several additional staff units.

In larger companies, the organization is more complicated. There may be a number of layers in the organization, that is, subdepartments reporting to departments, subsubdepartments reporting to subdepartments, and so on. The complete organization chart for a very large company with many tens of thousands of employees requires many hundreds of 8½-by-11-inch pages. It is so large and complicated that no one person is familiar with all its details; each manager knows the part that affects his or her responsibility relationships within the company.

There is no standard designation of the names of organization units. The terms *divisions*, *departments*, *units*, and *sections* stand for different things

in different companies. In this book, the word *division* is used for a relatively large and relatively self-contained organization, such as one of the three motels, and the word *department* is used for a unit that performs a single line or staff function, such as the housekeeping department.

Responsibility centers

Each box on Exhibit 1-1 represents a group of employees (or, as in the case of the president box, a single person). The group has a job to do; that is, it has a defined responsibility. Each employee in the group reports to someone, whom we shall designate the **manager**. We shall use the term **responsibility center** for any such group. **A responsibility center is an organization unit with a defined responsibility and headed by a manager.** Moreover, we shall use the term *responsibility center* to include aggregations of individual boxes on the organization chart. Thus, each department is a responsibility center, each motel is a responsibility center, and the company as a whole is also a responsibility center consisting of the aggregate of the lower level responsibility centers, with the president as its manager. The responsibility center is a key concept in our discussion of management accounting.

Functions of management

The principal responsibility of managers is to see to it that the work of their responsibility centers gets done by the employees who report to them; managers are *not* responsible for doing the work themselves. The principal responsibility of the food service manager in a Saga motel is to see to it that the employees receive, cook, and serve the food properly; the manager neither does the cooking nor regularly waits on tables. (Occasionally, managers do help out with these tasks, but when they do, they are not acting as managers.)

This is not the place for a detailed discussion of the functions that managers perform in carrying out their responsibilities; textbooks on management discuss these at length.³ Various authors classify these functions in different ways, but there is general agreement that they include at least the following:

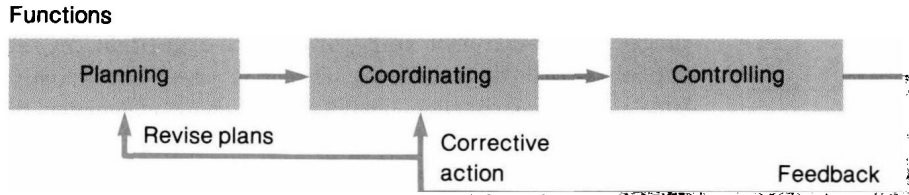
1. Planning.
2. Coordinating.
3. Controlling.

Managers perform these functions for their own responsibility centers, and they participate in the corresponding processes for the company as a whole. The relationship among them is shown in Exhibit 1-2.

Planning. In **planning**, the manager decides what actions should be taken to help the organization achieve its goals. Customers of a Saga motel see employees who are engaged in a variety of activities: in the rooms,

³ See Harold Koontz and Cyril J. O'Donnell, *Management*, 6th ed. (New York: McGraw-Hill Book Co., 1976); William H. Newman and E. Kirby Warren, *Process of Management*, 4th ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1977); and Jerry B. Poe, *An Introduction to the American Business Enterprise*, 4th ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1980).

EXHIBIT 1-2
Relation of
management
functions



they see beds and linen made ready for their use; and in the restaurant, they see a menu and know that (usually) they will be served whatever items on this menu they decide to order. If they stop to think about this, they realize that much thought has been given to such questions as how many employees of various skills are required to operate the motel, what dishes should be offered on the menu, what prices should be charged, and so on. This is planning.

Coordinating. In **coordinating**, managers oversee the conduct of day-to-day operations. Taking into account the number of guests registered in the motel, the restaurant manager estimates how busy the restaurant is likely to be and hence how much food will be prepared and how many employees are required. The particular people who are to work each shift are decided upon and notified. The manager also solves problems that arise in the conduct of operations; for example, disputes between the kitchen staff and the service staff arise and must be resolved. Customers observe day-to-day operations, and outsiders may therefore believe that these activities are the only function of the manager; this is by no means the case. Coordinating is the process involved with the here and now.

Controlling. Managers are responsible for ensuring that their responsibility centers operate in the best possible way. This is the process of **controlling**. As part of the control process, managers study reports on past operations, and from these they try to find ways of making operations better in the future. In other words, they use the lessons learned from past experience to make better plans for the future. The process of using past experience to modify future plans is also called **feedback**. The manager's evaluations of the past are made in two general areas. First, there is an **appraisal of activities or functions** which may lead to improvements in ways of doing things or even to a change in strategy. Second, there is an **appraisal of the performance of individuals** which leads to praise, promotion, criticism, constructive suggestions, or other actions with respect to these individuals.

Decision making. In performing the planning, coordinating, and controlling functions, managers make decisions. In planning, the food service manager *decides* to buy an additional piece of kitchen equipment, or what items will be offered on the menu. In coordinating, he or she *decides* who will work at what stations. In controlling, he or she *decides* what if any corrective action should be taken. Thus, in a broad sense, the three functions can be regarded as being various types of decisions. For our purposes,